

# Greenways Study

*Final Report*  
March 2019

## Acknowledgments

The project Technical Advisory Committee (TAC) included staff from the City of Minneapolis departments of Public Works, Community Planning & Economic Development (CPED), and Health, as well as staff from the Minneapolis Park & Recreation Board. The purpose of the TAC was to provide guidance and feedback throughout the project.

- Adrienne Bockheim, CPED
- Carrie Christensen, MPRB
- Steve Collin, Public Works
- Matthew Dyrdaahl, Public Works
- Erin Feehily, Public Works
- Larry Matsumoto, Public Works
- Kathleen Mayell, Public Works
- Kelly Moriarity, Public Works
- Paul Ogren, Public Works
- Bill Prince, Public Works
- Sarah Stewart, MPLS Health

The City also engaged the Minneapolis Pedestrian and Bicycle Advisory Committees in the study and held a focus group with representatives of four community-driven greenway initiatives:

- Great Northern Greenway
- Min-Hi Line
- North Minneapolis Greenway
- Southside Greenway

## Section 1: Greenways Study Overview, Purpose, and Organization

### Overview

The City of Minneapolis is well known for its extensive multimodal trail network. As of 2018, the citywide network consists of 244 miles of bikeways and 1,910 miles of sidewalk. The Minneapolis Park & Recreation Board (MPRB) owns and maintains over 100 miles of trails (included in the 244 miles of bikeways) in Minneapolis.

The City of Minneapolis has experience designing, constructing, and maintaining greenways. The Midtown Greenway, a 5.5-mile greenway in south Minneapolis connecting West River Parkway and Bde Maka Ska (formerly Lake Calhoun) has received national attention as a major urban commuter greenway. Other greenways in the network vary in typology, including commuter trails like the Dinkytown Greenway, linear parks like the Loring Greenway, and on-street greenways designed as creative solutions to stormwater management issues like the 37<sup>th</sup> Ave N Greenway. Each greenway project varies in the way it was planned and implemented. These existing greenway projects have inspired community groups in Minneapolis to develop and pursue ideas for further greenway development in other areas of the city. There are several examples of active initiatives across the city that are organized by community members along specific corridors.

Greenways are popular and offer many benefits to communities. They provide designated, low stress corridors for pedestrians and bicyclists of all ages and abilities. Greenways provide a natural space to remediate environmental quality issues common in the urban environment, including air and water pollution, flooding, and loss of wildlife and sensitive habitat. Greenways and green urban spaces can also provide a higher state of well-being due to the additional area for recreation, therapeutic qualities of nature, and stronger community connections. As shown along the Midtown Greenway, they can also be a contributing factor to economic development.

### Purpose

While there are several existing greenways in Minneapolis, the City does not currently have a process for identifying, prioritizing, and implementing greenways. The City has no singular, broadly understood definition of the term greenway. At the same time, there are groups organizing support for new greenways to be built in Minneapolis. One of the reasons the City of Minneapolis undertook this study is to document these community-driven initiatives as well as existing greenways in the city to provide a framework for addressing requests and potential development of greenways moving forward.

The purpose of the Greenways study is to document and present information on existing policy guidance, existing greenways, community-driven greenway initiatives, greenways in other cities, and a future framework for planning and implementing greenways in Minneapolis, including recommended greenway typologies. This study is not intended to identify capital improvement projects related to the development of any specific greenway project.

## [Study Organization](#)

This document is organized into six sections.

### **Section 1: Introduction – Page 2**

This section provides an overview of the study including its overall purpose.

### **Section 2: Existing Minneapolis policies, plans, and capital programs related to greenways – Page 4**

This section describes existing policies, plans, and capital programs related to greenways in Minneapolis. Much of the guidance relates more broadly to multimodal transportation options.

### **Section 3: Overview of existing greenways in the City of Minneapolis – Page 7**

This section includes examples of several existing greenways, including the following:

- Midtown Greenway
- 37<sup>th</sup> Ave N Greenway
- Milwaukee Avenue
- Dinkytown Greenway
- Hiawatha LRT Trail
- Loring Greenway

### **Section 4: Overview of current community-driven greenway efforts – Page 22**

This section documents four community-led greenway initiatives:

- Great Northern Greenway
- Min-Hi Line
- North Minneapolis Greenway
- Southside Greenway

### **Section 5: Greenway development in other cities – Page 34**

This section documents case studies of successful greenway development in the following cities:

- Vancouver, British Columbia
- Indianapolis, Indiana
- New Orleans, Louisiana
- Atlanta, Georgia
- Portland, Oregon
- Ghent, Belgium

### **Section 6: Future framework – Page 48**

This section provides options to move forward with greenway development in the City of Minneapolis, including four recommended greenway typologies and next steps:

- Trails
- Protected bikeways
- Neighborhood greenways: bicycle boulevard
- Neighborhood greenways: full greenways

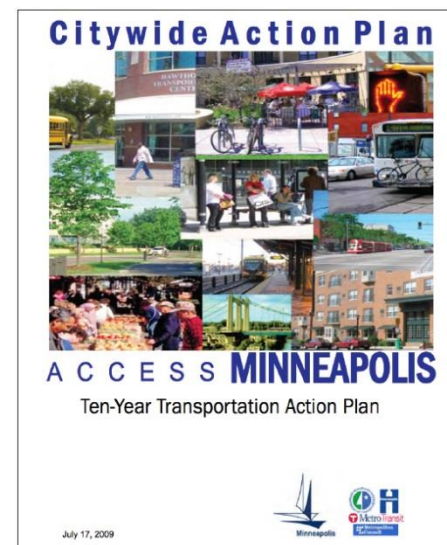


## Section 2: Existing Minneapolis Policies, Plans, and Capital Programs Related to Greenways

This section of the study describes existing policies, plans, and capital programs related to greenways in Minneapolis. Much of the guidance relates more broadly to multimodal transportation options.

### Planning documents

- Comprehensive Plan (2009, draft update started in 2018)
  - The current City of Minneapolis Comprehensive Plan, the Minneapolis Plan for Sustainable Growth, was adopted in 2009. The plan does not specifically address greenway development, but includes policies around land use, transportation, and urban design.
  - In 2017, the City began an update to the comprehensive plan called Minneapolis 2040. The draft plan is currently out for public comment. While the draft comprehensive plan does not specifically offer policy direction for the development of greenways, it does have a focus on transportation equity and reinforces the City's Complete Streets Policy that prioritizes walking, bicycling, and transit over motor vehicles. The draft language (Policy 10) calls out restoring the street grid as a priority, which in some cases may mean "new and restored access for people walking, bicyclists, or people riding buses only."
- Access Minneapolis (2007-2015)
  - Access Minneapolis is the City of Minneapolis' Ten-Year Transportation Action Plan. It is made up of six plan components: Downtown Action Plan (2007), Citywide Action Plan (2009 and amended in 2017), Design Guidelines for Streets and Sidewalks (2008), Streetcar Planning (2010), Pedestrian Master Plan (2009), and the Bicycle Master Plan (2009, with an update addressing protected bikeways in 2015).
  - Access Minneapolis addresses or has implications for greenways in the following ways:
    - The Citywide Action Plan states that "The city will seek to retain and enhance the city's grid system of streets."
    - The Bicycle Master Plan includes several greenways in Minneapolis, such as the Midtown Greenway and the River Lake Greenway, as important parts of the citywide bicycle network. The plan also includes a recommendation to "create a network of "greenways" or "green streets" where roadways are converted to bicycle and pedestrian only corridors (page 184). It also notes that greenway corridors may be constructed in collaboration with stormwater management projects. The plan also recommends "bicycle boulevard/long term greenway" as



a bikeway type on Bikeways Master Plan Map (page 4). The City has implemented several bicycle boulevards based on this designation in the plan, but has not implemented a long term greenway. Further guidance on converting bicycle boulevards to long term greenways is not included in the plan.

- The Protected Bikeway Update to the Bicycle Master Plan outlines a network of up to 48 miles of bikeways or protected bikeways. The identified corridors were considered to be near-term priorities and emphasized connections to downtown from surrounding neighborhoods. The network also connects the regional trail system to everyday destinations along corridors with high bicycle demand and high traffic conflict. While not always defined as greenways, protected bikeways and trails have similar benefits and are complementary to greenways.
- The Pedestrian Master Plan does not address or offer future policy guidance for greenways.
- The Street and Sidewalk Design Guidelines provide guidance on selecting bicycle facilities. Chapter 11: Bicycle Facility Design was published under separate cover as the Bicycle Facility Manual. Chapter 2 of the Bicycle Facility Manual offers guidance on selecting a bicycle facility. Bicycle boulevards/on-street greenways are recommended for streets under 2,000 ADT (Page 10). Chapter 3: Off-Street Facilities and Chapter 4: On-Streets Facilities do not have specific guidance for greenways. The chapters indirectly provide guidance on greenways in the context of trails and on-street bicycle boulevards.

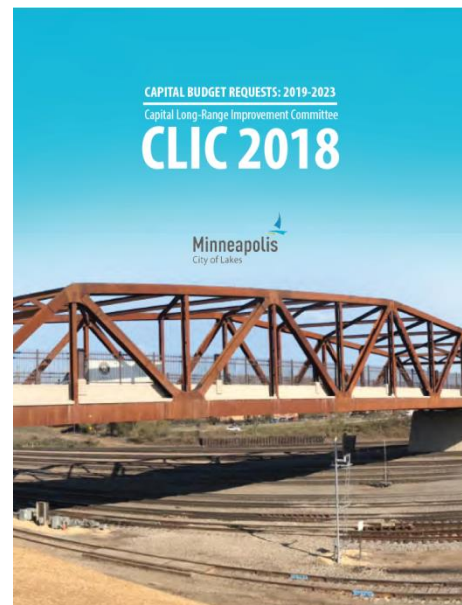
➤ Transportation Action Plan (2018-2019)

- The update to Access Minneapolis is underway. The Transportation Action Plan will build on information from this study and incorporate lessons learned into policy and action items. The update will replace Access Minneapolis and will include the following components: pedestrian, bicycle, transit, street operations, freight, advanced mobility, and street and sidewalk design guidelines. This is an opportunity to incorporate guidance on greenways.

### Capital programming

The City of Minneapolis has a five year Capital Improvement Program (CIP) that outlines infrastructure improvements, including street paving and resurfacing, sidewalks, bridges, traffic control and street lighting, bicycle and pedestrian projects, sanitary sewers, storm sewers, water infrastructure, and more. More information can be found in the [2018 Capital Long-Range Improvement Committee book](#).

While the CIP does not have a specific program for greenways in Minneapolis, there are opportunities to implement greenways



via street reconstruction projects, bicycle and pedestrian programs, flood mitigation, or other sources as opportunities arise.

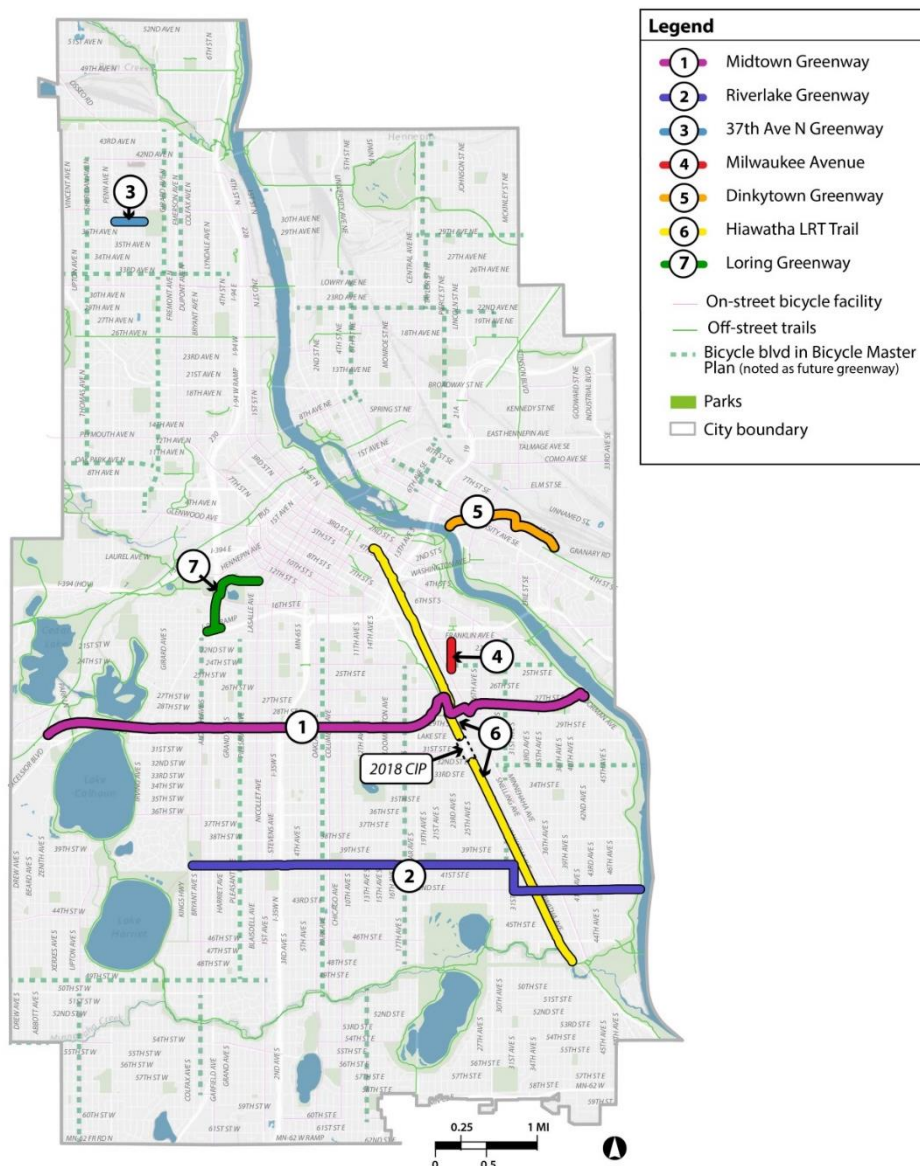
- Street reconstruction
  - The CIP includes standalone reconstruction projects and a residential street reconstruction program. 26th Ave N and 18th Ave NE were recently constructed with protected bikeways and are included in the Great Northern Greenway route (see Section 4).
- Street resurfacing
  - The CIP includes a concrete street rehabilitation and an asphalt resurfacing program.
- Pedestrian and bicycle programs
  - The CIP includes pedestrian and bicycle programs, including the Pedestrian Safety Program, Safe Routes to School, Protected Bikeway Program, Midtown Greenway Trail Mill & Overlay, Queen Ave N Bike Boulevard, and the 18<sup>th</sup> Ave NE Trail Gap.
- Flood mitigation – stormwater alternatives
  - The purpose of this program is to address localized flooding and drainage problems throughout the city. Where practicable, environmentally friendly green infrastructure stormwater practices such as rain gardens, bioswales, constructed wetlands, pervious pavements, and hard surface reduction will be utilized. Solutions for larger-scale drainage problems will look to incorporate underground storage, pipes and ponds with the above practices. A recent example is 37<sup>th</sup> Ave N Greenway.

## Section 3: Existing Greenways in Minneapolis

### Existing greenways inventory

This section describes existing greenways in the City of Minneapolis. By looking at the existing greenways and beginning to define them into typologies based on their characteristics, it helps frame potential ways to consider future greenways. Current examples range from fully separated greenways and trails, to residential street reconstruction projects designed to improve storm water management, and on-street bicycle boulevards.

This section features seven greenways or trails that could be considered greenways in the City of Minneapolis. A project sheet for each one includes an overview of the project, planning context, and a location map. There are also many other trails in the city that are not featured in this section.

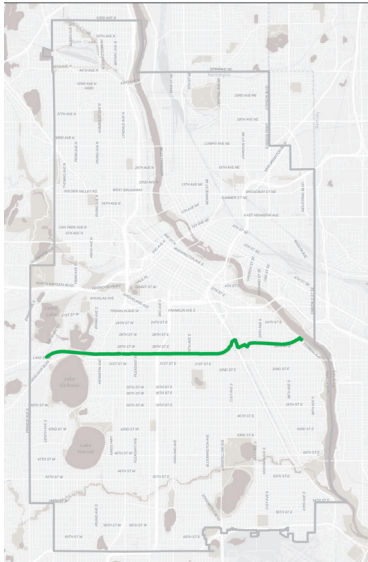




# Midtown Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### Location and extents

The Midtown Greenway is a major east-west trail in south Minneapolis. On the western end, it begins near the Chain of Lakes at the intersection of 31st St and Chowen Ave and connects to other major trails, including Kenilworth Trail and Cedar Lake Regional Trail. The Midtown Greenway terminates at West River Parkway.

##### Length

5.5 miles

##### Current ownership and maintenance

The trail is owned and maintained by the City of Minneapolis; the Right-of-Way is owned by Hennepin County Regional Railroad Authority.

##### Implementation

Phase 1: western edge of Minneapolis to 5th Ave S - 2000; Phase 2: 5th Ave S to Sabo Bridge Crossing - 2004; and Phase 3: Hiawatha Ave to West River Pkwy trail - 2006

##### Existing design elements

- Separated bicycle and walking trail
- Enhanced crossings at some intersections
- Grade separated at many crossings
- Art and pedestrian/bicycle amenities (benches, bike stations, gardens, wayfinding signage, and trail lighting) along corridor

##### Adjacent land uses

Commercial, residential, industrial, parks/lakes

#### PLANNING CONTEXT

The rail corridor was purchased by the Hennepin County Regional Railroad Authority for the original exploration of repurposing the site for local transportation in the form of streetcar or light rail transit line. The design of the grade separation, particularly west of Hiawatha Ave allowed for few crossings and conflicts with the existing street grid. The phased strategy of development allowed concepts to be tailored for each unique situation along the corridor with in-depth analysis for existing conditions in each segment.

The Midtown Greenway Coalition and community members are advocating for an extension of the greenway across the Mississippi River to connect with existing trails on the east side of the Mississippi River, as well as planned trails further into St. Paul.

Hennepin County has a Highways Safety Improvement Project (HSIP) project in 2020. The project will include trail crossing improvements such as durable high-visibility crosswalks, raised medians, curb extensions, ADA, sidewalk construction, and signal improvements.

The City plans to resurface phase 1 of the Midtown Greenway, from Chowen Avenue to 5th Ave S, in 2021.



*Rail corridor prior to greenway implementation*

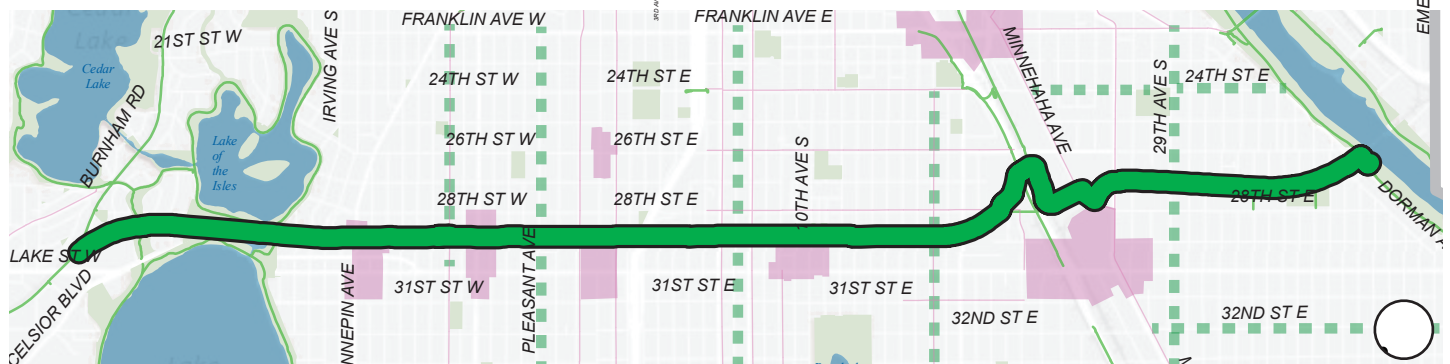


# Midtown Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
- Off-street Trails
- - - Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
- Parks
- City Boundary



Greenway with wayfinding signage

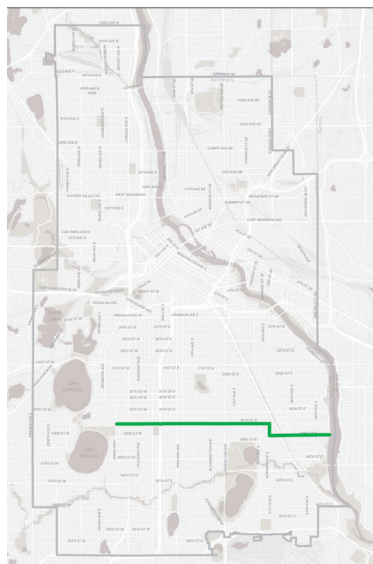


Bicyclists and pedestrians on the greenway

# Riverlake Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### Location and extents

The greenway is located along 40th St E/W and 42nd St E (midway between the Midtown Greenway and the Minnehaha Creek corridor) from W River Pkwy to Kings Hwy.

##### Length

~ 5 miles

##### Current ownership and maintenance

The greenway is owned and maintained by the City of Minneapolis.

#### PLANNING CONTEXT

The greenway project was developed as part of a community-driven project that was initiated in the mid-1990s. The goal was to create a green space and an alternative transportation route within existing right-of-way between the Midtown Greenway and Minnehaha Creek. The result was an east-west bicycle boulevard that runs along 40th St E from Kings Hwy to 30th Ave S and on 42nd St E from 30th Ave S to West River Pkwy, with additional connections along 30th Ave S and Nokomis Ave.

The Riverlake Greenway was the city's first bicycle boulevard and was paid for largely through federal Transportation Enhancement funding and federal Non-Motorized Transportation Pilot funds. Minneapolis is one of four cities across the country that received \$25 million as part of a 2005 federal Non-Motorized Transportation Pilot Program to encourage biking and walking infrastructure.

The 40th St E pedestrian bridge over I-35W is being reconstructed as a part of the 35W@94: Downtown to Crosstown project.

42nd St E, from 46th Ave S to West River Parkway, is scheduled to be reconstructed in 2021 as a part of the Residential Reconstruction Program.

#### Implementation

2011

#### Existing design elements

- Medians at major intersections where cars must turn and bicyclists and pedestrians can continue straight ahead
- Curb extensions to make street crossings safer and easier
- Pedestrian "refuge islands" to aid street crossings
- Fewer stop signs so that bicycles do not have to stop at every corner
- Large "bike boulevard" pavement markings
- New bike lanes along 42nd Street E, from Nokomis Ave to Minnehaha Ave
- Sharrows, or shared lane markings, along 42nd St E, from Minnehaha Ave to West River Pkwy
- Bumpouts of intersection corners that reduce the length of crosswalks

#### Adjacent land uses

Commercial and residential

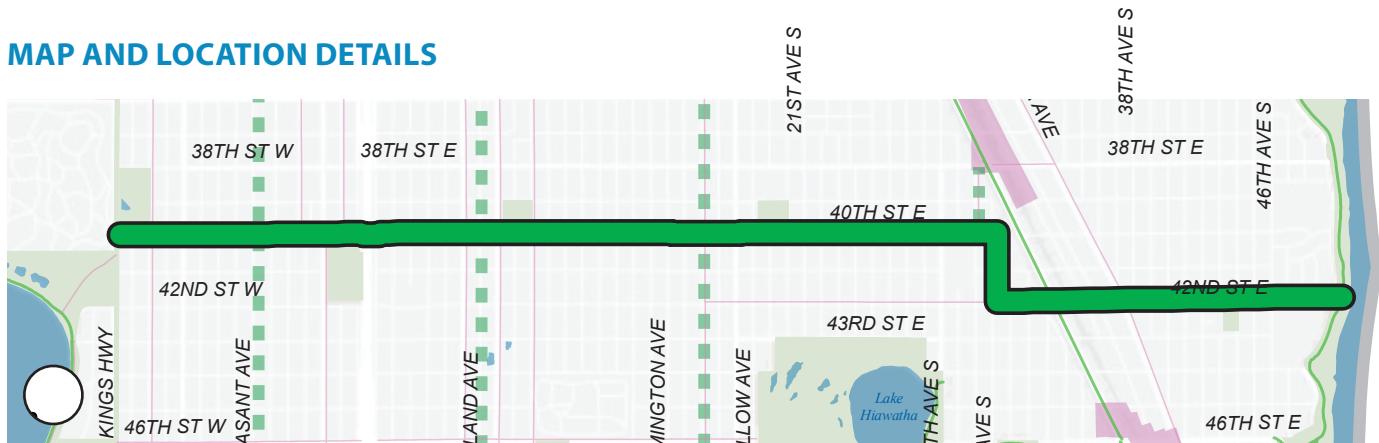


# Riverlake Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
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Photo of Riverlake Greenway at a traffic diverter



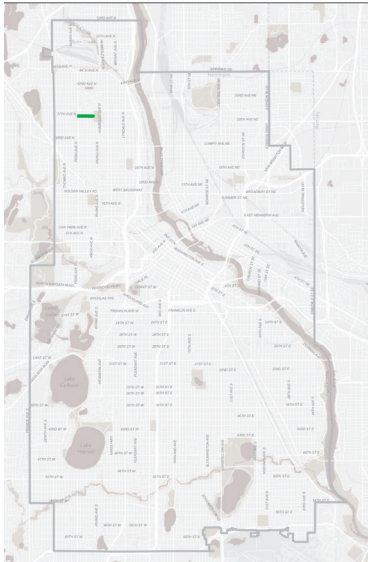
Photo of Riverlake Greenway at a median crossing



# 37th Ave N Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### Location and extents

The greenway is located on 37th Ave N between Penn Ave N and Knox Ave N.

##### Length

0.25 miles

##### Current ownership and maintenance

Milwaukee Ave has a H.O.A. and owns and maintains parking lots for its residents.

##### Implementation 2011

##### Existing design elements

- Multi-use trail adjacent to rain gardens
- Contraflow bike lane and shared bikeway for two blocks

##### Adjacent land uses

Residential

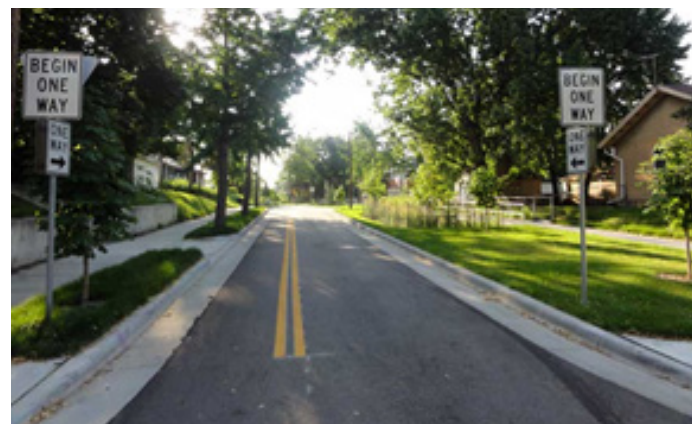
#### PLANNING CONTEXT

The 37th Ave N Greenway was implemented as a stormwater storage solution. A 50-acre residential neighborhood in North Minneapolis regularly experienced street flooding during large rain events with runoff discharging into an impaired water body. The City of Minneapolis addressed both issues by creating a multi-block greenway.

In 2011, six blocks of paved street were removed so that precast concrete boxes could be placed underground as flood storage detention cells. Almost 1,400 lineal feet of underground basins now protect homes from a 100-year flood event. Along with the removal of portions of the street to provide underground flood storage, the project installed a greenway with trees, 11 rainwater gardens, and a trail for pedestrians and bicyclists on three blocks. On another two blocks, the road was narrowed to a single travel lane with a contraflow bike lane and traffic calming elements. The corridor mitigates flooding and removes pollutants from 25 acres before discharging to Crystal Lake in Robbinsdale.



Greenway segment with adjacent rain gardens



Contraflow bike lane and shared one-way travel lane

# 37th Ave N Greenway

## City of Minneapolis Greenway Project

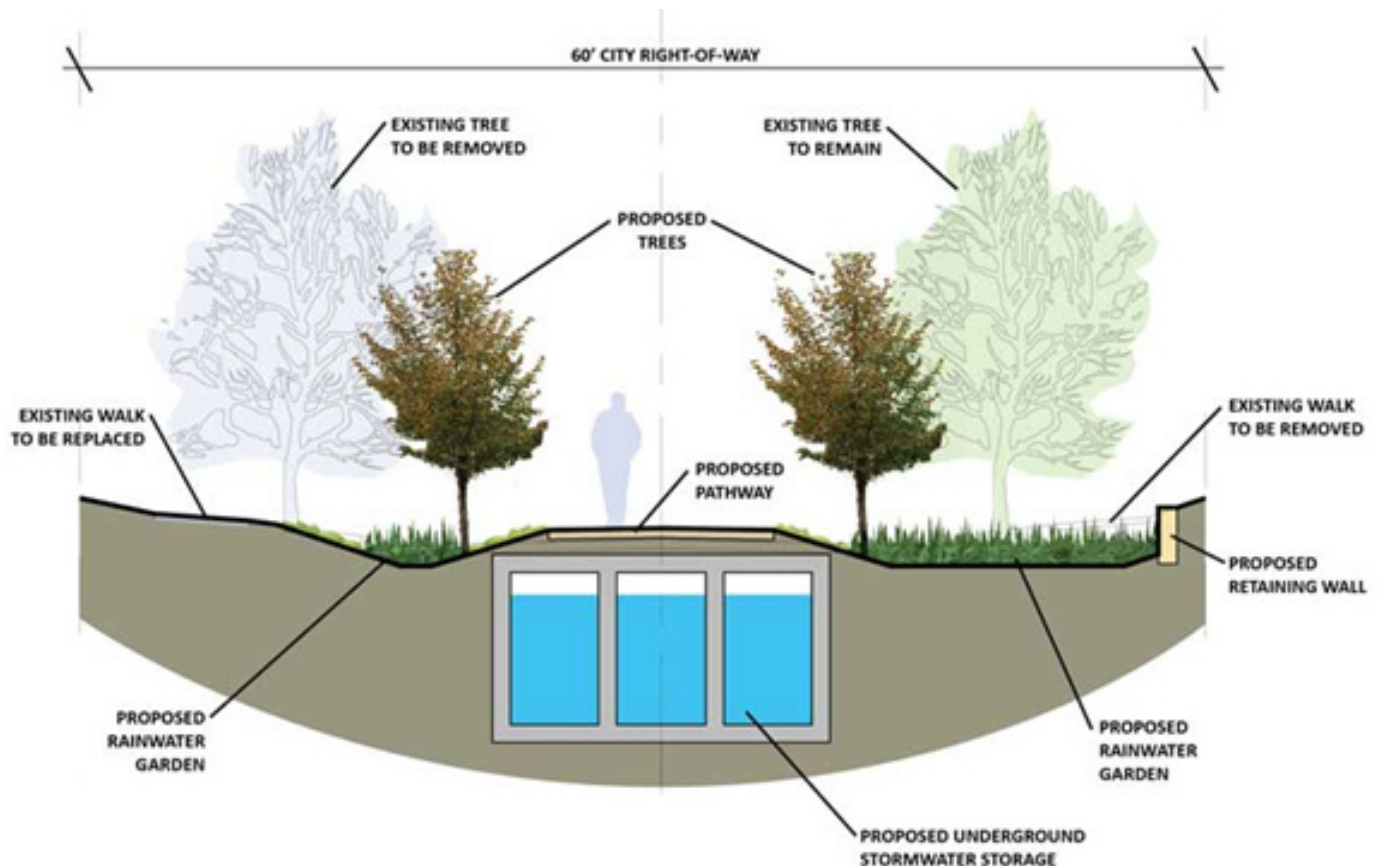
### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
- Off-street Trails
- Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
- Parks
- City Boundary

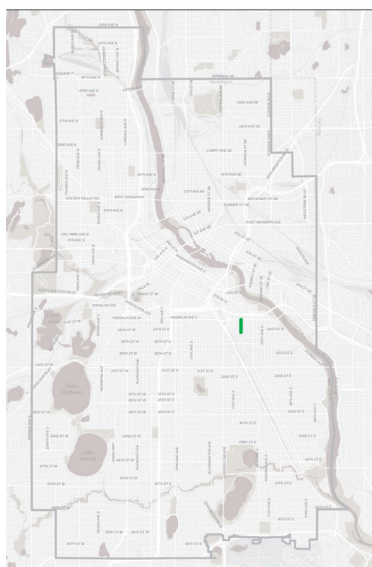


Cross section of stormwater capture system below the greenway - shown as proposed

# Milwaukee Avenue

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### Location and extents

The greenway is located on Milwaukee Ave beginning just south of Franklin Ave E and ending at 24th St E.

##### Length

0.2 miles

##### Current ownership and maintenance

The right-of-way is owned and maintained by the City of Minneapolis.

#### Implementation

Milwaukee Avenue was listed on the National Register of Historic Places in 1974. The rehabilitation of homes began in 1975.

#### Existing design elements

- Pedestrian walking path and park amenities
- Car-free

#### Adjacent land uses

Residential

#### PLANNING CONTEXT

In the late 1880s, Milwaukee Ave was a small low-cost housing development for immigrant workers in the city and the narrow street was part of the original development design. In 1970, the houses were planned to be demolished as part of an urban renewal project. The neighborhood opposition to the demolition led to the development of the Seward West Project Area Committee (PAC) which successfully campaigned to gain control in advising the urban renewal process in 1971. In 1973, several PAC and Minneapolis Housing and Redevelopment Authority (MHRA) members jointly formed the Milwaukee Avenue Planning Team. The area was resurveyed to determine in the buildings could be saved.

On May 2, 1974, Milwaukee Ave received designation on the National Register of Historic Places. Subsequently, the Minneapolis Heritage Preservation Commission designated Milwaukee Ave a historic district in 1975. This protected the homes from demolition without a public hearing. PAC members advocated saving all but the housing that was beyond repair, blending new construction with restored structures to replace housing that was demolished, and the addition of a pedestrian walkway and green space to replace the narrow street.

Milwaukee Ave is now a pedestrian only space filled with green space, pedestrian paths, a playground, shared parking spaces, and several mature trees.

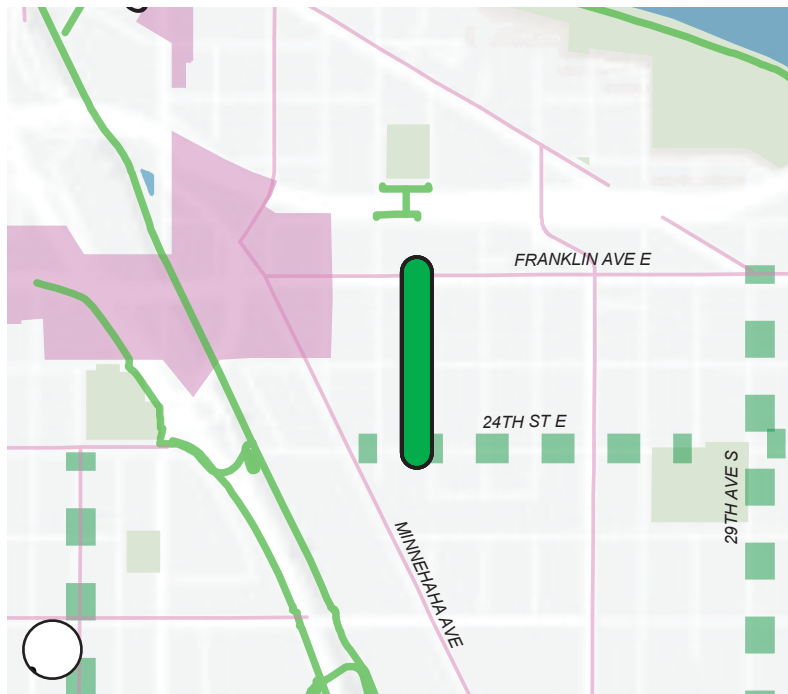


# Milwaukee Avenue

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
- Off-street Trails
- - - Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
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Milwaukee Ave in the 1970's

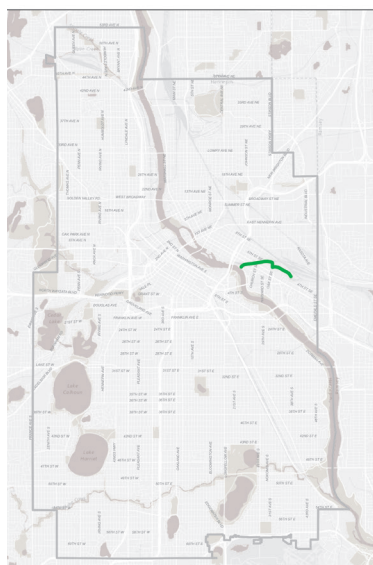


Present day Milwaukee Ave

# Dinkytown Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### Location and extents

The greenway is located on the University of Minnesota's East Bank Campus from the Mississippi River to the University's Transitway.

##### Length

1.9 miles

##### Current ownership and maintenance

The greenway is owned and maintained by the City of Minneapolis and the University of Minnesota.

##### Implementation

2014

##### Existing design elements

- Two-way shared use bike and pedestrian path

##### Adjacent land uses

Commercial, residential, and industrial

#### PLANNING CONTEXT

The planning of the Dinkytown Greenway began in 1994, but was stalled due to BNSF Railway negotiations. Minneapolis Public Works studied development options following expressed interest in building a road where the Dinkytown Greenway is currently located. Assistance from the Metropolitan Design Center and input from University of Minnesota urban design graduate students led to the greenway concept. The project was included in an area plan created with the University District Alliance. The major barrier in the development of this greenway was cost and ownership issues associated with the BNSF property.

Completed in 2014, the 1.2 mile greenway runs within a railroad trench that cuts through the East Bank Campus and includes an old railroad bridge previously used by Northern Pacific Railroad (Bridge 9). The bridge that spans the Mississippi River was converted into a bike/pedestrian bridge.

Similar to the Riverlake Greenway, the Non-Motorized Transportation Pilot Program helped fund the project.

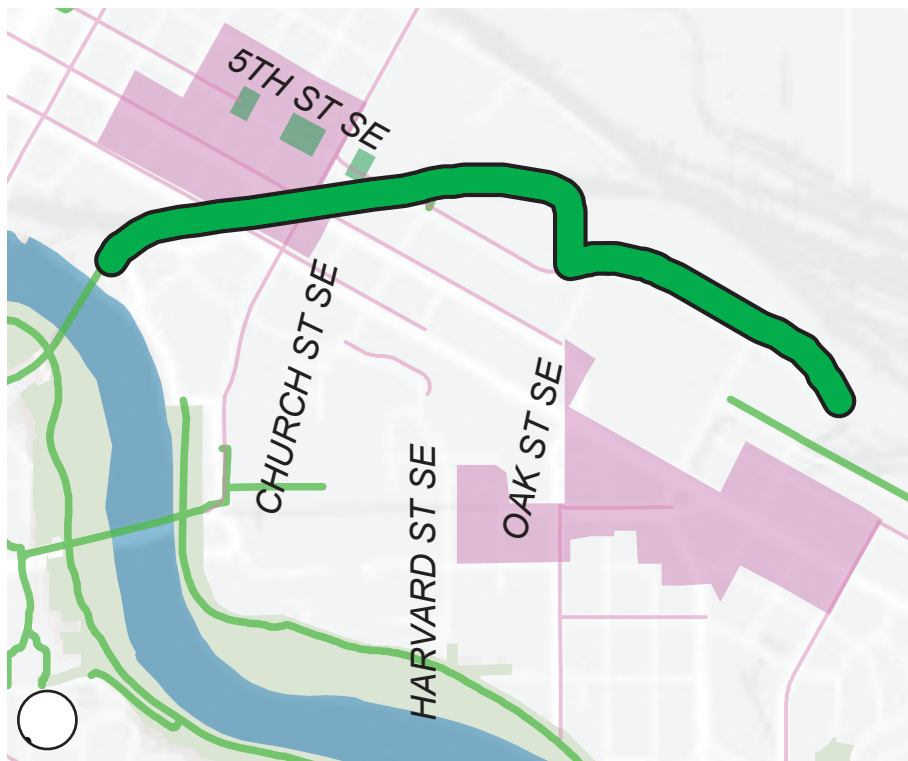


# Dinkytown Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
- Off-street Trails
- - - Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
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Shared use bicycle and pedestrian path on greenway

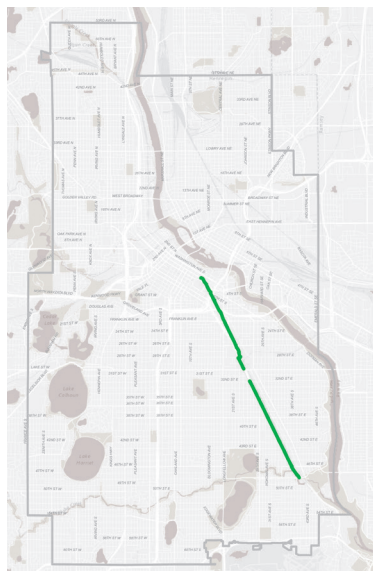


A bicyclist on the two-way shared use bicycle and pedestrian path

# Hiawatha LRT Trail

## *City of Minneapolis Greenway Project*

### City of Minneapolis Greenways Study



#### PROJECT OVERVIEW

##### **Location and extents**

The northern extent of the trail terminates on 3rd St S at Norm McGrew St in Downtown Minneapolis, and continues along the east side of Hiawatha Ave to 28th St E. The trail shifts to the west side of Hiawatha Ave and continues south to Minnehaha Creek.

##### **Length**

4.7 miles

##### **Current ownership and maintenance**

The trail is owned by Metropolitan Council and is maintained by the City of Minneapolis (snow removal/lighting).

##### **Implementation**

1999

##### **Existing design elements**

- Multi-use trail
- Public art and pedestrian/bicycle amenities (benches, bike stations, gardens, wayfinding signage, and trail lighting) along corridor

##### **Adjacent land uses**

Commercial, residential, and industrial

#### PLANNING CONTEXT

The trail development was part of the Light Rail Transit (LRT) Project. The Hiawatha LRT Trail is a bicycle and pedestrian trail along an active light rail corridor. The northern portion is a shared-use path on the east side of Hiawatha Ave. The southern portion of the trail shifts to the west side of Hiawatha Ave, south of 28th St E and is a concrete shared-use path.

Near term projects include signal enhancements for crossing Hiawatha Ave, constructing a trail extension from 28th St E to 32nd St E, and a trail signalization project at 26th St E.



*Picture of Hiawatha Trail*

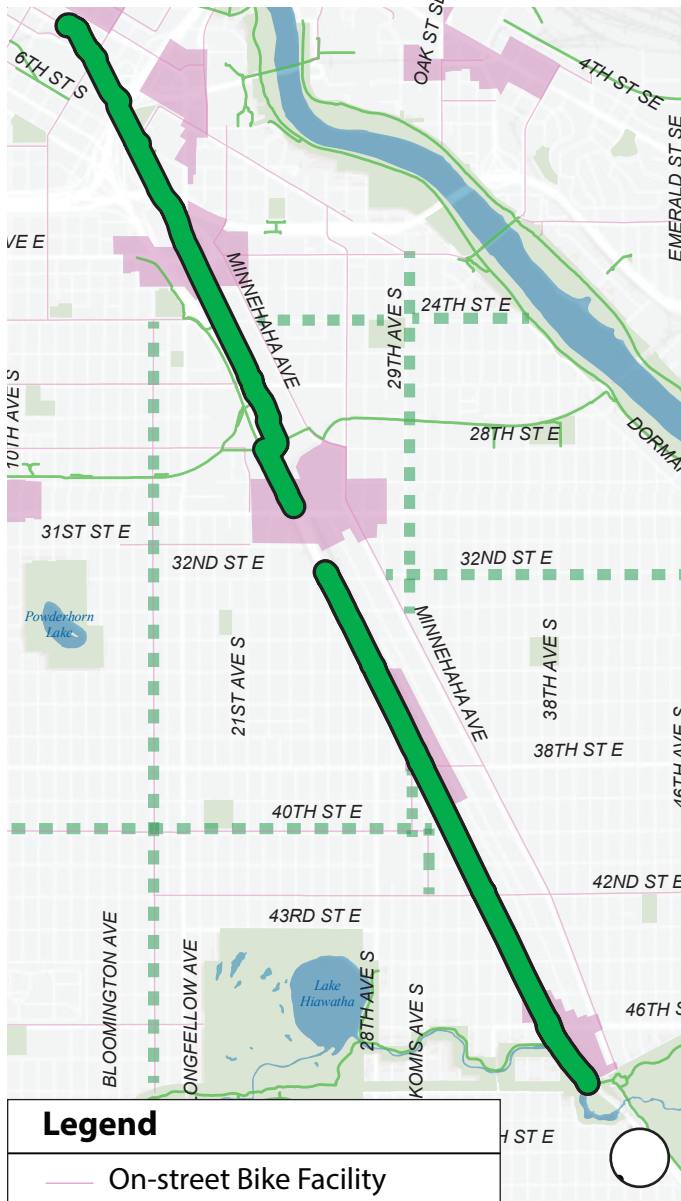


# Hiawatha LRT Trail

## City of Minneapolis Greenway Project

City of Minneapolis Greenways Study

### MAP AND LOCATION DETAILS



#### Legend

- On-street Bike Facility
- Off-street Trails
- - - Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
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Picture of Hiawatha Trail at 24th St E



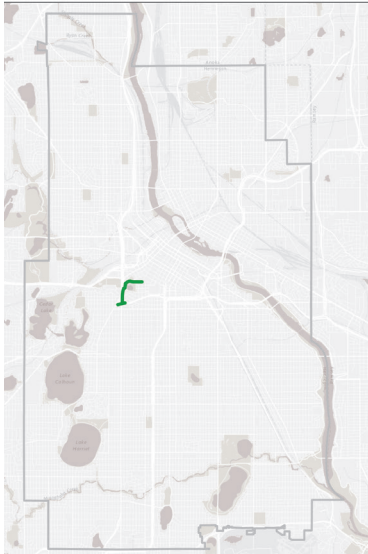
Picture of Hiawatha Trail at 28th St E



# Loring Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study



1 mile

#### Current ownership and maintenance

The trail is owned and maintained by the City of Minneapolis, with volunteer gardening performed by the Friends of Loring Greenway.

#### Implementation

1970's

#### Existing design elements

- Off-street trail and gardens

#### Adjacent land uses

Residential and park

### PROJECT OVERVIEW

#### Location and extents

North of Grant St W, the Loring Greenway connects to Nicollet Mall on its eastern edge and Loring Park on its west. Walking and bicycling paths continue through the park and along Lyndale Ave to a pedestrian and bicycle bridge connecting to the Bryant Ave S bicycle boulevard.

#### Length

### PLANNING CONTEXT

The Loring Greenway is part of a 10-block urban renewal project in the 1970's. The Loring Park Development District was a comprehensive effort to attract middle- and upper-income residents into the inner city, in a process which led to development proposals for an area seen as one in decline at the city center's edge. The City Council officially created the District in 1972 via tax-increment financing.

In 1973, The Metro Center '85 plan noted the potential for high density residential redevelopment around Loring Park. The plan intended to compete with what was seen as the desirable suburbs through specific open space, building design and orientation, and security. The City's Urban Design plan identified the Loring Greenway in its current location as a major open space and residential walkway, connecting to a narrow pedestrian shopping mall on the eastern edge with a bus stop below on Lasalle Ave and the remaining portion accommodating different recreational activities. Apartment courtyards would connect directly to the greenway through pedestrian entries.

The actual design of the building did not follow the plan in regards to size and orientation, with townhouses clustered in one area and the retail shopping area.

In 2005, a pedestrian/bike bridge was constructed over Lyndale Ave S, connecting the Loring Greenway to the Bryant Ave S Bicycle Boulevard.

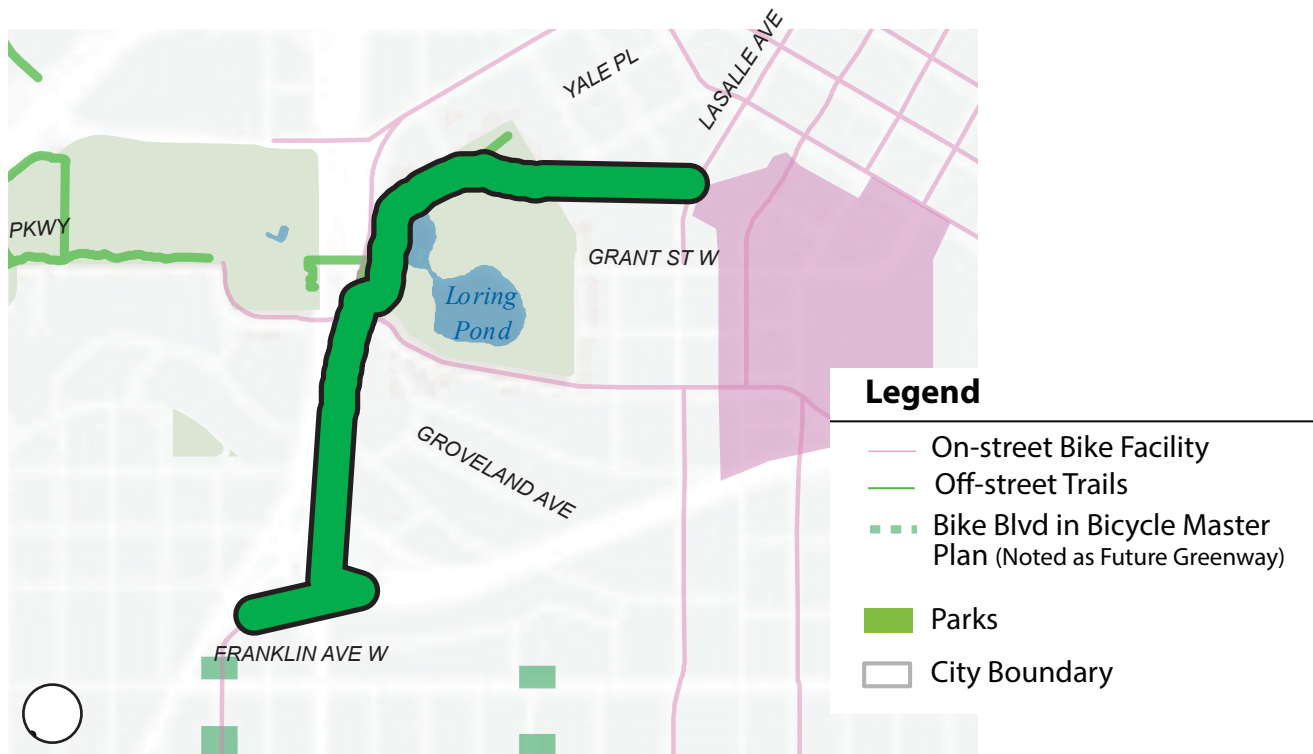
The Loring Greenway, from Loring Park to the Bryant Ave S pedestrian/bike bridge was improved to provide separation between pedestrians and bicyclists as a part of the Hennepin/Lyndale reconstruction project in 2016.

# Loring Greenway

## City of Minneapolis Greenway Project

### City of Minneapolis Greenways Study

#### MAP AND LOCATION DETAILS



Pedestrians and bicyclists on the greenway (Photo: <https://loringgreenway.org/>)

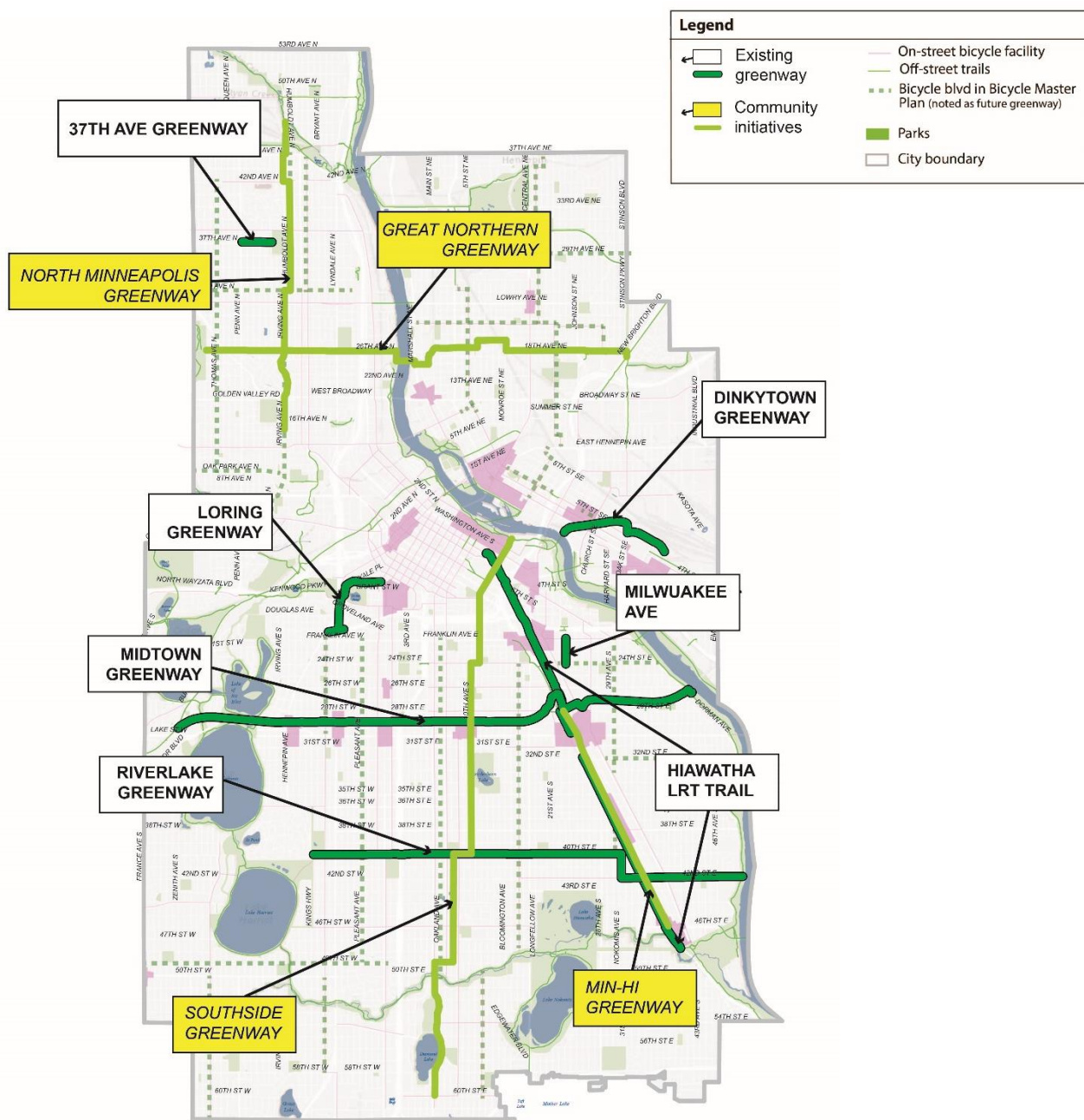


Pedestrians on the greenway

## Section 4: Community-Led Greenway Initiatives

### Overview of community-led greenway initiatives in Minneapolis

This section documents four community-led greenway initiatives. These community-led greenway initiatives have an organized group of residents building support for a greenway along a particular corridor in Minneapolis. The groups organizing support for the greenways have identified priorities and have a vision for the respective corridors. The following map shows locations of community initiatives documented in this study, as well as an inventory of existing greenways in Minneapolis today.





### Community greenway initiative focus group

Public Works hosted a focus group with representatives from the four community-led greenway initiatives on November 14, 2017. The purpose of the focus group was to gather feedback from participants regarding their desires for their greenway initiative.

Initially, Public Works reached out to an additional greenway initiative, known as the Urban Paradise Project (UPP), but that group was unreachable at first. Public Works staff met with members of UPP on November 8, 2018. The project runs along 45<sup>th</sup> Ave S from Dorman Ave to E Lake Street. The project envisions closing off a portion of the street to motor vehicles and converting the streets to include permeable pavers, underground stormwater management, perennial gardens, pedestrian paths, benches, and other opportunities for shared spaces. Members of the group have been meeting since February 2015 and have engaged their neighbors in a variety of ways, including a Facebook page, Minneapolis Open Streets, and National Night Out. They have also hosted fund raisers and other events. The project is envisioned to inspire similar projects in neighborhoods across Minneapolis.

During the focus group, a member of another greenway initiative brought up the Granary Corridor, which would connect the Stone Arch Bridge to the Dinkytown Greenway, and then extend further east along the Burlington Northern Santa Fe railroad into St. Paul. There have been studies in the past that have explored the benefits and costs of improvements to the corridor. The corridor is marked as a trail connection in the Minneapolis Bicycle Master Plan. The Granary Corridor was not included in this study for two reasons: 1) there are several similar planned trails in Minneapolis that haven't been constructed and 2) the greenway initiatives featured in this section have groups actively meeting and advocating for greenways.

### **Attendees**

12 representatives from the four community initiatives came to the focus group meeting. Representatives included those working on outreach and planning for the projects, as well as community members and residents along the proposed greenway corridors.

### **Common themes from the focus group**

- **Vision.** The vision for the infrastructure varied significantly across participants, including a full greenway, to bike boulevards and rail to trails.
- **Prioritizing walking and bicycling.** A core theme was to prioritize space for walking and bicycling over motor vehicles.
- **Separation of modes.** Separation or removal of motor vehicles from pedestrians and bicyclists was commonly noted as important, as well as separation between non-motorized modes.
- **Greenway identity.** The term greenway was largely viewed positively by participants. Branding a project with the term greenway and developing an identity for a particular corridor can help create a sense of place. Elements that can help build an identity of a greenway include wayfinding signage, public art, benches, etc.
- **Commercial growth.** There were two viewpoints on the benefits and challenges of connections between greenways and commercial growth. Some were excited about potential development

opportunity in conjunction with the prospect of new greenways, while others were concerned about gentrification and displacement.

### **North Minneapolis Greenway summary**

The proposed North Minneapolis Greenway is an approximately 3.5 mile north/south route from Humboldt Ave N and 47th Ave N to Irving Ave N and 15th Ave N. The idea for this project came from residents who wanted to see a greenway built in North Minneapolis. A significant amount of grassroots engagement has taken place around the idea for several years.

Since 2012, the Minneapolis Health Department has been exploring the possibility of the North Minneapolis Greenway. In 2016, the City installed a year-long temporary greenway on five blocks of the proposed North Minneapolis Greenway route and conducted an extensive evaluation of the project. The temporary greenway tested three different designs, including a one-block full greenway, a three-block bike boulevard with community spaces, and a one-block half-and-half greenway. The City installed planters, benches, pavement markings/paint, posts, signs, and barricades on top of the existing street to create a greenway on a temporary basis.

Focus group participants emphasized health equity and safe/accessible transportation options for residents as top priorities. Members of the focus group noted a strong preference for a full linear greenway, which would eliminate motor vehicle traffic and allow space for trails, green space, community gardens, and playgrounds along the corridor. Other designs, including a half-and-half greenway and bike boulevard, were not as desirable unless there was a specific need for motor vehicle access. A highlight of the greenway is the strong connections to schools and parks.

### **Great Northern Greenway Summary**

The proposed greenway is an east/west route from Theodore Wirth Park through North Minneapolis along 26<sup>th</sup> Ave N, across the Mississippi River and through NE Minneapolis roughly along 18<sup>th</sup> Ave NE, ending at the Diagonal Trail at the eastern terminus. The proposed corridor is nearly complete, with a protected bikeway along 26<sup>th</sup> Ave N and a trail along much of 18<sup>th</sup> Ave NE. Gaps in the 18<sup>th</sup> Ave NE trail will mostly be addressed via projects identified in the 2019-2023 CIP. The group felt that separated pedestrian and bicycle trails should be implemented in the remaining small gaps.

The primary remaining challenge is a lack of a pedestrian and bicycle connection across the Mississippi River, where there is currently a rail bridge. Advocates for the Great Northern Greenway have been in discussions with the owners of the railroad about the possibility of transitioning the bridge to accommodate pedestrians and bicyclists.

The group is also very interested in building an identity for the Great Northern Greenway. They envision a family-friendly corridor that connects people to green spaces and other destinations. They want to make sure that people have a sense that they are using a greenway. Participants expressed the opinion that an ideal greenway included more vegetation, wayfinding signage, and art than a standard pedestrian and bicycle path. This would build a sense of place and identity to draw people to the greenway.

### **Southside Greenway Summary**

The proposed corridor is a north/south route connecting 12 parks, starting with Gold Medal Park in downtown near the Mississippi River and ending by Pearl Park near the city's southern border. The rough route follows 11<sup>th</sup> Ave S in Downtown Minneapolis, continues to 10<sup>th</sup> Ave S near Powderhorn Park, and then down Park Ave S and Portland Ave S.

Members of the Southside Greenway group have been leading engagement efforts for several years. Participants of the focus group indicated a desire to learn lessons from engagement efforts from the North Minneapolis Greenway, particularly around community engagement. They acknowledged challenges with parts of the route, including parking needs and other competing demands for space in the right-of-way. The proposed greenway could be phased in areas as needs and community desires evolve. The greenway could include a combination of calmed streets/bike boulevards, protected bike lanes, and full greenways.

### **Min-Hi Line Summary**

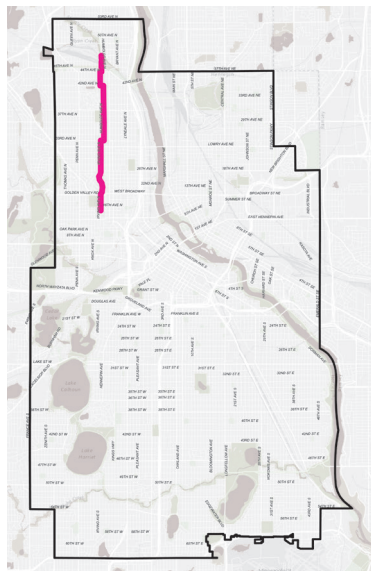
The proposed location of the Min-Hi Line is along an active freight rail line between Minnehaha Ave and Hiawatha Ave. This project would connect the Midtown Greenway and the trails at Minnehaha Regional Park. Focus group participants saw the Atlanta Belt Line as an attractive example of what the corridor could become. The group did not feel that the Min-Hi Line should be branded as a greenway, which could detract from the vision of being a linear park. The group felt it was important to brand the corridor to make sure that the space appears and stays public, particularly as development occurs. Their biggest concern is missing opportunities to have the space reserved for a trail when the rail is no longer in use.

# North Minneapolis Greenway

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### INITIATIVE OVERVIEW



##### Approximate extents

The proposed greenway runs along Irvine and Humboldt Aves N from Shingle Creek to the north and 15th Ave N to the south.

##### Approximate length

3.5 miles

##### Existing conditions

Current conditions include low-volume residential streets with sidewalks along the corridor.

##### Efforts to date

A group called the Northside Greenway Council meets

monthly regarding the greenway. The Minneapolis Health Department and Public Works collaborated on a 12-month pilot in 2016 and 2017.

Multiple treatments have been tested via a 12 month pilot in 2016 and 2017, including a full greenway, a partial greenway, and bike boulevards. The temporary demonstration for five blocks was conducted from Folwell Park to Jordan Park. The purpose of the demonstration was to give residents and the City an opportunity to evaluate how the greenway works and assess interest in a permanent greenway.

The Minneapolis Health Department recently completed the evaluation report of the temporary greenway. Results show that most people (73% of the respondents) who lived along the temporary greenway would like some sort of greenway on their street.

##### Proposed design elements

- Full or partial greenway that increases space for pedestrians and bicyclists while reducing or eliminating motorized traffic and parking
- Bicycle boulevard enhancements

##### Additional details

During the focus group discussion, greenway advocates mentioned concerns of gentrification along the greenway corridor due to potential increased development, land values, and public interest in the area.

#### CITY OF MINNEAPOLIS PLANNING CONTEXT

##### City of Minneapolis planning documents

- The 2011 Minneapolis Bicycle Master Plan identifies the proposed corridor as a bicycle boulevard/long term greenway.

##### Capital improvement projects (2019-2023)

- There are no current plans to include permanent infrastructure for the project in the capital improvement program (CIP).
- In 2017, the Bicycle Advisory Committee and Pedestrian Advisory Committee included infrastructure recommendations for the 2018-2022 CIP.

#### CHALLENGES/GAPS

- The various rounds of community engagement have found strong support for a greenway, but further outreach would be needed to identify appropriate designs along the corridor.
- Converting a street to a full greenway would require special accommodations for issues such as Metro Mobility and deliveries.

#### PROPOSED FUTURE PLANNING

- Continued outreach and engagement on the greenway and survey results from the temporary demonstration is being conducted by an advocacy group called Northside Greenway Now.

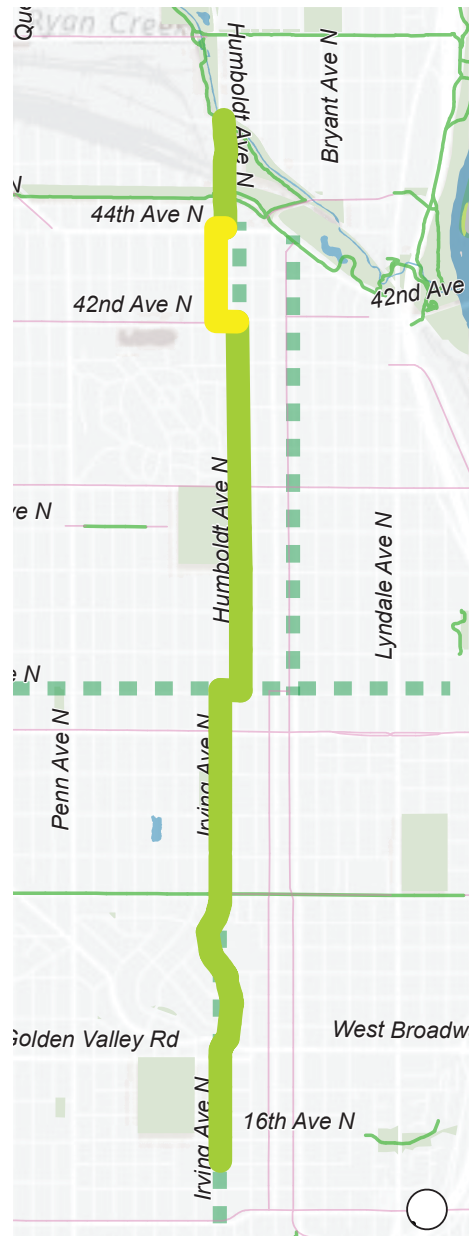


# North Minneapolis Greenway

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### PROJECT MAP



#### Legend

- Proposed-No planned bike/ped facility
- Proposed-Bike facility identified in Bicycle Master Plan
- Existing bike/ped facility
- Parks
- City Boundary
- On-street Bike Facility
- Off-street Trails
- - - Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)

#### PROJECT IMAGERY



#### Northside Greenway Now

@northsidegreenwaynow

#### Home

About  
Photos  
Events  
Likes  
Videos  
Posts

Create a Page



#### Northside Greenway Now

August 30 at 3:47pm · Minneapolis ·

Here's a more accurate representation of what the Northside Greenway could look like with actual grass. I really wish we could have thrown you guys a sod block party this summer on the temp Greenway, but money did not permit.

Notice the greenery from curb to curb. If you would like to see more pictures please let us know.

(Pics from 2015 engagement)



Proposed Northside Greenway from the 2015 community-led engagement



Segment of the Northside Greenway demonstration



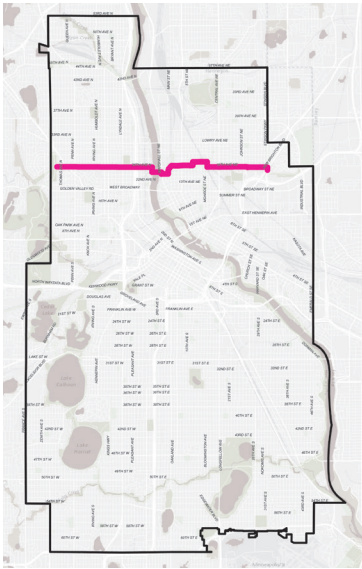
# Great Northern Greenway

## Community-Led Greenway Initiative

Minneapolis  
City of Lakes

### City of Minneapolis Greenways Study

#### INITIATIVE OVERVIEW



#### Approximate extents

The proposed greenway is located along 26th Ave N in North Minneapolis and 18th Ave in Northeast Minneapolis. The greenway extends from N Theodore Wirth Pkwy to the Diagonal Trail.

#### Approximate length 4.5 miles

#### Existing conditions

A majority of the greenway corridor is already built with sidepaths or protected bikeways. Connections include an existing protected bikeway along 26th Ave N, shared

bikeway (sharrows) on California St NE/16th Ave NE/Monroe St NE/19th Ave NE/6th St NE, existing trail/sidepath along 18th Ave, protected bikeway along 18th Ave NE, trail/sidepath between California and 6th St NE on 18th Ave NE only marked for bicyclists, shared use sidepath along 18th Ave NE between the US Post Office east of Johnson St and west of Stinson Blvd.

#### Efforts to date

Formal conversations about the Great Northern Greenway began in 2014. A steering committee composed of residents, neighborhood organization staff, staff from Minneapolis River Front Partnership, and advocates meets monthly to discuss the greenway's progress. The bridge across the Mississippi River crossing is still being explored by the group as they advocate for the connection of the North and Northeast corridors.

#### Proposed design elements

- Off-street multi-use trail
- Greenway amenities such as public art and wayfinding

#### Additional details

During focus group discussions, greenway advocates cited examples of other greenways that have led to more

- development and increased revenue from greenway development as one of the interested outcomes of the greenway.

#### CITY OF MINNEAPOLIS PLANNING CONTEXT

##### City of Minneapolis planning documents

- The route for this project is identified in the Minneapolis Bicycle Master Plan.

##### Capital improvement projects (2019-2023)

- The 18th Ave NE Trail Gap, from Marshall St NE to California St NE is scheduled for construction in 2022.
- 18th Ave NE, phase 2, is scheduled for a reconstruction in 2020 from Johnson St NE to Stinson Blvd NE.
- In 2017, the Bicycle Advisory Committee and Pedestrian Advisory Committee included infrastructure recommendations for the 2018-2022 CIP.

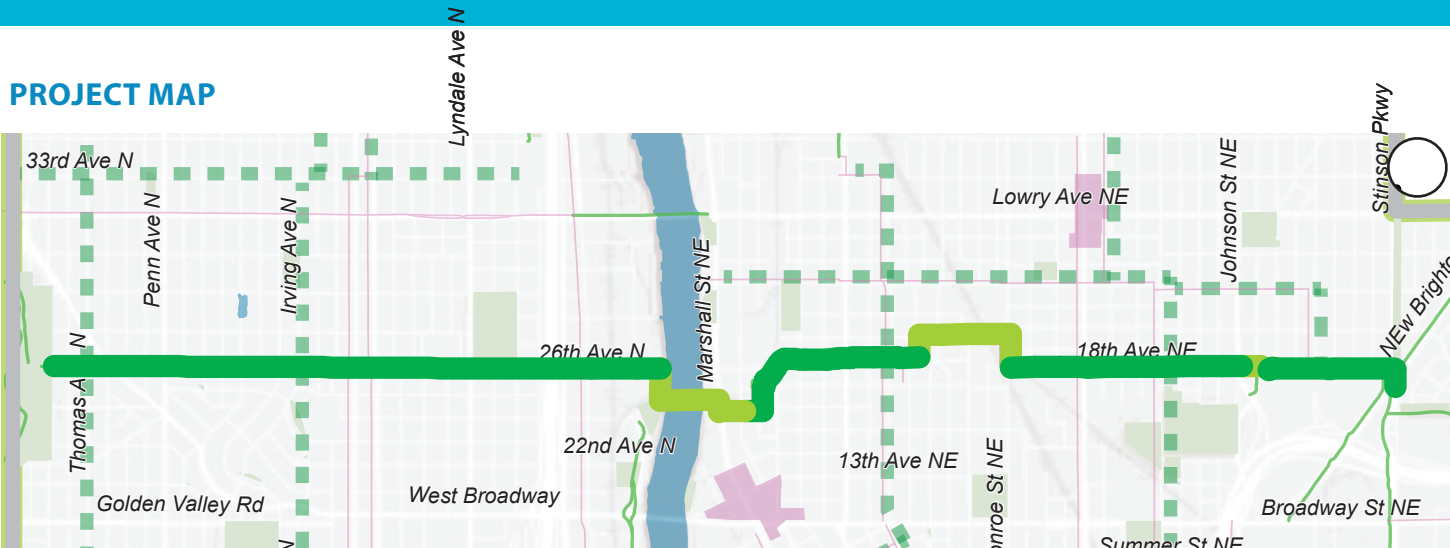
#### CHALLENGES/GAPS

- Gaps exist between 3rd St N and Mississippi River on west side, at Johnson St intersection to the existing shared use path east of the US Post Office (the path behind the Quarry), between the western limits of the 18th Avenue NE reconstruction project (Monroe/18th intersection) and the existing bikeway (6th St NE/18th Ave NE intersection), and at the California St NE/17th Ave intersection to the Mississippi River/East Bank Trail/BNSF bridge. The long term vision is for an off-road trail along the railroad tracks.
- The BNSF bridge conversion is needed to allow people walking and bicycling to cross the Mississippi River.



## City of Minneapolis Greenways Study

### PROJECT MAP



Legend	
	Proposed-No planned bike/ped facility
	Proposed-Bike facility identified in Bicycle Master Plan
	Existing bike/ped facility
	On-street Bike Facility
	Off-street Trails
	Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
	Parks
	City Boundary

### PROJECT IMAGERY



26th Ave N protected bikeway and sidewalk at Penn Ave N



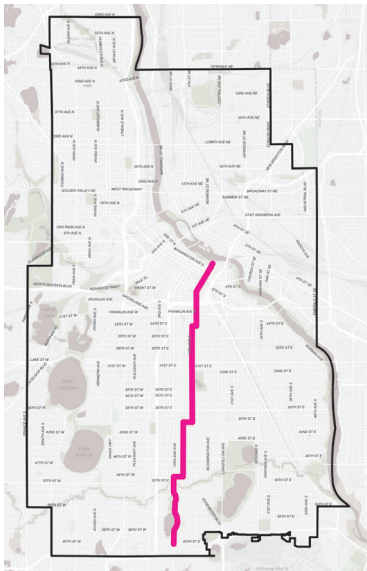
BNSF bridge, the proposed river crossing for the Great Northern Greenway (Photo: David Joles, Star Tribune)

# Southside Greenway

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### INITIATIVE OVERVIEW



##### Approximate extents

The northern section of the proposed greenway is aligned with a protected bikeway on 11th Ave S in Downtown Minneapolis, and continues south along 10th Ave S past Powderhorn Park, Park Ave S or Chicago below 40th St E and Phelps Park, to Portland Ave S just above Minnehaha Creek, ending at Hwy 62.

**Approximate length**  
6.5 miles

##### Existing conditions

A large portion of the corridor currently has bicycle facilities, either protected or traditional bike lanes in downtown, and buffered or standard bike lanes south of Powderhorn Park. The street types are mostly residential, with mixed-use streets at the north and south extents.

##### Efforts to date

An exploratory committee was formed with local bicycle and greenway advocacy groups, neighborhood groups along the route, as well as City staff, Council Members, and County Commissioners. The committee was funded by the Local Initiatives Support Corporation (LISC) grant received by the Minneapolis Bicycle Coalition. An exploratory report was created in 2015.

Community outreach efforts have included gauging interest among the community and the specific desires of potential users.

##### Proposed design elements

- A variety of bikeway types, from protected bike lanes to neighborhood greenway segments, as well as phased half greenways

##### Additional details

- The project would provide connections to 12 parks in Downtown and South Minneapolis from Gold Medal Park and Pearl Park, commercial establishments, and schools.

#### CITY OF MINNEAPOLIS PLANNING CONTEXT

##### City of Minneapolis planning documents

- Segments align with planned routes on the Bicycle Master Plan
- The 2011 Minneapolis Bicycle Master Plan identifies Oakland Ave as a bicycle boulevard/ long term greenway.

##### Capital improvement projects (2019-2023)

- In 2017, the Bicycle Advisory Committee and Pedestrian Advisory Committee included infrastructure recommendations for the 2018-2022 Capital Improvement Program.

#### CHALLENGES/GAPS

- A full greenway, as proposed, would not be funded in the 2019-2023 CIP.

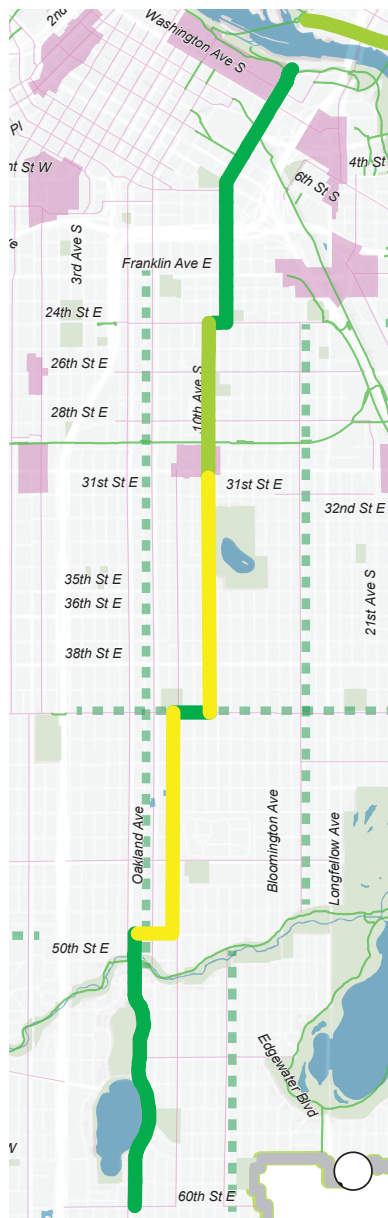


# Southside Greenway

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### PROJECT MAP



#### Legend

- Proposed-No planned bike/ped facility
- Proposed-Bike facility identified in Bicycle Master Plan
- Existing bike/ped facility
- On-street Bike Facility
- Off-street Trails
- Bike Blvd in Bicycle Master Plan (Noted as Future Greenway)
- Parks
- City Boundary

#### PROJECT IMAGERY

#### What could the Southside Greenway look like? Some design options...



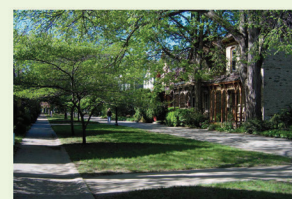
#### Calmed streets

Street where bikes and cars share space, and traffic calming techniques limit speeds



#### Protected bike lanes

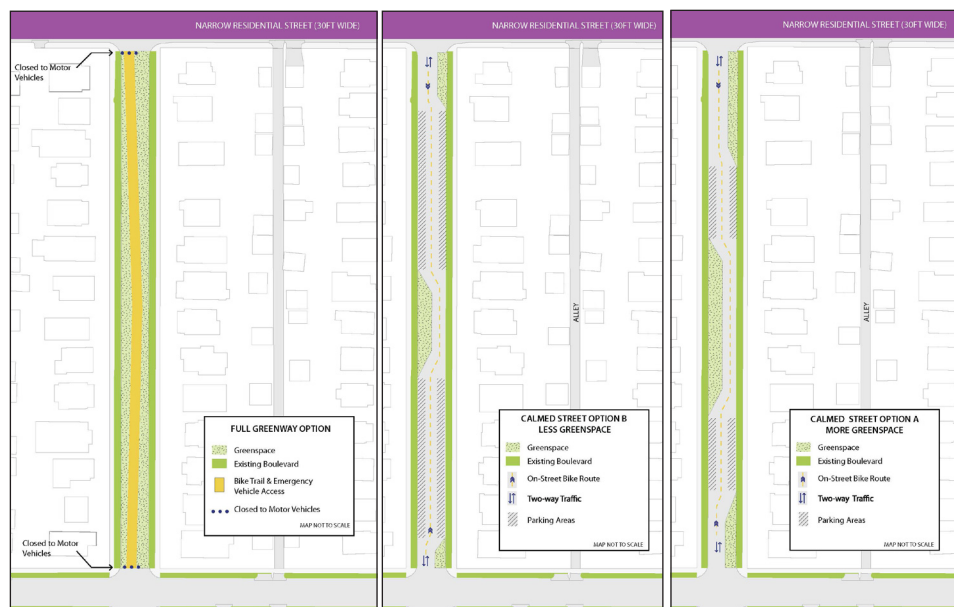
Separated spaces for bicycles and cars, with a physical barrier to calm traffic and protect bicyclists



#### Street-to-park conversion greenway

Street converted into a park, with a trail that accommodates bikes and emergency vehicles

Greenway concept options from the 2015 Exploratory Committee Report



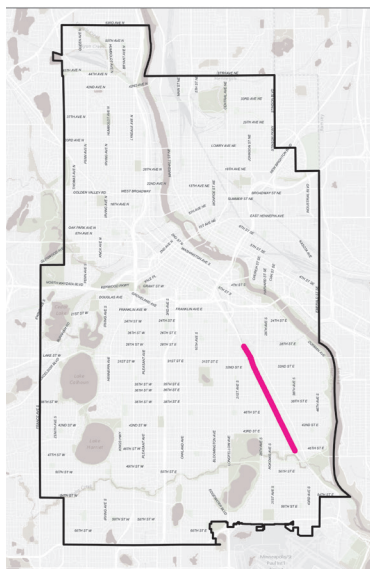
Greenway design options along the narrow residential street (most typical along corridor)

# Min-Hi Line

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### INITIATIVE OVERVIEW



##### Approximate extents

The proposed Min-Hi Line corridor lies between the Hiawatha Light Rail Transit (LRT) trail and Minnehaha Ave. The northern edge connects to the Midtown Greenway and the southern terminus is at Minnehaha Pkwy.

##### Approximate length

2.25 miles

##### Existing conditions

Located along an active rail corridor, the Hiawatha LRT trail runs parallel to the proposed project and is included in the 2010 Bicycle Master Plan.

##### Efforts to date

Volunteer-run group of neighborhoods, organizations, and individuals are envisioning and developing a distinct green space along the Minnehaha-Hiawatha corridor.

##### Proposed design elements

- Pedestrian and bicycle path

##### Additional details

The Min-Hi Line Coalition developed two renderings of what the south end pilot section could look like, between 46th St and Minnehaha Parkway. This stretch of city owned, abandoned railroad tracks is right next to the The Capp, a grocery store and residential development by Oppidan.

On the north side, the Hiawatha Trail Gap project is proposed to be constructed between 28th St E and 32nd St E, linking the Midtown Greenway with the Lake Street Station. The south side of the corridor includes a proposed site for a linear park and trails along the abandoned railroad tracks, between 46th St and Minnehaha Pkwy.

#### CITY OF MINNEAPOLIS PLANNING CONTEXT

##### City of Minneapolis planning documents

- The project is included in the City's 2011 Bicycle Master Plan as a trail.
- The Hiawatha-Lake Interchange Study includes potential upgrades to the pedestrian realm that could connect to the proposed corridor.

##### Capital improvement projects (2019-2023)

- This route includes the Hiawatha Trail Gap in the City's capital improvement program.

##### CHALLENGES/GAPS

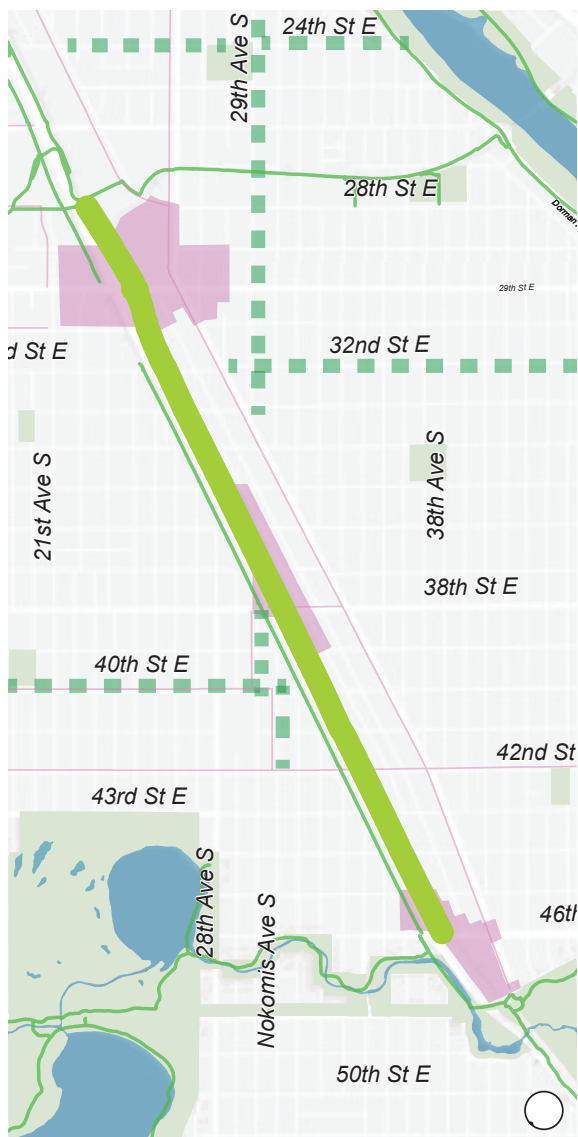
- Active rail corridor
- Private property development may impact the design of the corridor and could potentially create gaps if not included in the development process.

# Min-Hi Line

## Community-Led Greenway Initiative

### City of Minneapolis Greenways Study

#### PROJECT MAP



Design concept of the 46th and Hiawatha Transit Oriented Development Strategy developed by CPED (adopted by City Council in 2001) notes the proposed greenway location as a "Green Pedestrian/Bike Corridor"

#### Legend

- |  |   |
|--|---|
| Proposed-No planned bike/ped facility                    | On-street Bike Facility                                     |
| Proposed-Bike facility identified in Bicycle Master Plan | Off-street Trails   |
| Existing bike/ped facility                               | Bike Blvd in Bicycle Master Plan (Noted as Future Greenway) |
| Parks  | City Boundary   |



## Section 5: Greenway Development in Other Cities and Agencies

This section documents case studies of successful greenway development in other cities in the United States and other countries. Lessons learned from these greenway projects can help the City of Minneapolis in planning decisions, programming options, and designing best practices related to future greenways.

### Overview of Greenway Case Studies

The following greenway projects and programs are examples that can assist the City of Minneapolis as it considers greenways. Case studies include the following:

- Greenways Plan – Vancouver, British Columbia
- Cultural Trail – Indianapolis, Indiana
- Lafitte Greenway – New Orleans, Louisiana
- Beltline – Atlanta, Georgia
- Neighborhood Greenways – Portland, Oregon
- Car-free city centers – Ghent, Belgium

### Lessons Learned for Minneapolis

There are three primary lessons learned for Minneapolis, including developing a strong vision and planning framework, defining the types or typologies for greenways, and developing greenway identities.

#### **Visioning and planning**

Setting a vision and developing system plans for greenways is important, whether it is a comprehensive greenways plan identifying routes throughout the city or a bold vision for a particular corridor. A strong planning framework is helpful to identify the path forward and prioritize investments.

#### **Greenway typologies**

There are three greenway typologies featured in this section: trail/protected bikeway, full greenway, and neighborhood greenway/bicycle boulevards.

#### **Trails and protected bikeways**

- Trails and protected bikeways are common types of greenways. The Cultural Trail in Indianapolis, Indiana is an example of a greenway in an urban downtown environment. The Atlanta Beltline is planned as a trail system adjacent to a transit corridor. Many trails take advantage of historic transportation corridors, particularly rail, and repurpose them for walking and bicycling.

### Bicycle boulevards

- Another common form of greenway is a bike boulevard. Bicycle boulevards are streets with low motor vehicle volumes where pedestrians and bicyclists are given priority. Features include diverting motor vehicles, reducing motor vehicle speeds, enhancing pedestrian and bicycle crossings of busy streets, and wayfinding signage.

### Full Greenway

- Full greenways are similar to bicycle boulevards in that pedestrians and bicyclists are given priority, and low volume residential streets that provide connections to many destinations are attractive options. The difference is that a full greenway removes or highly restricts motor vehicles from the corridor. There are not a lot of examples of cities that have converted residential streets to full greenways. The Lafitte Greenway in New Orleans, LA is an example of a full greenway.

### Car-free centers

There is an example of a car-free city center in Ghent, Belgium in this section, though it is not featured as a typology. Car-free city centers prioritize walking and bicycling in downtown environments where there are very high volumes of pedestrians and bicyclists. Car-free city centers are more common in European cities than in the United States.

### Greenway identities

Greenways often have a unique identity or brand. Supporters of greenways and planners often seek to build community, connect neighborhoods and green space, attract development, and provide a safe space to walk and bike. Greenway projects include more than just new pavement for people that walk and bike. Greenways typically include additional infrastructure and amenities to make people feel comfortable and enjoy the space, including benches, light poles, signage, trash receptacles, and art.



# Neighborhood and City Greenways (Vancouver, BC)

## Various Greenway Typologies

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

The City of Vancouver in Canada started to envision greenways in the early 1990's with the appointment of an Urban Landscape Task Force in 1991. The task force created a report defining greenways which led to The Vancouver Greenways Plan in 1995. The greenways in Vancouver connect to parks, nature reserves, cultural reserves, cultural features, historic sites, neighborhoods, and retail. Greenways are divided into two segments, City Greenways and Neighborhood Greenways. Regardless of the type of greenway, once a development is proposed the residents along and adjacent to the routes are consulted with prior to design development.

City Greenways are funded through the City's capital budget, with additional funds sourced from other government programs, donations, and nonprofit agencies or business associations. The City's goal is for a City Greenway to be no more than a 25-minute walk or a 10-minute bike ride from every resident in the city. Some greenways are also negotiated through development projects at no cost to the City for construction or maintenance.

Neighborhood Greenways are partially funded by the City, with the community providing funds or in-kind contributions towards planning, construction, or maintenance. These facilities are initiated by local residents, creating a partnership with the City and communities. Due to the community-driven process, these projects often take years to implement. While the City leads design, development, and construction, the community is expected to take the lead in maintaining the space once completed. Grants are available from the Neighborhood Matching Fund to support the Neighborhood Greenway initiatives. The neighborhoods work with city staff to ensure utilities are accessible and existing traffic patterns remain when greenway implementation results in street closure and the routes remain safe and accessible for all residents.

#### PROJECT OVERVIEW

##### Location and extents

The completed network would include 17 routes with 140 km (87 miles) of greenways developed.

##### Current ownership and maintenance

The City of Vancouver owns trails and depending on greenway typology, is maintained by the city (City Greenway) or the community (Neighborhood Greenway).

##### Date implemented

The planning for many greenways began in 1995 with the Greenways Plan. At the time the Vancouver Greenway Network was planned and initiated in 2011, 9 greenway corridors already existed or were under construction.

##### Existing greenway typology elements

- City Greenways range from bicycle boulevard concepts where bicyclists share calmed streets with vehicles and pedestrians utilize sidewalks, to off-street trails along waterways, rail corridors, and connecting to park land.
- Neighborhood Greenways are low-scale, local connections for pedestrians and bicyclists. These greenways are often smaller neighborhood parks, which can include road diverters/closures for plantings, pedestrian seating, and public art installations.

##### Adjacent land uses

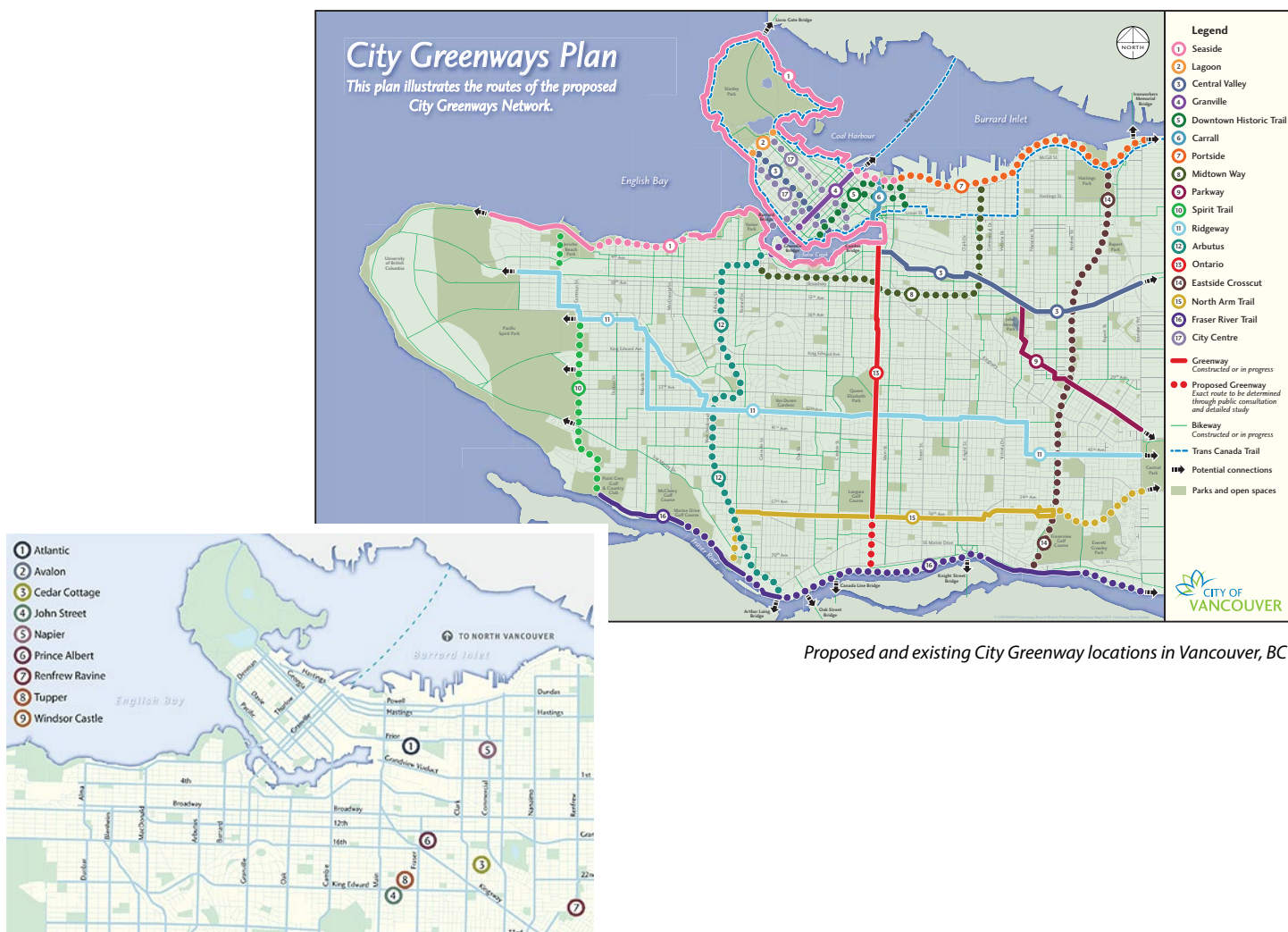
Multiple

City of Vancouver. (n.d.) Greenways, Making Vancouver a more walkable, bikeable city. Retrieved from <http://vancouver.ca/streets-transportation/greenways-for-walking-and-cycling.aspx>

# Neighborhood and City Greenways (Vancouver, BC)

## Various Greenway Typologies

### City of Minneapolis Greenways Study



Proposed and existing City Greenway locations in Vancouver, BC

Neighborhood Greenway locations in Vancouver, BC

## LESSONS LEARNED FOR MINNEAPOLIS

- Public/private partnerships can allow for additional funding opportunities and assistance with public outreach.
- Looking at various greenway typologies and how they connect as an network can help to prioritize implementation.
- Partnerships with development projects can provide funding, construction, and maintenance sources outside of the City.
- A larger planning process for greenway development can help the City to designate different typologies and different processes associated with each type to streamline the individual project implementation process.

# Indianapolis Cultural Trail (Indianapolis, IN)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

The streets of downtown Indianapolis, IN include wide one-way streets and extensive overhead walkways connecting hotels and the convention center. These factors have resulted in a lack of street-level pedestrian activity. In 2001, 6 neighborhoods were designated as cultural districts by the Indianapolis Cultural Development Commission. These neighborhoods lacked connectivity between each other. The Indianapolis Cultural Trail was proposed by Brian Payne, President and CEO of the Central Indiana Community Foundation (CICF) as a solution and to support the establishment of the cultural district designations.

Designed by the Indianapolis landscape architecture firm of Rundell Ernstberger Associates the trail construction began in 2007 and was finished in 2012. The design closed a lane to traffic along selected major downtown streets and introduced a raised 8-foot-wide bicycle path. Sidewalks and swales to capture and filter stormwater were added along the bikeway. The project also added trail amenities, including custom benches, light poles, signage, and trash receptacles.

In addition to linking the cultural districts, the trail was designed to enhance the art community in Indianapolis. As of 2014, there are eight art installations along the trail. The trail connects every significant arts, cultural, heritage, sports, and entertainment venue.

The \$63 million project cost included \$27.5 million raised in private and philanthropic support and \$35.5 million from federal transportation grants with no cost to the City. The largest support of public funds came from the US Department of Transportation through a Transportation Investment Generating Economic Recovery (TIGER) grant.

#### PROJECT OVERVIEW

##### Location and extents

The trail is located in Downtown Indianapolis, IN. It is an 8-mile connection between the Wholesale District, Indiana Avenue, the Canal and White River State Park, Mass Ave, Fountain Square, and (via the Monon Trail) Broad Ripple Village. The northeastern terminus meets with the Monon Trail heading north. The southeastern terminus in Fountain Square meets with the Pleasant Run Parkway, and the trail user may hop on the White River Trail to the northwest.

##### Date implemented

May 2013

##### Existing greenway typology elements

- Separated bicycle and walking trail
- Enhanced crossings at intersections with city streets
- Public art

##### Adjacent land uses

Commercial and residential

##### Outcomes from project implementation

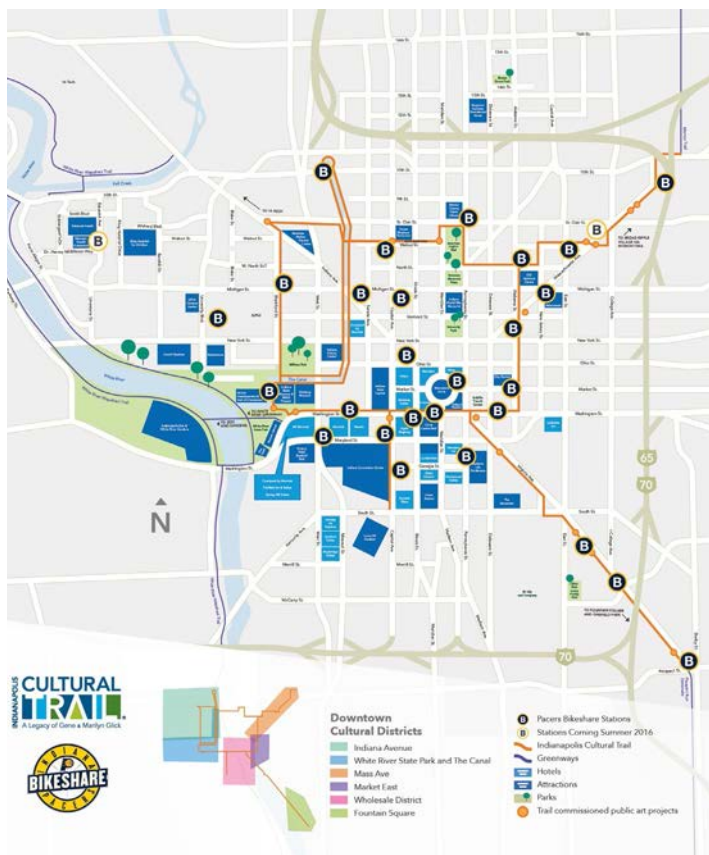
- Based on 8 counters that were placed along the corridor, trail usage exceeded most other Indianapolis trails and greenways.
- Users reported feeling safe on the trail, increased activity in the area, and good connectivity.
- An increase of affluent visitors to areas from Downtown and other Indianapolis metro areas
- Exercise and recreation are the main trail uses
- An increase in business sales and property values along and near the trail
- Decreased parking issues in non-inclement weather due to bike share and trail use
- A diminishing supply of affordable housing
- Some confusion due to trail crossings and conflicts between bicyclists and pedestrians entering/exiting shops



# Indianapolis Cultural Trail (Indianapolis, IN)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study



Map of the Indianapolis Cultural Trail



Enhanced crossing pavement markings (Image: indiestar)



Enhanced crossing pavement markings (Photo walkindianapolis.org)

## LESSONS LEARNED FOR MINNEAPOLIS

- Design standards for trails that exist in the City right-of-way need to account for areas of ingress and egress when located in heavy volume areas where commercial or residential activity occurs.
- Greenways and street adjacent trails in city centers with heavy commercial activity connected to skyway systems can help to make the street level more attractive and activate the ground level in ideal weather conditions.
- Enhanced crossings can draw attention to pedestrians and bicyclists as they intersect with vehicular traffic while also providing trail identity.
- Utilizing cultural, historical, or public art sites and connecting them by trails can establish landmarks and a natural wayfinding system through a city, minimizing sign clutter, and assisting with placemaking.

# Lafitte Greenway (New Orleans, LA)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

The Lafitte Greenway bicycle and pedestrian path is a 2.6-mile multi-use trail and linear park connecting the French Quarter to Bayou St. John and Mid-City. Funded by Disaster Community Development Block Grants and Louisiana Recreational Trails grants, the \$9.1 million Lafitte Greenway project was designed with extensive input from neighborhood and civic groups.

The Lafitte Corridor Revitalization Plan was developed by the City Planning Commission in conjunction with the Department of Public Works. More than two dozen community and stakeholder meetings were held to develop the Lafitte Corridor Revitalization Plan. The first element of the Plan to go into construction is the Lafitte Greenway bicycle and pedestrian path, tree planting, and lighting. The off-street trail will allow travel from N. Alexander and St. Louis streets in Mid-City to St. Louis and Basin streets, one block from the French Quarter.

The design for the Greenway incorporates sustainable design through green stormwater infrastructure, native plantings, adaptive re-use of existing buildings, and the reduction of impervious surface. The planning process for the design included three public meetings, eight public presentations, over 75 stakeholder meetings, on-line surveys, and additional events with 12 constituent groups. Additional strategies were developed for Safe Routes to Schools, expansion of the community gardening program, and for the creation of nodal mixed-use development at major intersections.



Public outreach session (Photo: Design Workshop)

#### PROJECT OVERVIEW

##### Location and extents

The 2.6-mile trail is located in New Orleans, LA. Connecting Carrollton Ave N to the NW and Basin St to the SE, the NW/SE corridor includes a side path on St Louis St, and runs through abandoned rail property between Lafitte Ave and St Louis St, connecting to protected bike lanes and shared bus/bike lanes on Basin St on the SE terminus.

##### Date implemented

Spring 2000

##### Existing greenway typology elements

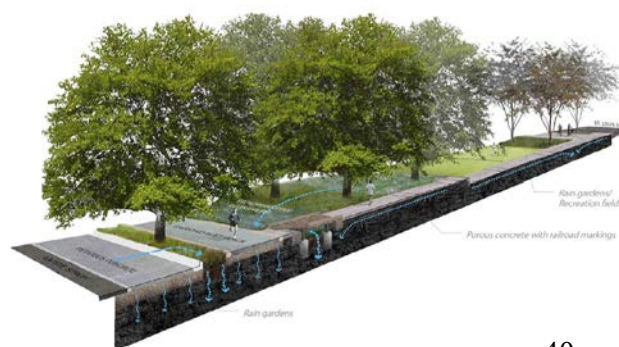
- 12' wide asphalt path for bicyclists and pedestrians and Crushed stone walking path
- Recreation fields, green space, landscape improvements, and stormwater retention
- Trail lighting
- Signal-enhanced high visibility crosswalks

##### Adjacent land uses

Commercial, residential, and industrial

##### Outcomes from project implementation

- Created a connection across multiple socioeconomic neighborhoods
- Provided additional green space and stormwater infiltration solutions
- Additional security and increased business growth along the route



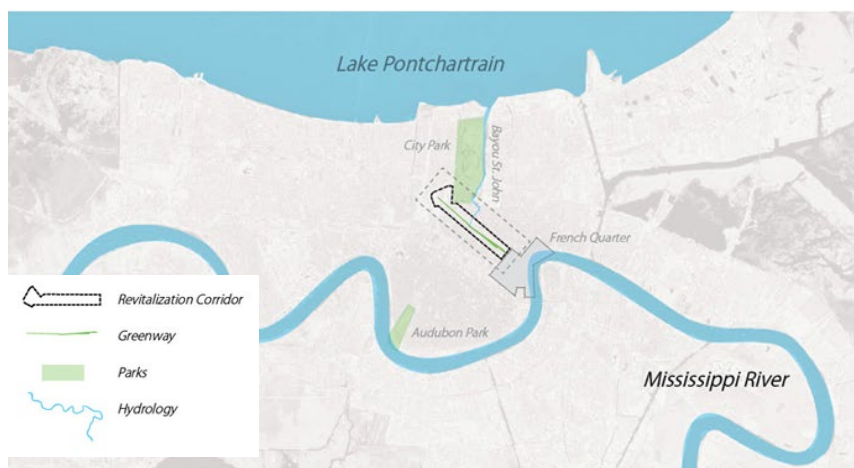
Water infiltration system graphic (Photo: Design Workshop)



# Lafitte Greenway (New Orleans, LA)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study



Trail crossing along the greenway



### LESSONS LEARNED FOR MINNEAPOLIS

- Developing under-utilized space for greenway development can help a city to avoid funding and budgeting issues associated with land acquisition, whether it be an abandoned rail corridor, existing City right-of-way or under-utilized utility corridors.
- Large greenway projects are often more successful when coordinated with multiple programs such as Safe Routes to School, neighborhood greening, and/or flood control projects.
- Input from community members can alleviate concerns such as those of gentrification, by allowing the community members most affected by the project to address their concerns and be part of the planning process.



# Atlanta BeltLine (Atlanta, GA)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

The Atlanta BeltLine began as a master's thesis in 1999 by Georgia Tech student Ryan Gravel and evolved with the grassroots support of community members in 2002. In 2007, the Metropolitan Atlanta Rapid Transit Authority (MARTA) approved the 22-mile loop of the Atlanta BeltLine and a light rail mode of transit as its locally preferred alternative and the Atlanta BeltLine was awarded \$300,000 in Federal Transit Administration funding for initial design and engineering. That year master planning began with Atlanta BeltLine Inc. and the City of Atlanta Department of Planning and Community Development partnering to address land use, transportation, and parks.

The comprehensive transportation and economic development effort is made up of five segments, which are split into ten subareas for planning. The ten subareas are organized as: Southwest (subareas 1 and 2), Southeast (subareas 3 and 4), Northeast (subareas 5 and 6), Northside (subareas 7 and 8), and Westside (subareas 9 and 10).

As part of the planning process for the BeltLine, Atlanta has included additional planning. The Tax Allocation District Advisory Committee and Atlanta BeltLine, Inc. created an Equitable Development Plan, approved by the Atlanta BeltLine, Inc board in 2009. The plan shows a commitment to healthy growth. The details regarding evaluation and monitoring are still being developed.

Public involvement has been an important part in the planning process. As of 2017, 315 public meetings have been held, engaging 12,200 participants. Atlanta BeltLine, Inc. has participated in hundreds of community meetings across Atlanta including pop-ups at farmers markets and coffee shops and coordination with neighborhood associations and Neighborhood Planning Unit (NPU) meetings.

In December 2013, the Atlanta BeltLine adopted the 2030 Strategic Implementation Plan to guide the project's development over the next 17 years.

#### PROJECT OVERVIEW

##### Location and extents

There are 33 miles of multi-use trails and 1,300 acres of parks in the Atlanta BeltLine. To date, 11 miles of trails are open to the public.

##### Current ownership and maintenance

The City of Atlanta owns and maintains the land. The Atlanta BeltLine Partnership was established in 2005 to advance the Atlanta BeltLine. Atlanta BeltLine, Inc. is an independent nonprofit that was formed in 2006 to manage the implementation of the Atlanta BeltLine program and works as a partner with the City to lead efforts in securing funding; spearheading design, engineering, construction, and community engagement; and tracking and reporting progress to the Atlanta City Council, Atlanta Public Schools, and Fulton County. The Atlanta Police Department has dedicated the Path Force Unit to provide public safety along the BeltLine and adjacent parks.

##### Date implemented

West End Trail opened in 2008

##### Existing greenway typology elements

- Shared-use trail separated from vehicular uses
- Adjacent street car, green space, public art, and historic preservation

##### Adjacent land uses

Commercial and residential



Greenway typology graphic (Photo: beltline.org)



# Atlanta BeltLine (Atlanta, GA)

## Full Greenway (Trail)

### City of Minneapolis Greenways Study



(Image: beltline.org)

The Atlanta BeltLine is a planned loop of 22 miles of modern streetcars (expanding on the existing streetcar system), 33 miles of multi-use trails and 2,000 acres of parks.

- Links 45 intown neighborhoods
- Includes 5,600 units of affordable housing
- 1,100 acres of brownfields remediated
- \$10-20 billion in economic development
- 30,000 permanent jobs
- 48,000 one-year construction jobs
- Includes public art and historic preservation



Before and after view from Highland Avenue (Photos: beltline.org)

## LESSONS LEARNED FOR MINNEAPOLIS

The Atlanta BeltLine is more than just a greenway or trail development project, but includes transit-oriented development, affordable housing, and park development.

- Utilizing partnerships both within the city departments and through private and nonprofit partnership create larger funding opportunities so that holistic city goals can be achieved.
- Extensive outreach allows community members to be heavily involved in the decision making process for projects and can provide valuable feedback to the planning and project implementation teams.
- By breaking down larger corridors into segments, specific needs of each neighborhood can be addressed rather than a blanket design and planning approach that may not be suitable for all areas. This also allows for project implementation phasing.

# SE Clinton Neighborhood Greenway (Portland, OR)

## Neighborhood Greenway

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

There are 78 miles of neighborhood greenways in Portland, OR that are considered to be shared-use residential streets designed to prioritize bicycling and enhance conditions for walking. The SE Clinton Greenway is the oldest and most heavily used greenway. There are 3000 estimated daily bicycle trips in an area of significant land use development. Clinton St has high volumes of traffic, mostly attributed to cut-through traffic to and from newly developed areas.

In 2015, traffic calming improvements were requested by advocacy groups to address issues of safety and comfort on the street for bicyclists and pedestrians, and the City committed to a 6-month test project. That year, the City Council adopted the Neighborhood Greenways Assessment Report developed by the Portland Bureau of Transportation (PBOT). The report included an assessment of existing greenways and how they function as well as new performance guidelines for development of new greenways and the management of existing ones.

Using the new performance guidelines for context, the test project's goals were to reduce traffic volumes and speeds along the existing greenway on Clinton St.

#### Public Engagement

- Neighborhood and business association outreach: Several meetings over the overall project process
- Public meetings (2): To discuss project objectives, existing conditions, design options, and proposals for improvements; and to discuss a traffic diverter proposal
- Public education campaign: Series of lawn signs to discourage non-local traffic
- Online surveys (2): To help identify issues for the project and to assess public reaction near the end of the test
- Evaluation committee: 14-member committee comprising neighborhood groups, business associations, advocacy groups, and area at-large residents reviewed test results and developed potential follow-up actions

#### PROJECT OVERVIEW

##### Location and extents

The 1.8-mile trail is located along Clinton St SE in the Bosford-Abernethy and Richmond neighborhoods in Southeast Portland, OR.

##### Date implemented

2016

##### Existing greenway typology elements

- Traffic calming (diverters, speed bumps, traffic circles)
- Shared use facility signage and pavement markings

##### Adjacent land uses

Commercial and residential

##### Project Details

- Phase 1 design recommendations included a full and partial median diverter based on traffic engineering assessments, and a segment converted to one-way traffic with a contraflow bike lane. Additional untested design recommendations included speed bumps, signage changes, and changes to posted speed limit.
- Phase 1 results showed a reduction in traffic volumes, where traffic volumes dropped to the target volume in 3 test locations while volumes remained slightly above the maximum (2,050) only at one location. Non-compliance of diverter was low, at 5-7% and one way non-compliance was at 4%. No significant traffic speed changes were noted. On adjacent streets, traffic volume increases ranged from -106 to +429, with only one street segment exceeding the maximum volume guidelines of 1000/day.
- Phase 2 design referred to the Neighborhood Greenway Assessment Report to identify two sub areas for additional traffic calming and mitigation. This included tighter spacing of speed bumps in a commercial and bus corridor on Clinton St as well as additional speed bumps on adjacent streets to mitigate larger traffic volumes associated with the new greenway updates. Stop bars and "STOP" pavement markings were added to areas of aggressive driving and low stop sign compliance.



# SE Clinton Neighborhood Greenway (Portland, OR)

## Neighborhood Greenway

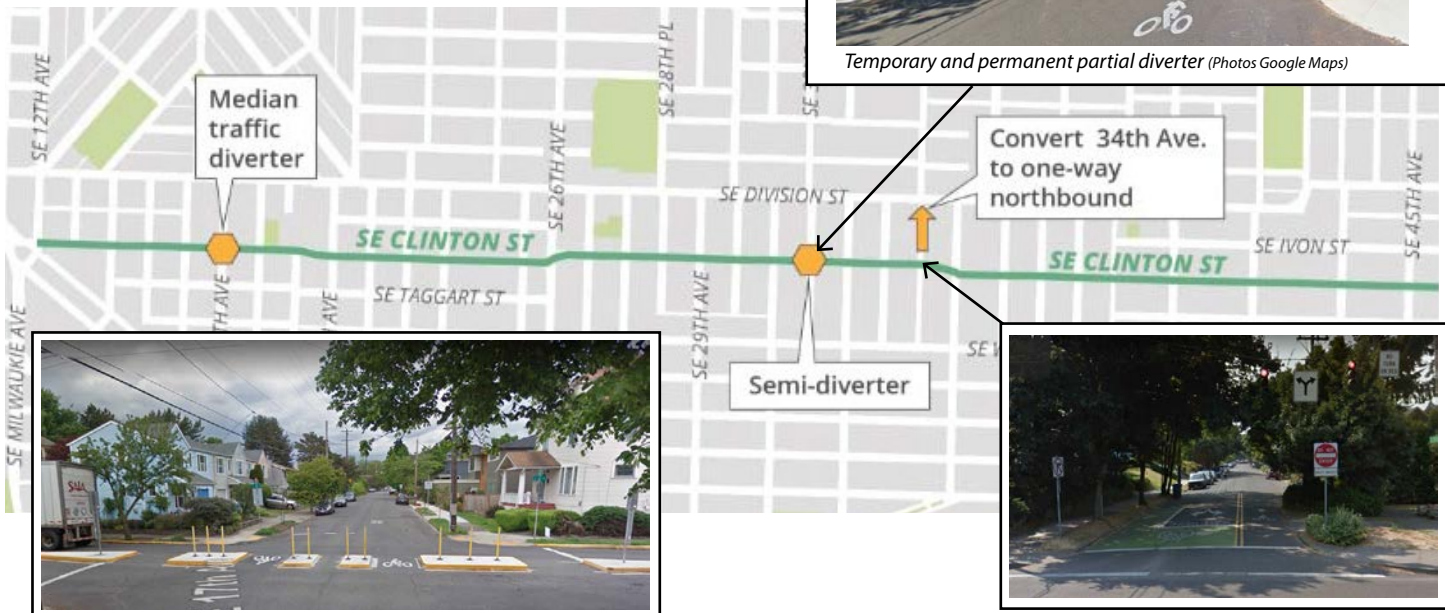
### City of Minneapolis Greenways Study

#### Outcomes from project implementation

- Traffic volumes dropped to allow 20 MPH posted signage to comply with state guidelines
- Auto volumes decreased significantly
- General positive reception from the public, with some concerns due to higher traffic on adjacent corridors
- Recommendation for a future comprehensive neighborhood traffic calming project to be considered



Temporary and permanent partial diverter (Photos Google Maps)



### LESSONS LEARNED FOR MINNEAPOLIS

The neighborhood greenways are seen to be most successful in residential neighborhoods to increase safety and comfort for all modes as they share lower volume streets. Minneapolis can look to enhance the low-stress network by creating guidelines for neighborhood greenways with already existing infrastructure as traffic calming solutions.

- Phased approaches and tests on streets allow for assessment of specific treatments in the context of specific streets.
- Noting the impact on the street as well as the adjacent corridors allows for a better analysis of traffic patterns as a whole.
- Developing targets prior to implementing projects can further assist in assessments and help guide future development of greenways on similar street typologies.

# Car-free City Center (Ghent, Belgium)

## Car-free Streets

### City of Minneapolis Greenways Study

#### PLANNING CONTEXT

The City of Ghent in Belgium removed vehicle traffic and created a car-free city center of 86.5 acres in 1996. Today, the city is estimated to move 700,000 people around the city every day. Public transport, taxis and permit holders may enter but not exceed 3.11 mph. When originally proposed, the concept was met with opposition from businesses and elderly residents who feared being cut-off from other areas of the city, eliminating customer bases and visitors. Protests occurred outside of Ghent City Hall.

The car-free, although not a traditional greenway, was seen as a solution to the city's persistent traffic jams, a way to provide a safer pedestrian and bicycling environment, improve air quality, increase public transportation, and reevaluate the city center to increase commercial and tourist activities. Once implemented, a few businesses that relied on vehicle access moved out of the car-free area, but overall it was considered a success.

Currently 72% of Ghentians are in favor of the new mobility plan which seeks to expand the car-free zone by 37 acres, while 17% of the population is neutral. This updated plan divides the city into sections, accessible only by a ring road to reduce through-traffic. From 2012-2015, Ghent saw an 8% decrease in vehicular traffic (40%, down from 48%) with hopes to lower that number to 27% by 2030. Part of the planning process involves recruiting 150 local residents for a citizens' cabinet to advise the mobility minister. Political opposition does exist with some seeking to stop the mobility plan from moving forward.

#### PROJECT OVERVIEW

##### Location and extents

The project extends across 86.5 acres in the city center of Ghent, Belgium.

##### Current ownership and maintenance

City of Ghent, Belgium

##### Date implemented

1996

##### Existing greenway typology elements

- Designated spaces separating vehicular traffic from personal vehicle use
- Increase in public meeting spaces in areas that were once spaces for vehicular travel
- Connections to green spaces and public areas

##### Adjacent land uses

Commercial and residential



The new mobility plan guides cars in a ring around the city denoting car-free spaces by outlining biker and pedestrian spaces with red marks.  
(Photo: <http://bubblepost.eu>)



# Car-free City Center (Ghent, Belgium)

## Car-free Streets

### City of Minneapolis Greenways Study



A graphic promoting the Ghent Mobility Plan says "Center is for Local Traffic" and denotes the "larger car-free zone" in the center, disconnecting green and auto-free spaces from busier roads, providing more space for bicyclists and pedestrians, and creating a quieter and more pleasant center. (Photo <https://stad.gent/>)

Pedestrians and bicyclists in car-free city center  
(Photo: <http://www.eltis.org>)

## LESSONS LEARNED FOR MINNEAPOLIS

- The car-free establishment includes multiple measures which connect to mobility, technology utilization, energy efficiency, business, and tourism. Integration of all of these items has led to the success of the city center by providing multiple ways to access the center, including a connection through technology for residents to navigate to parking areas.
- Major factors in the success of a project of this scale includes strong political leadership, public acceptance, and clear and open communication.
- The scale of the project is heavily dependent on traffic flows, legal requirements, and land-use. Therefore, the context of Ghent will not likely fit that of Minneapolis. However, smaller projects could occur and be scaled out over time as user behaviors and needs change.
- Monitoring success or changes in terms of air quality, modal shift, and economic impact can help when evaluating whether projects can be scaled further and where adjustments to funding or implementation need to occur.



## Section 6: Future Framework

This section provides options to move forward with greenway development in the City of Minneapolis, including four recommended greenway typologies and next steps. The typologies and next steps are based on the research from existing policies and greenways in Minneapolis, community-driven greenway efforts, research on greenways in other cities, and feedback from the TAC and Pedestrian/Bicycle Advisory Committees.

The study provides information for staff and policy makers to consider. It does not make specific recommendations or new policy for greenways in Minneapolis. Further guidance and/policy direction could be included in the City's Transportation Action Plan.

### Use of the Term Greenway in Minneapolis

There is no singular, broadly understood definition of the term greenway in Minneapolis. This study documents a number of infrastructure types that are commonly referred to as greenways. Greenways are also often synonymous with trails, protected bikeways, bicycle boulevards, and full greenways. The City of Minneapolis also does not have full control over the branding of corridors as greenways.

There are some key features of greenways in Minneapolis, largely based on how the term has been historically applied to different projects. Greenways are low stress pedestrian and bicycle routes that connect people to destinations, typically with clearly defined beginning and end points. In some cases, greenways are major urban trails that provide space for pedestrians and bicyclists away from streets. Other greenways are along busier commercial corridors with dedicated space for pedestrians and bicyclists within street corridors and with physical separation from motor vehicles. Some greenways are located on low volume residential streets that connect people to neighborhood destinations. Finally, there are greenways implemented as a response to flooding and stormwater management issues.

It should be noted that not all trails, protected bikeways, or bicycle boulevards are or will be branded as greenways.

### Introducing Neighborhood Greenways

A neighborhood greenway is a new concept for Minneapolis. Neighborhood greenways could be installed on low volume residential streets that connect neighborhood destinations (such as libraries, parks, schools, etc.). Neighborhood greenways would prioritize and optimize travel for pedestrians and bicyclists by eliminating or significantly reducing motor vehicle traffic. Neighborhood greenways could also serve as a final piece of the puzzle, in coordination with trails and protected bikeways, to developing a low stress pedestrian and bicycle network across the city.

There are two recommended typologies for neighborhood greenways: bicycle boulevards and full greenways. They could be used interchangeably along residential streets depending on context of the street, neighborhood, and other factors.

## Greenway Typologies

There are four recommended typologies for greenways in Minneapolis. Greenway typologies could be incorporated into the Transportation Action Plan, particularly the Street and Sidewalk Design Guidelines.

### **Trails**

A trail is a non-motorized path for pedestrians and bicyclists along rivers, lakes, parkways, and railroad corridors. This could be a shared-use path or a separated path with an adjacent sidewalk. This typology includes the Minneapolis Park and Recreation Board trail system, although they are not specifically branded as greenways.

### **Protected bikeways**

A protected bikeway is a designated bicycle facility located within street corridors and separated from motor vehicle travel lanes through parked cars, curbs, medians, bollards/flexible traffic posts, planters, or another vertical feature. They are typically installed along streets with high bicycle demand, high traffic conflict, and good network connection to destinations. Examples of protected bikeways in Minneapolis include 11<sup>th</sup> Ave S and Plymouth Ave N.

### **Neighborhood greenways: bicycle boulevards**

Bicycle boulevards are enhanced local streets that give priority to pedestrians and bicyclists, including traffic and speed management measures such as diverters, speed bumps, bumpouts, median refuge islands, and traffic circles. Examples of neighborhood greenways/bicycle boulevards in Minneapolis include the Presidents Bike Boulevard and the Riverside Greenway.

### **Neighborhood greenways: full greenways**

A full greenway converts a street to a pedestrian and bicycle only street, or significantly limits access to motor vehicles. Emergency vehicle access is maintained as necessary. Enhanced street crossings are provided at intersections with higher volume corridors. Full greenways could be considered as a part of a low stress pedestrian and bicycle network or to address stormwater management issues. Examples of full greenway in Minneapolis include Milwaukee Ave, 37<sup>th</sup> Ave N Greenway, and the Loring Greenway.



# Trails

## Greenway Typology

### City of Minneapolis Greenways Study

#### Description

A trail is a non-motorized path for pedestrians and bicyclists, generally located away from street corridors. Trails may be shared-use paths or separated paths with adjacent sidewalks. This designation includes all of the Minneapolis Park & Recreation Board trails.

Suitable locations:

- Adjacent to rivers and lakes
- Parkways
- Abandoned rail corridors
- Through open space and parkland
- In coordination and adjacent to development

#### Strategic design

- Minimize hardscape area and accommodate more greenspace to aid in stormwater infiltration and biofiltration, and reduction in heat-island effect
- Provides added greenspace in the city to promote recreation
- Part of a low-stress networks and provides more options for multi-modal transportation

#### Design amenities

- Enhanced street crossings at intersections with higher volume corridors
- Park-like amenities, such as benches, water fountains, gathering areas, and gardens
- Physical separation from the street
- Green space

#### Level of effort

High

#### Related city planning and programs

- Capital improvement program funding

#### Existing or similar treatments in Minneapolis

- Midtown Greenway
- East River Parkway Trail
- Hiawatha Trail



Photo of Midtown Greenway crossing at Minnehaha Ave



Photo of East River Parkway trail

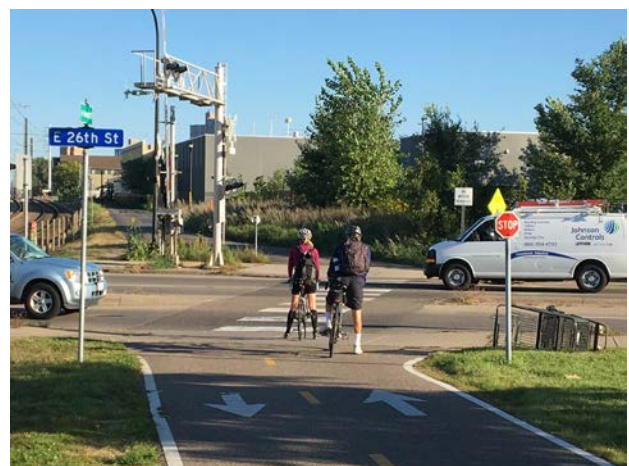


Photo of Hiawatha Trail crossing at 26th St E



# Protected Bikeways

## Greenway Typology

### City of Minneapolis Greenways Study

#### Description

A protected bikeway is a bicycle facility that is physically separated from motor vehicle traffic. Off-street trails are the most common type of protected bikeways; however, protected bikeways may also be located within street corridors and separated from traffic lanes through parked cars, curbs, medians, bollards/flexible traffic posts, planters or other vertical feature.

Suitable locations:

- Streets with high volume of motor vehicles
- Streets with high bicycle volumes
- Streets that connect to park space, commercial areas, and community amenities
- Streets where low-stress bikeway facilities such as trails and bicycle boulevards are not an option

#### Strategic design

- Creates low-stress networks and more options for multi modal transportation

#### Design amenities

- Enhanced street crossings at intersections with higher volume corridors
- Physical separation from traffic lanes, including flexible delineator posts, planters, and medians

#### Level of effort

Low to medium

#### Related city planning and programs

- Protected Bikeway Program
- Capital improvement program funding

#### Existing or similar treatments in Minneapolis

- 3rd Ave S protected bike lanes
- Park Ave protected bikeway
- Oak St protected bikeway



Photo of 3rd Ave S protected bike lane over the Mississippi River



Photo of Portland Ave protected bikeway at 4th St S



Photo of Oak St protected bikeway



# Neighborhood Greenways: Bicycle Boulevards

## Greenway Typology

### City of Minneapolis Greenways Study

#### Description

A bicycle boulevard is a low-volume, low-speed street that has been optimized for pedestrian and bicycle travel. Bicycle boulevards are a type of neighborhood greenway that is designed to improve bicycle safety and circulation and provide bicyclists, especially those who are not comfortable riding on busy streets, an attractive, comfortable, and more relaxing place to ride. Bicycle boulevards also have significant benefits for people walking due to slow speeds, less motor vehicle traffic, and enhanced street crossings.

Suitable locations:

- Streets with low vehicle volumes
- Streets with high pedestrian and bicycle volumes
- Residential land use
- At connections to existing low-stress bicycle networks, such as protected bikeways and trails

#### Strategic design

- Calms traffic in residential areas

#### Design amenities

- Enhanced street crossings at intersections with higher volume corridors
- Volume management measures, including Traffic calming elements, including speed bumps, traffic diverters, traffic circles, curb extensions, chicanes, and traffic signals
- Speed management measures, including diverters, channelized right-in/right-out islands, median islands, and full closures for motor vehicles

#### Level of effort

Low to medium

#### Related city planning and programs

- Pedestrian safety program
- Safe routes to school program

#### Existing or similar treatments in Minneapolis

- Riverlake Greenway
- Seward Bicycle Boulevard
- Presidents Bike Boulevard



Photo of Riverlake Greenway



Photo of Seward Bicycle Boulevard



Photo of Presidents Bike Boulevard



# Neighborhood Greenways: Full Greenways

## Greenway Typology

### City of Minneapolis Greenways Study

#### Description

A full greenway is a conversion from an existing public street (typically with two-way motor vehicle travel and parking) to remove or significantly reduce motor vehicle access and provide space for pedestrian and bicycle travel. In addition to providing a comfortable transportation corridor for pedestrians and bicyclists, full greenways create new greenspace that can be used for other purposes, such as play, gardening, or public art.

Suitable locations:

- Streets with low vehicle volumes
- Streets with high pedestrian and bicycle volumes
- Residential land use
- At connections to existing low-stress bicycle networks
- Stormwater management mitigation

#### Strategic design

- Minimize hardscape area and accommodate greenspace to aid in stormwater infiltration and biofiltration, and reduction in heat-island effect
- Opportunity to create connections to more densely populated areas
- Reduction in pavement maintenance needs in typical vehicular street use

#### Design amenities

- Park-like facilities, such as parklets, plazas, and planters
- Remove pavement for motor vehicle travel and parking and install greenspace and paved non-motorized trails

#### Level of effort

High

#### Related city planning and programs

- Residential reconstruction program
- Street reconstruction projects
- Flood mitigation

#### Existing or similar treatments in Minneapolis

- Loring Greenway
- 37th Ave N Greenway
- Milwaukee Avenue



Photo of Loring Greenway



Photo of 37th Ave N Greenway



Photo of Milwaukee Avenue



## Next Steps

Below are some options for next steps for greenways in Minneapolis. The information compiled from best practices and current policy and planning in the City has led to the potential options to advance greenway planning and development in the future, as well as options to address requests for greenways moving forward.

- Option 1: Complete the Transportation Action Plan
  - The primary next step is to incorporate greenways into the Transportation Action Plan and align with the Vision Zero Action Plan and Complete Streets Policy. This means incorporating routes into the bicycle component, further developing greenway typologies, and provide guidance on implementation.
  - Integrate neighborhood greenways into the updated street design guide. Neighborhood greenways could be a design treatment option for residential streets, particularly when a street is identified as a bikeway or to address stormwater management issues.
- Option 2: Complete transportation feasibility studies
  - Implement greenway or transportation feasibility studies for potential greenway routes to explore feasibility, identify costs and benefits, and develop high level concepts.
- Option 3: Incorporate greenway improvements in capital projects
  - Seek short term (one to three years) opportunities to implement relatively small capital improvements to future neighborhood greenway routes, such as an intersection or a short connection, utilizing existing capital programs. This could include a stand-alone reconstruction project, or a project completed through the residential reconstruction, protected bikeways, safe routes to school, or pedestrian safety programs.
- Option 4: Develop a new capital program for greenways
  - Develop a new capital program for neighborhood greenways, which could be modeled after the protected bikeway, safe routes to school, and pedestrian safety programs.