

# City of Northfield CIP Pedestrian and Bikeway Analysis

August 16, 2022



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# Introduction and Project Context

The background image is a photograph of a residential street in winter. It is covered in snow, and there are bare trees and houses in the background. In the foreground, a person wearing a yellow safety vest with "SAFETY PATROL" written on it is walking across a crosswalk. Other pedestrians, including a child with a backpack, are also visible. A yellow signpost is on the right side of the street. The entire image has a teal color overlay.

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## Introduction to the project

- Overview
- Purpose
- Key questions the report







# Key Policy Recommendations *Council Input Needed*

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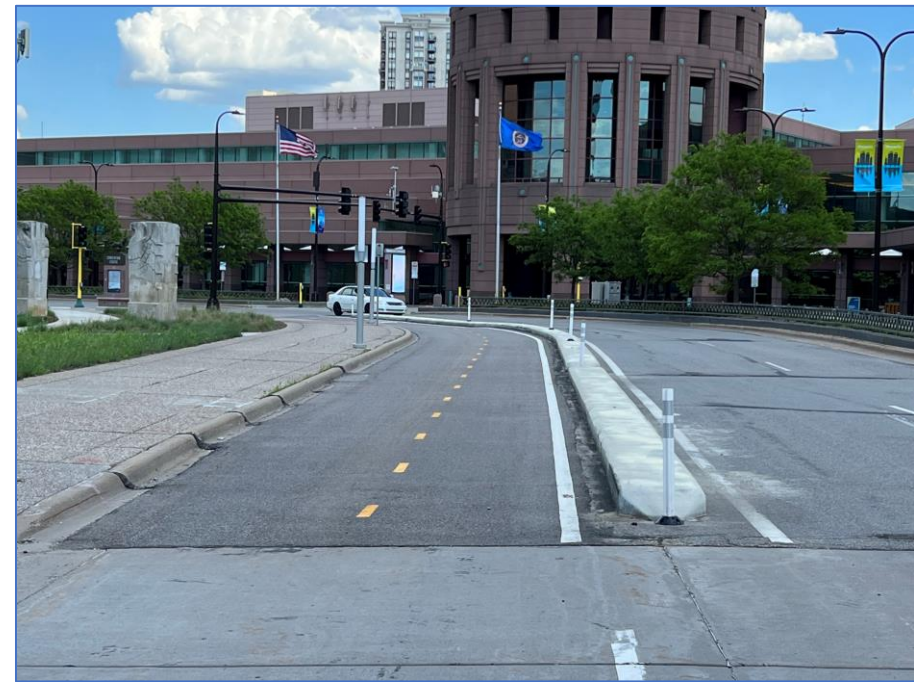
## CIP Recommendations

- **Recommendation 1:** Split the Sidewalk/Trail/Bike Construction category and fund at a level that allows multiple projects per year. This should include sidewalk construction, All Ages and Abilities (AAA) bikeways, and Pedestrian Crossing Improvements.



# Bikeway Recommendations

- **Recommendation 2:** Identify a preferred bikeway type in Northfield.
- For most retrofit projects, recommend a two-way protected bikeway, with a 2' concrete bike buffer as a form of physical separation.
- For reconstruction and reclamation projects, recommend a raised two-way protected bikeway. Include separate space for people walking and bicycling where space allows.



## **Bikeway Recommendations**

### **Connections and Bikeway Continuity**

- **Recommendation 3:** For the unprogrammed sections of the “proposed bikeway corridors,” add to the scope and implement them with a quick build approach – which would include striping, signage, and concrete bike buffers.



## Bikeway Recommendations

**Recommendation 4:** Explore a demonstration of a concrete bike buffer as a form of bikeway separation as a retrofit project. Evaluate how the treatment works and make any necessary tweaks on future installations.





## **Pedestrian Crossing Improvements**

### **Upgrade crossings**

- **Recommendation 5:** Use the pedestrian origin and destination map to prioritize pedestrian crossing improvements in conjunction with reconstruction/reclamation projects, mill & overlays, and stand alone projects.



# Existing Plans and Conditions

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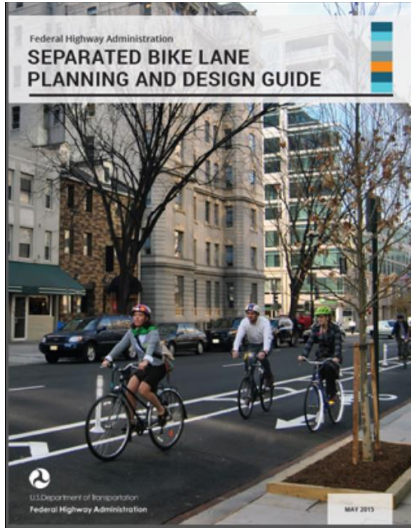


## Overview of existing plans and conditions

- All Ages & Abilities
- Facility design should rely on “latest and best” guidance
- Separated bikeways are recommended
- Traffic calming and crossing treatments (bumpouts, and pedestrian refuge islands)



# Bikeway Guidance



- NACTO Urban Street Design Guide
- FHWA Separated Bike Lane Planning and Design Guide
- MnDOT Bicycle Facility Design Guide







# Draft Bikeway Design Concepts and Report

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## **Overview of bikeway analysis**

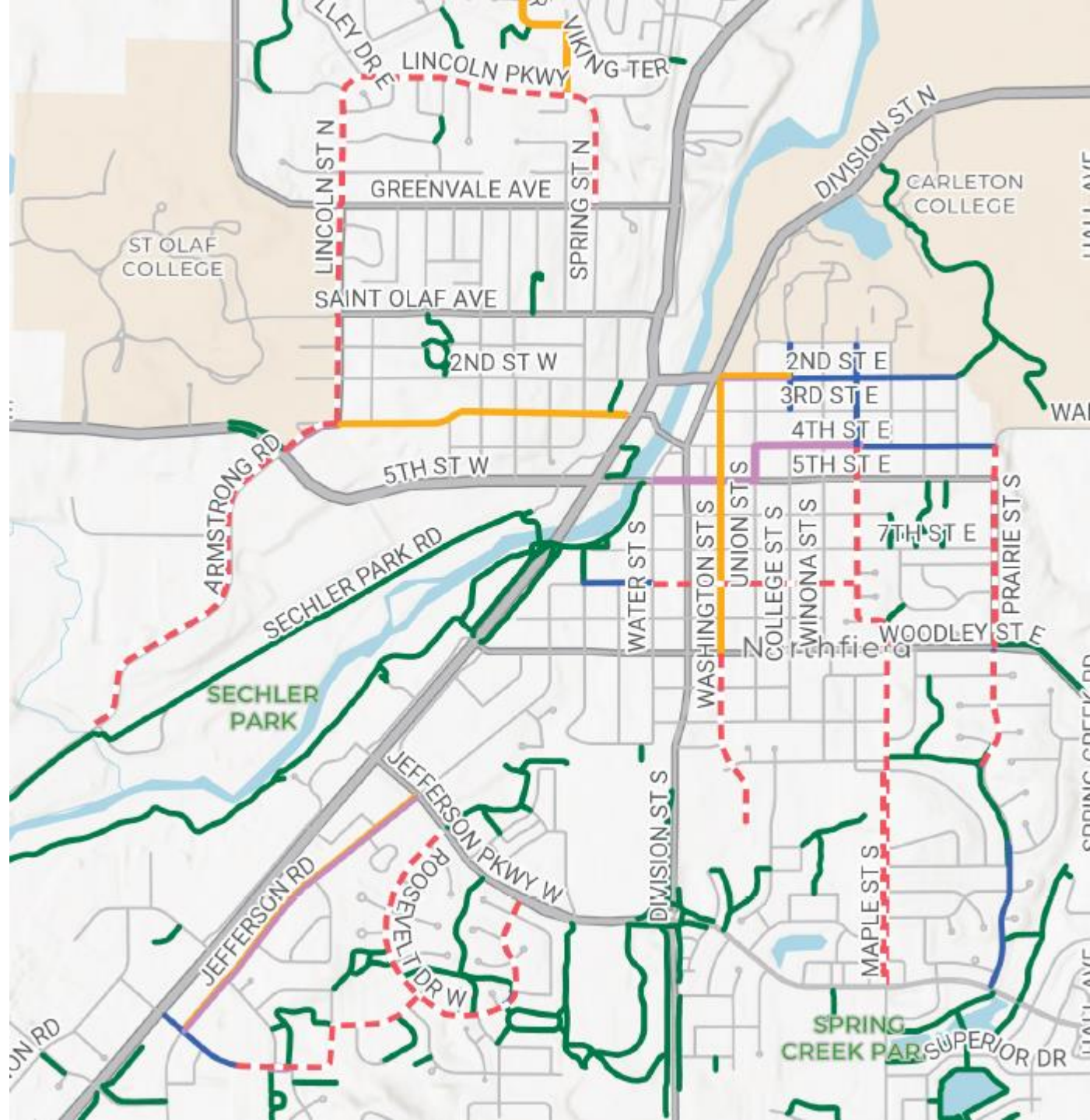
- 7 corridors
- Building off recent bikeway installations
- Identifying preferred bikeway type
- Designing for all ages and abilities
- Continuity – (programming)



## **Proposed bikeway routes**

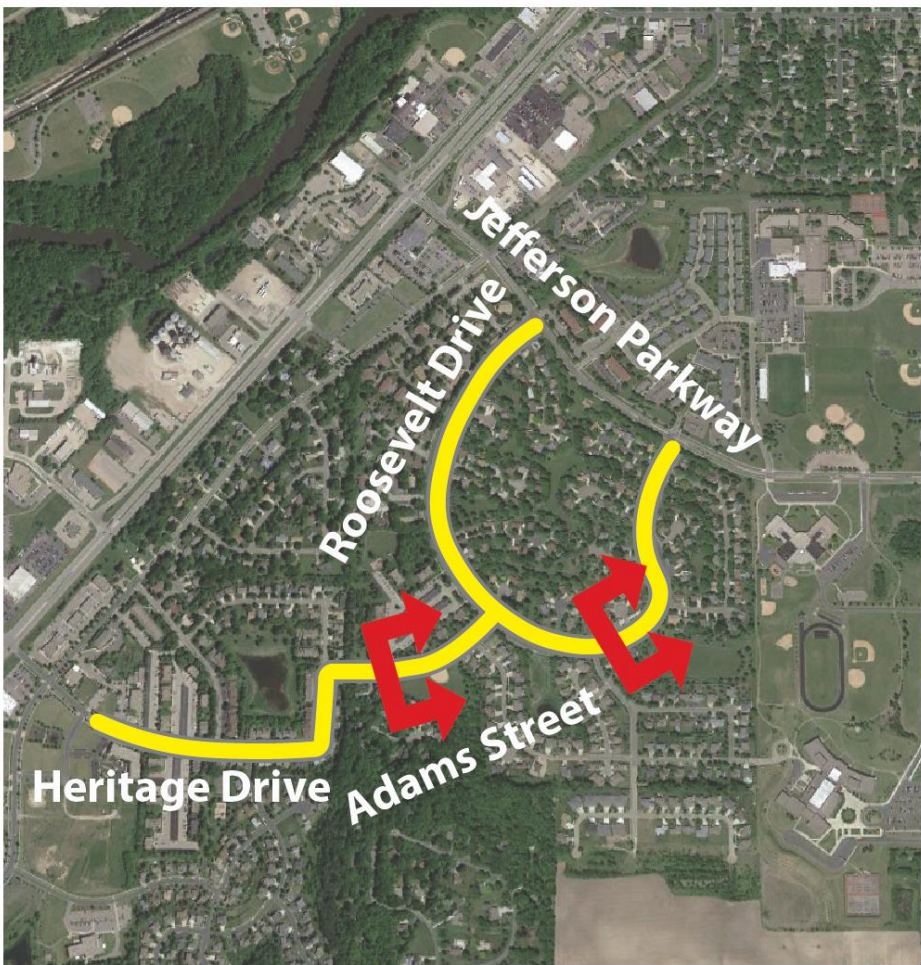
- Heritage Drive/Adams Street/Roosevelt Drive
- Spring Street/Lincoln Parkway/Lincoln Street
- Armstrong Road
- Washington Street
- Eighth Street
- Prairie Street
- Maple Street/Nevada Street

# Proposed Bikeway Corridor Map (with existing bikeway network)



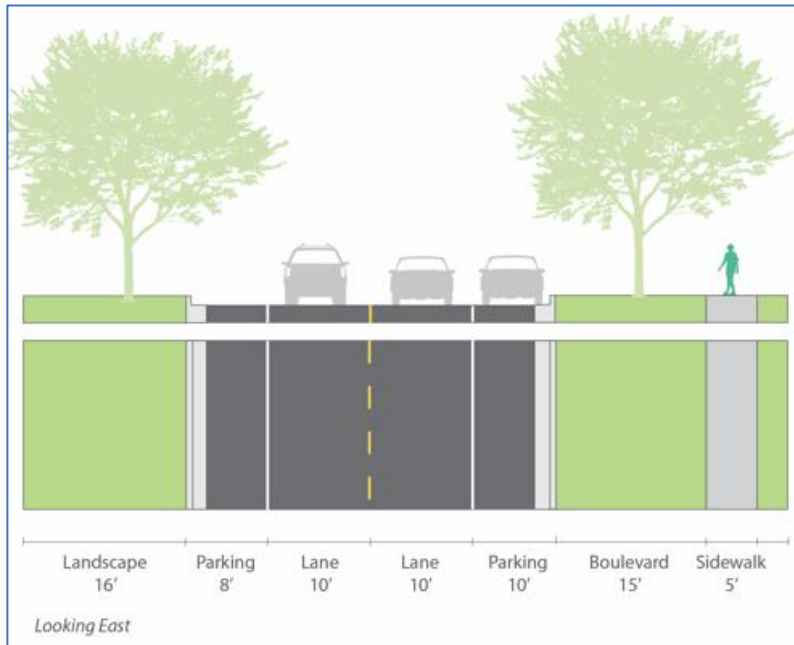


# Heritage Dr, Adams St, and Roosevelt Dr

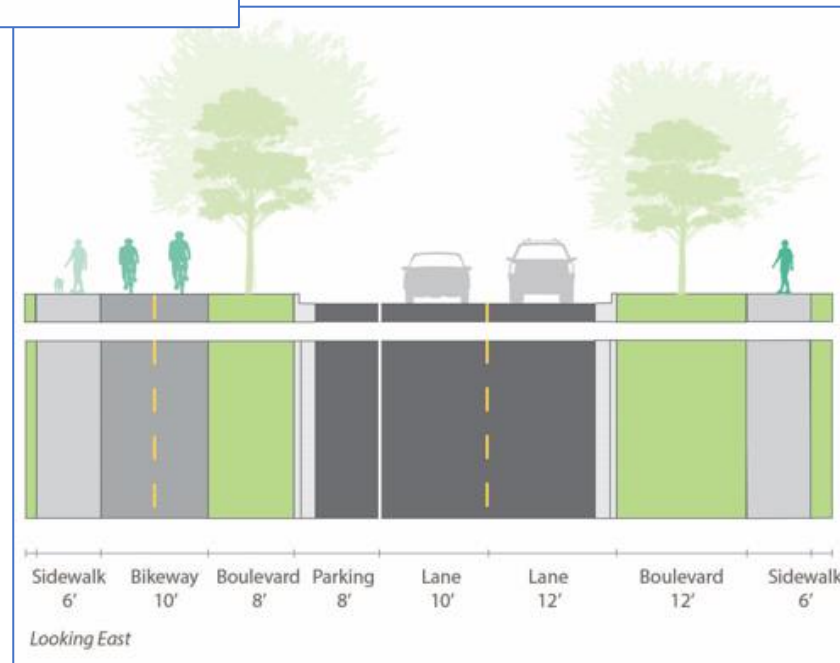


 Proposed bikeway extents

 Location of cross section



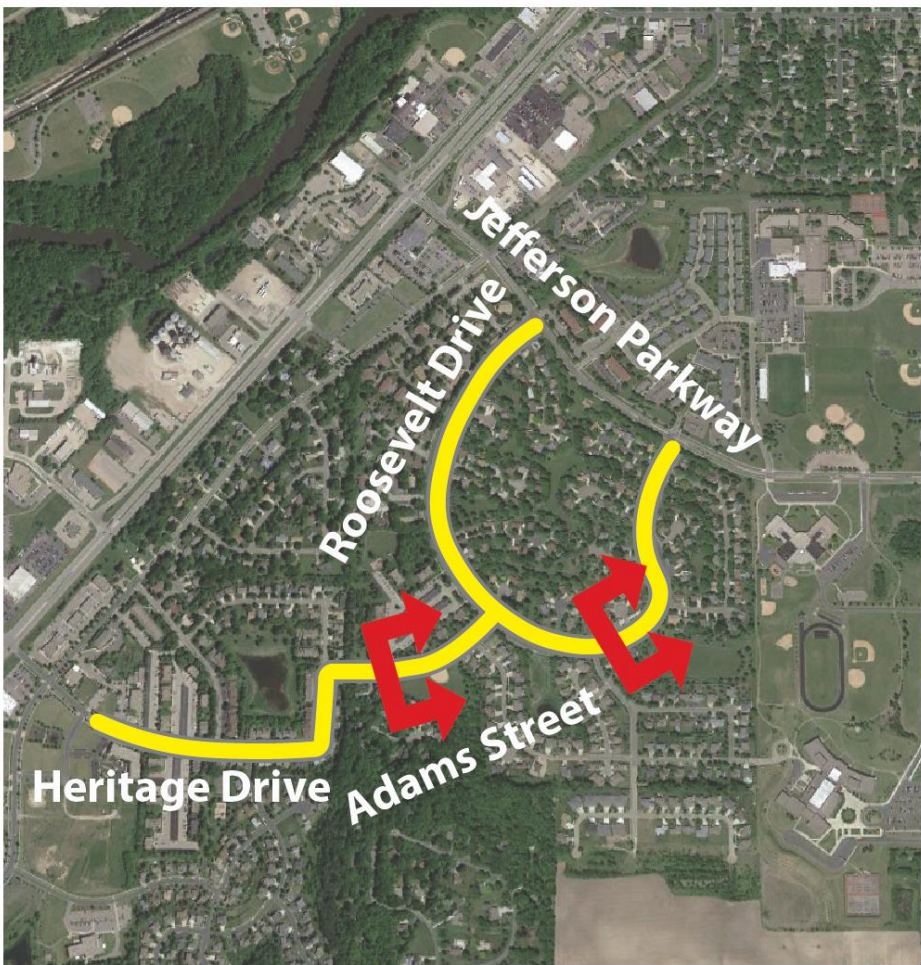
Existing cross section (Adams St)



Recommendation west of Grant Dr



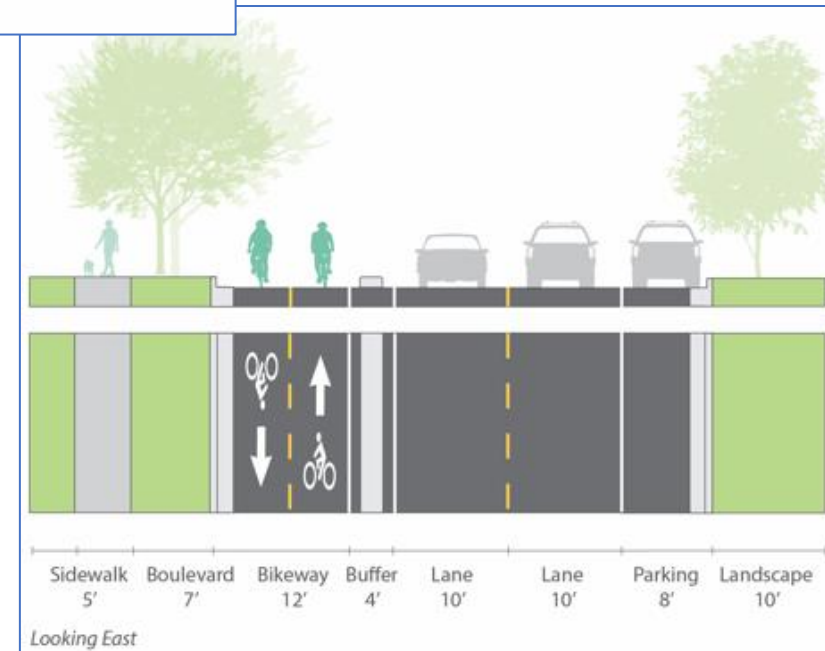
# Heritage Dr, Adams St, and Roosevelt Dr



Proposed bikeway  
extents



Location of  
cross section





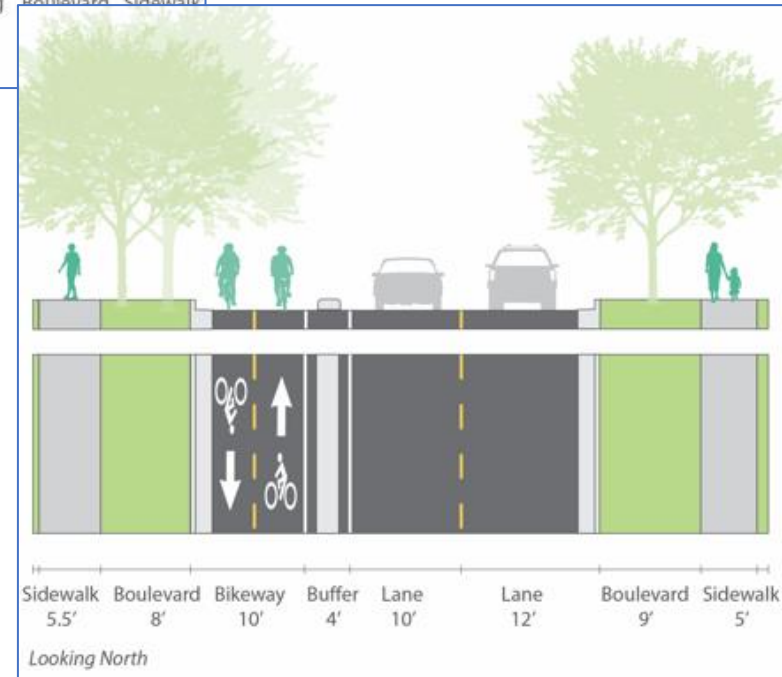
# Lincoln St, Lincoln Pkwy, and Spring St



 Proposed bikeway extents  Location of cross section



Existing cross section



Recommendation south of Lincoln Lane

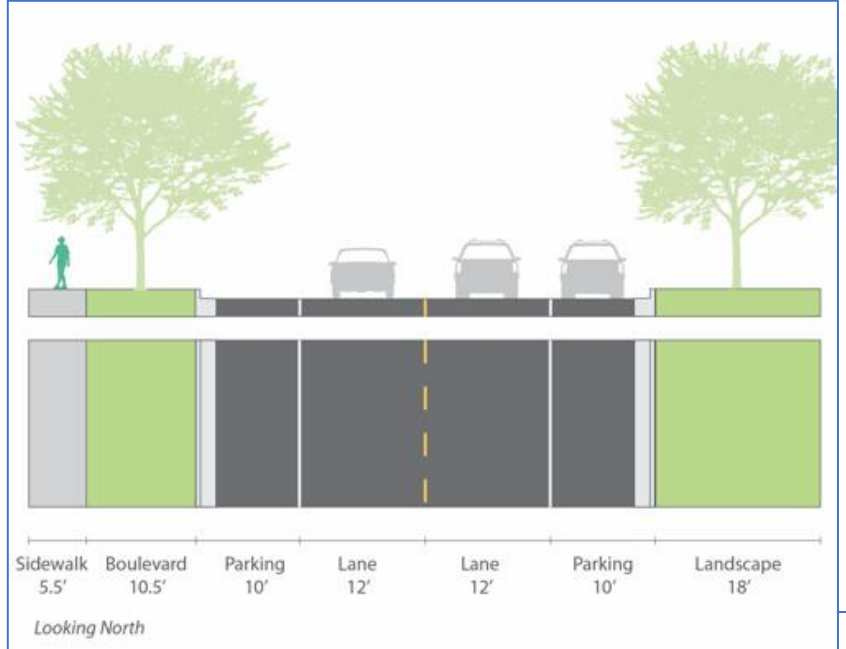


# Lincoln St, Lincoln Pkwy, and Spring St

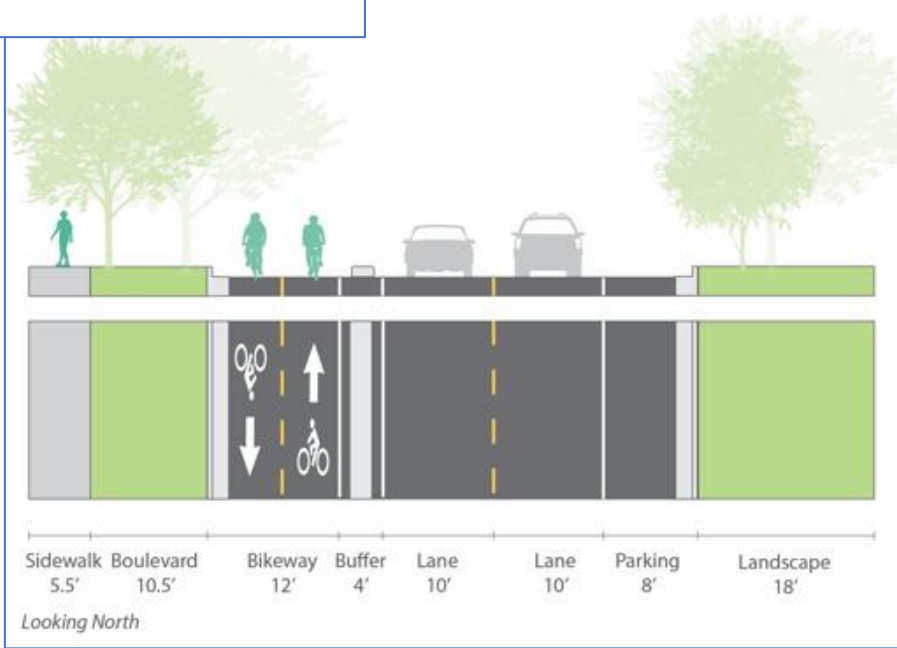


 Proposed bikeway extents

 Location of cross section



Existing cross section



Recommendation north of Greenvale Ave



# Armstrong Rd



Proposed bikeway  
extents

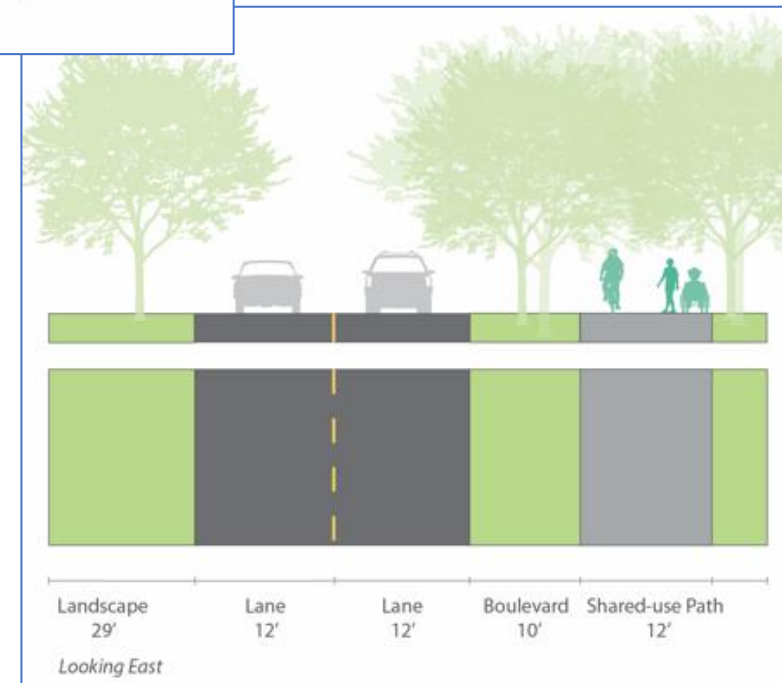


Location of  
cross section

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Existing cross section



Recommendation in the 24' section



# Armstrong Rd

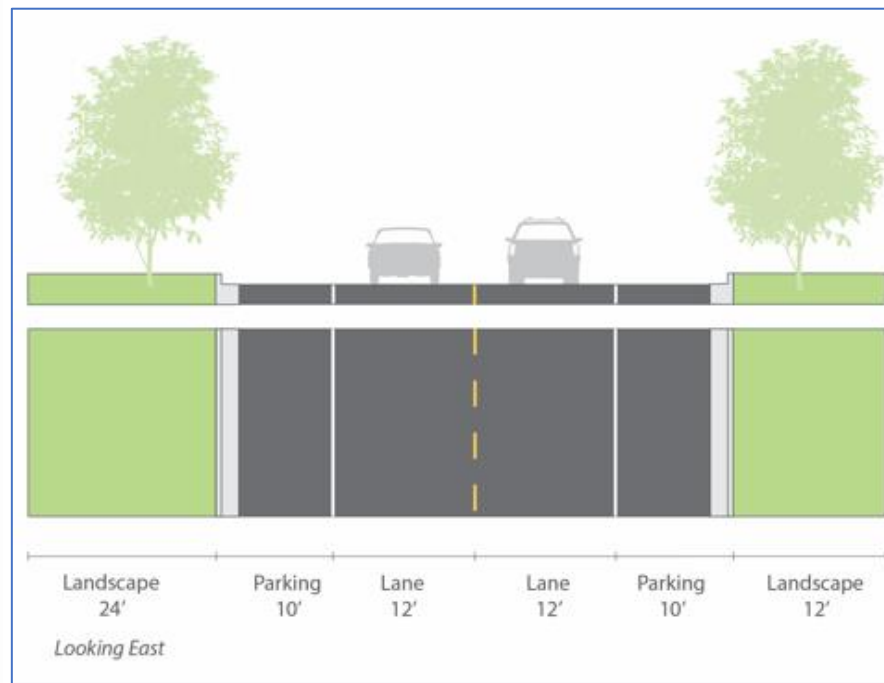


Proposed bikeway  
extends

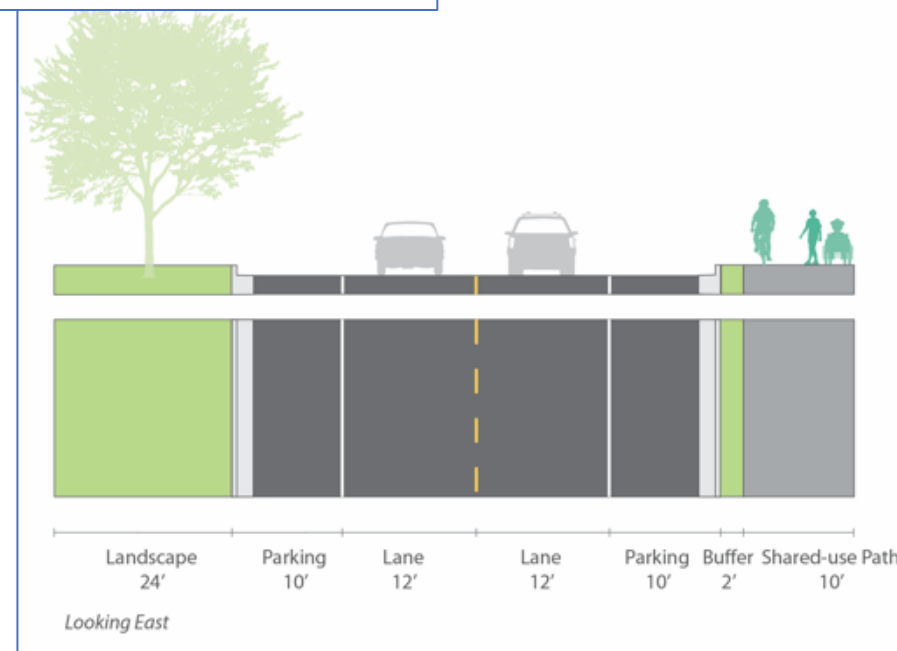


Location of  
cross section

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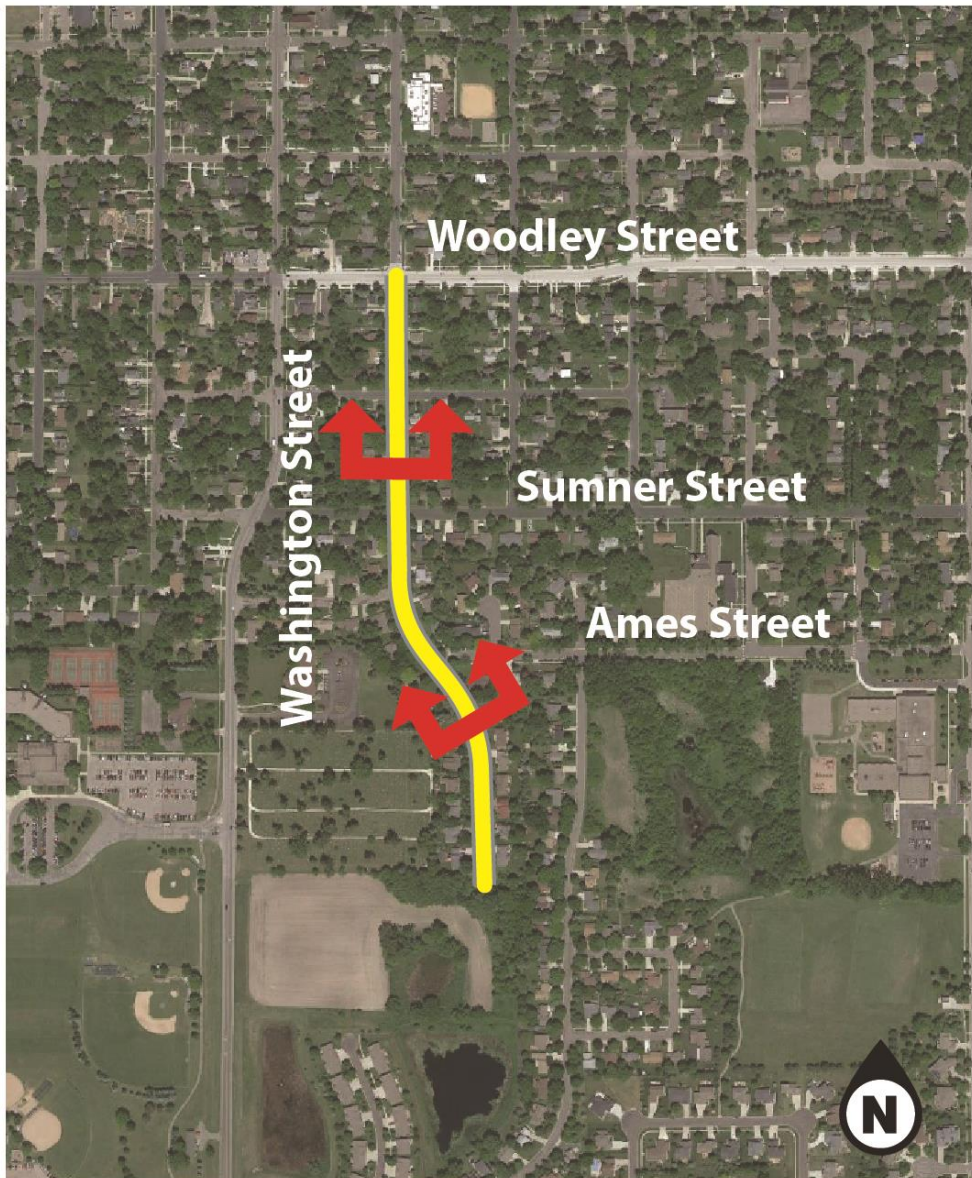
Existing cross section



Recommendation in the 44' section



# Washington St

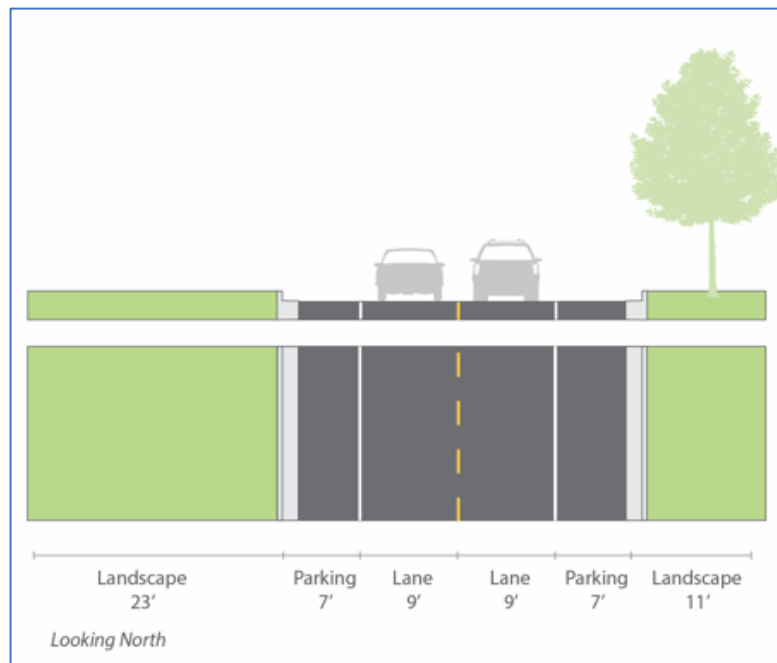


Proposed bikeway  
extents



Location of  
cross section

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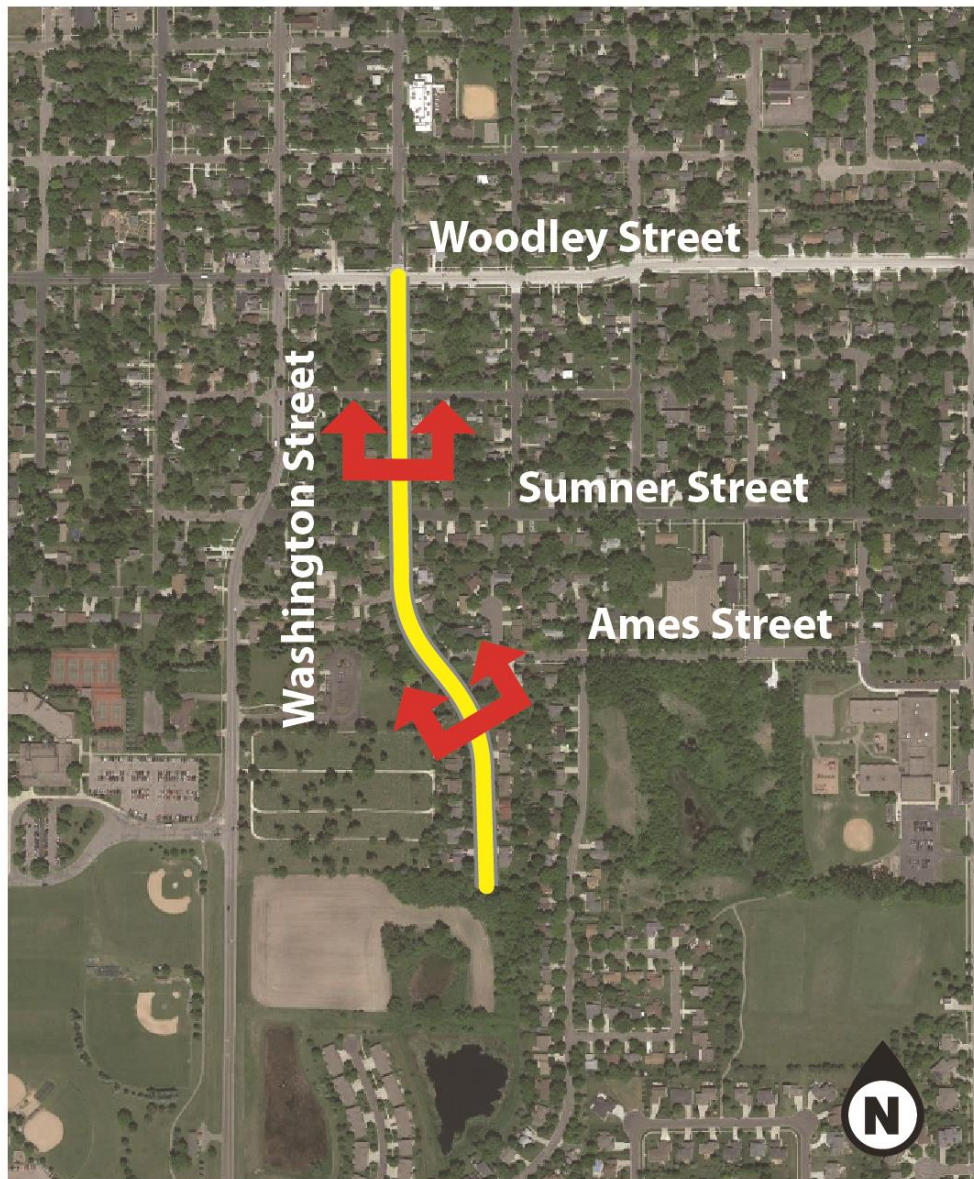
Existing cross section



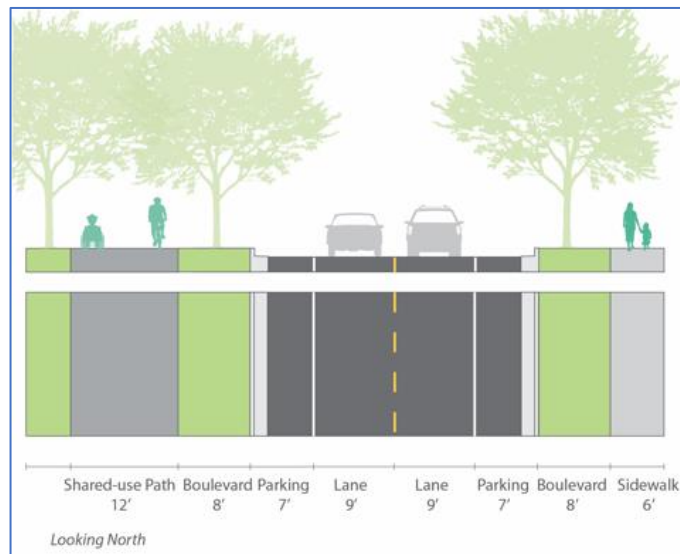
Recommendation from Ames St to cul-de-sac



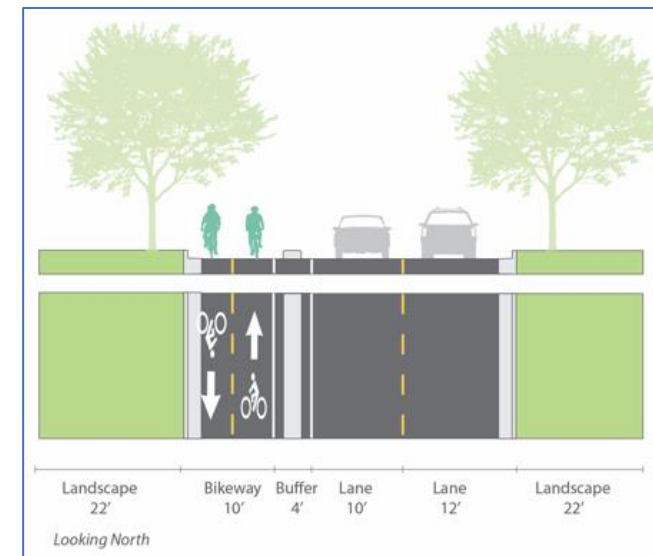
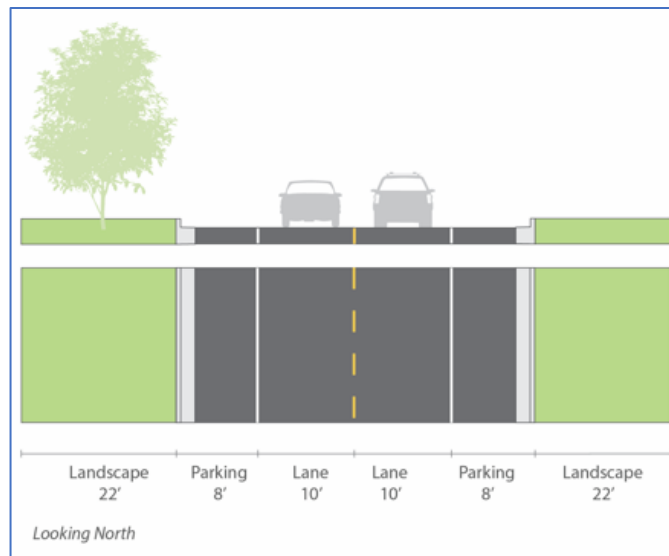
# Washington St



 Proposed bikeway  
 extents
  Location of  
 cross section



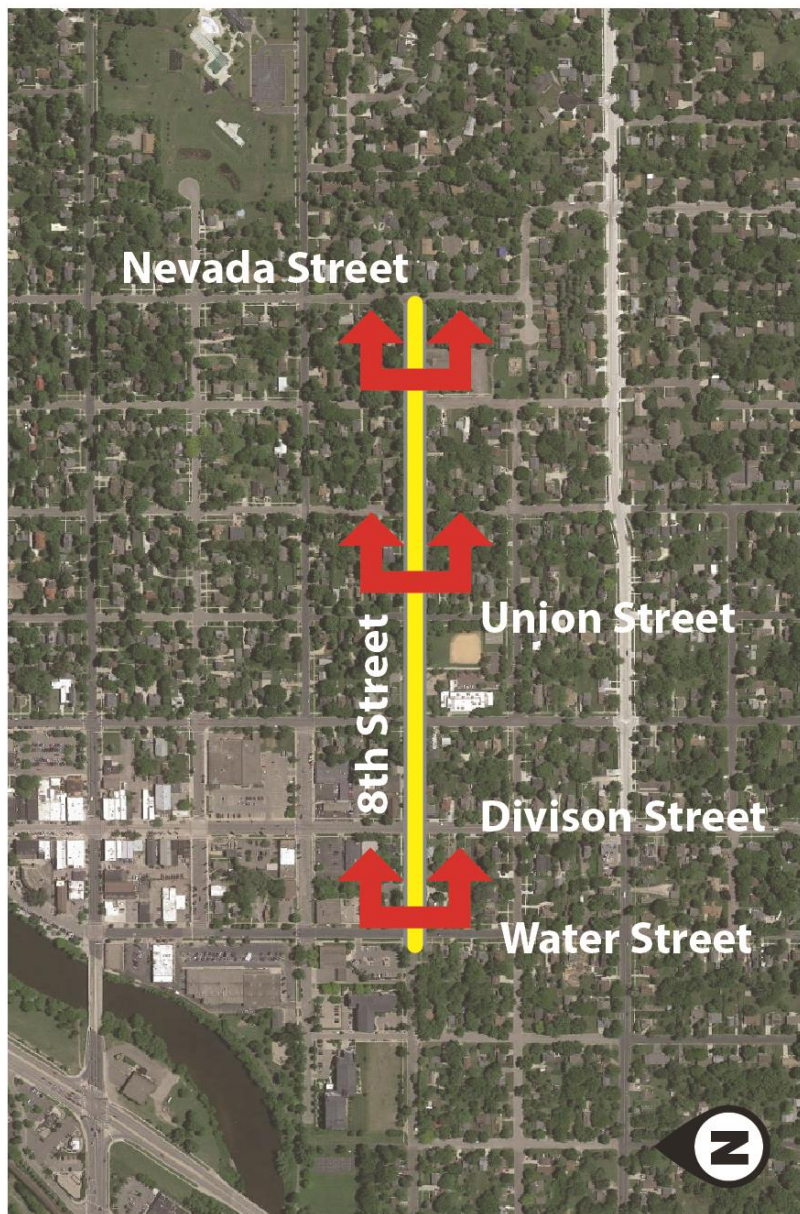
Existing cross section



Recommendations from Woodley St to Ames St



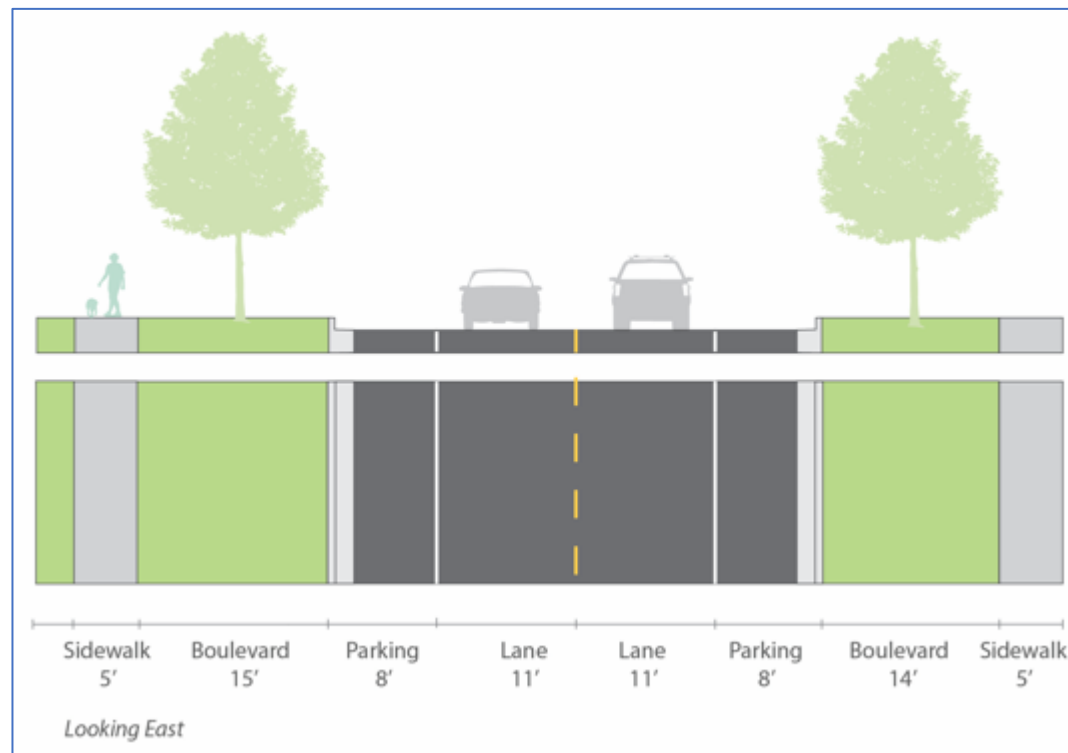
8th St



Proposed bikeway  
extends



Location of  
cross section



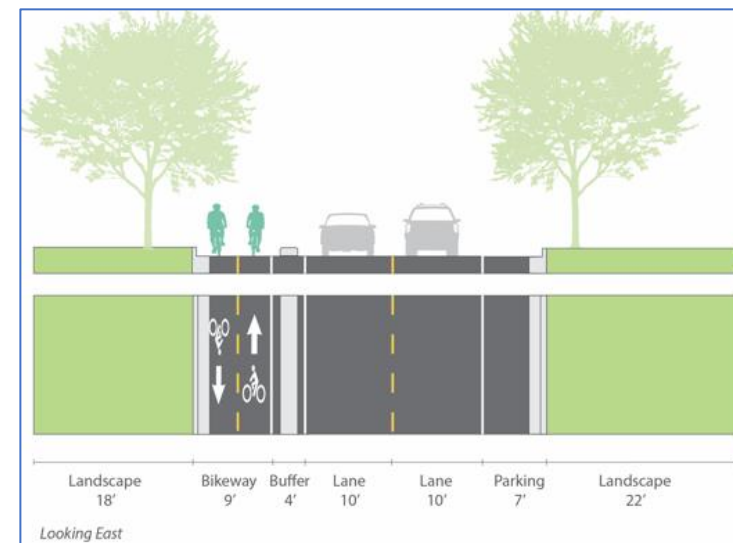
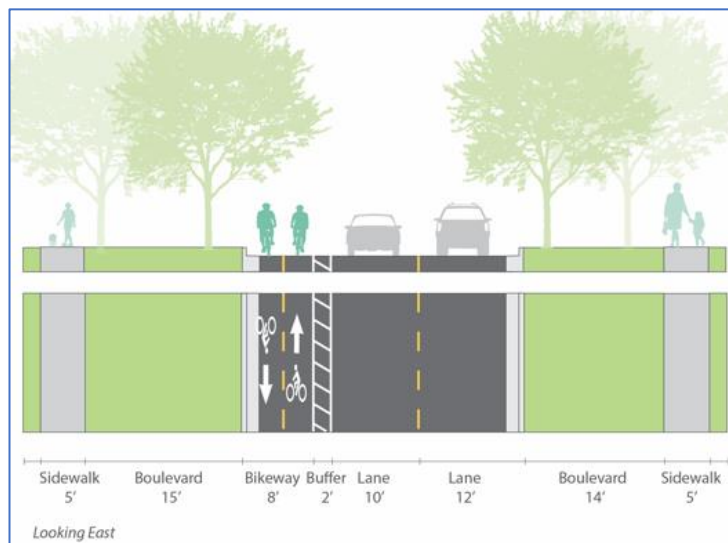
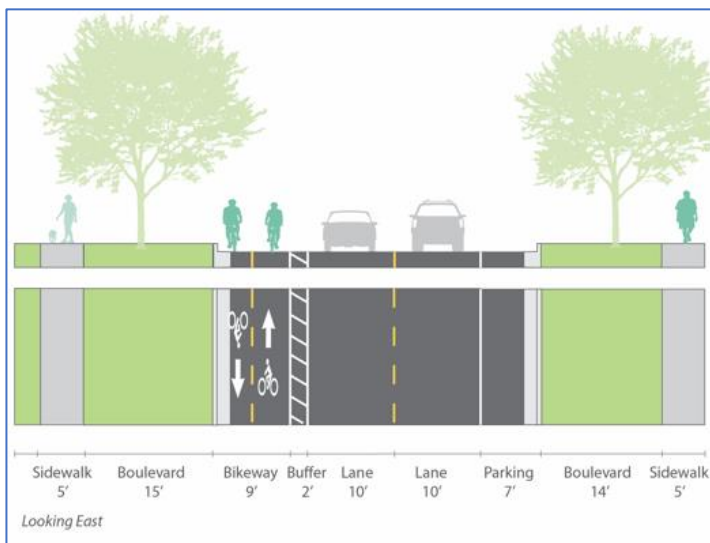
Existing cross section: 38' section show – ranges from 38' to 32' to 40'



8<sup>th</sup> St

Proposed bikeway  
extends

Location of  
cross section

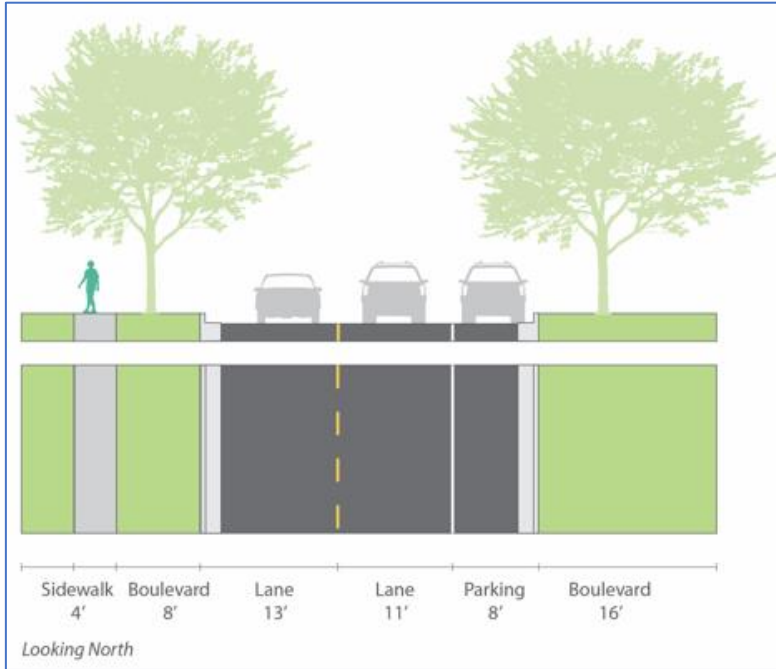




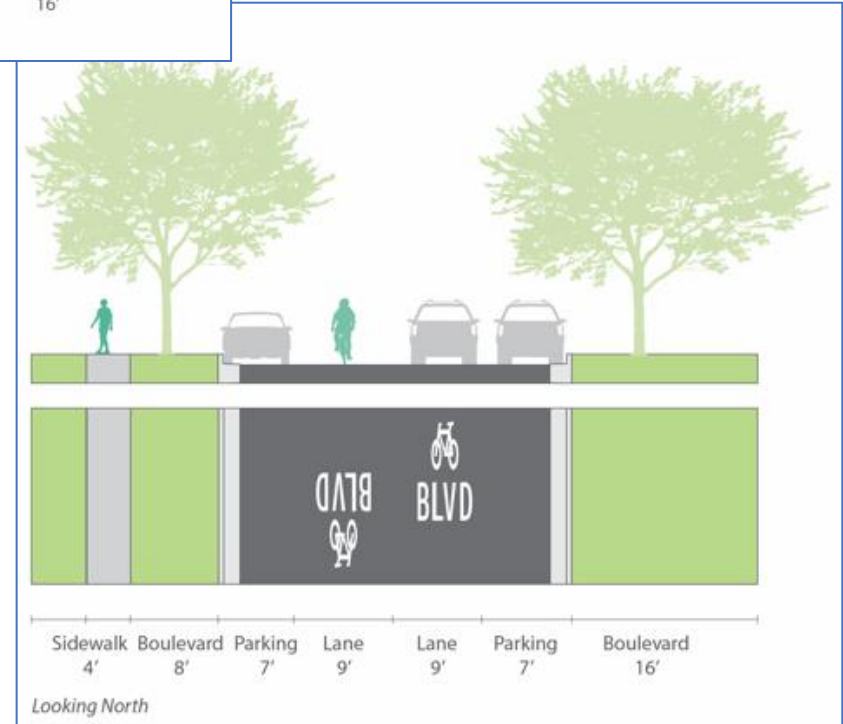
Proposed bikeway  
extents



Location of  
cross section



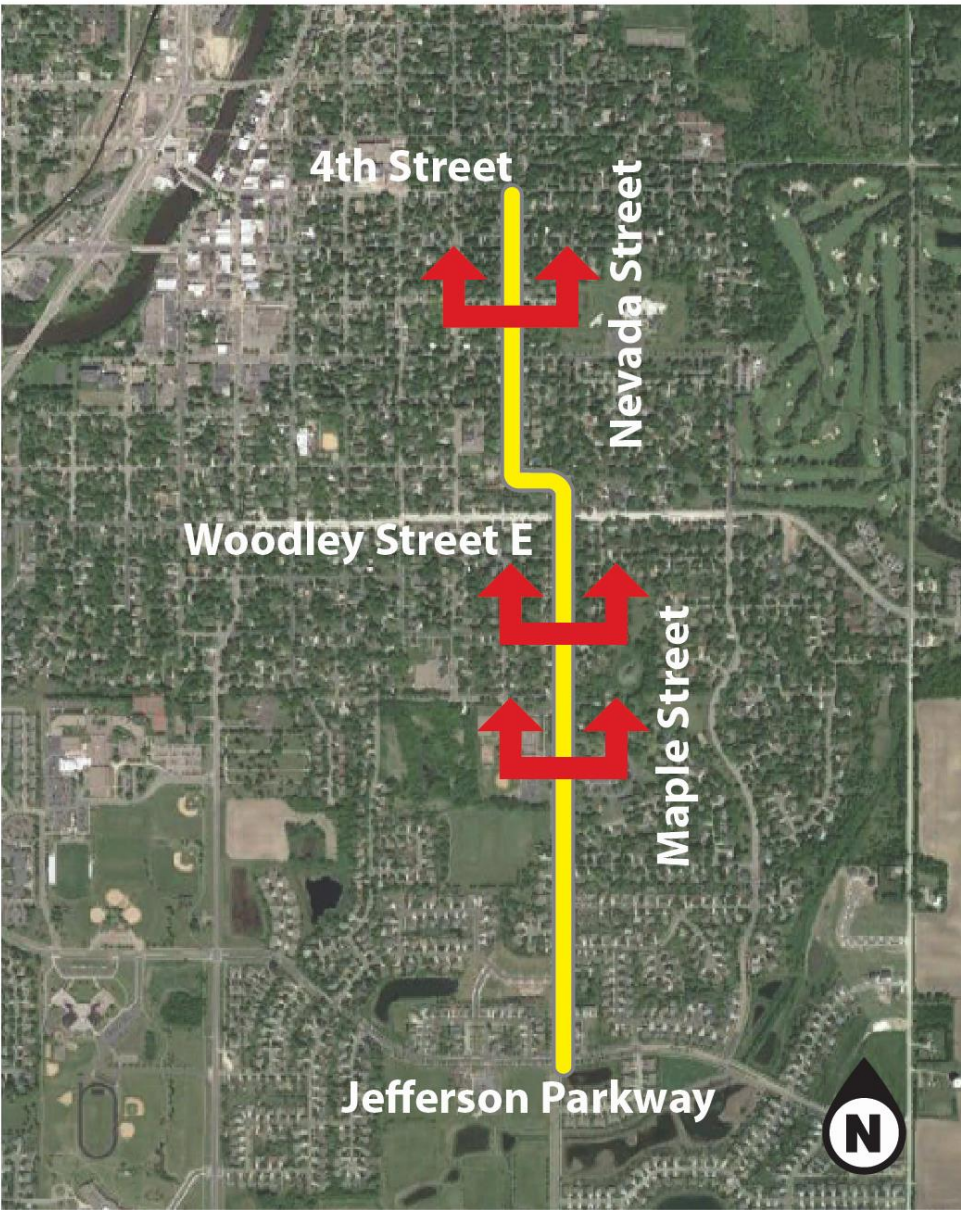
Existing cross section



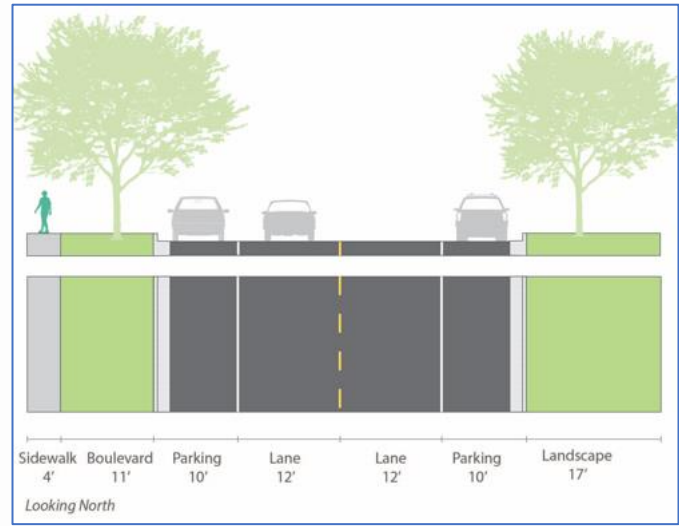
Recommendation



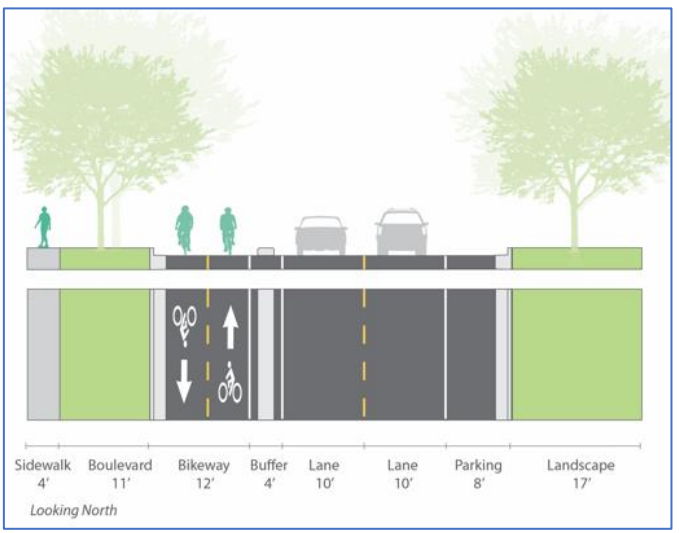
# Maple St & Nevada St



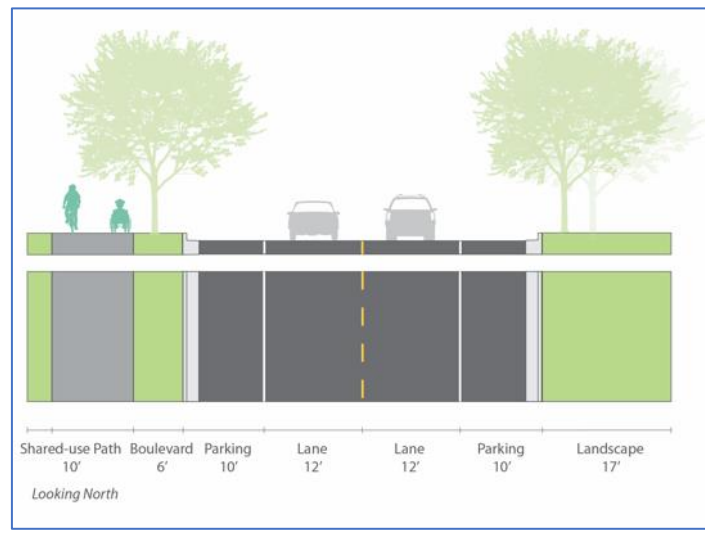
 Proposed bikeway extents
  Location of cross section



Existing cross section (Maple St)



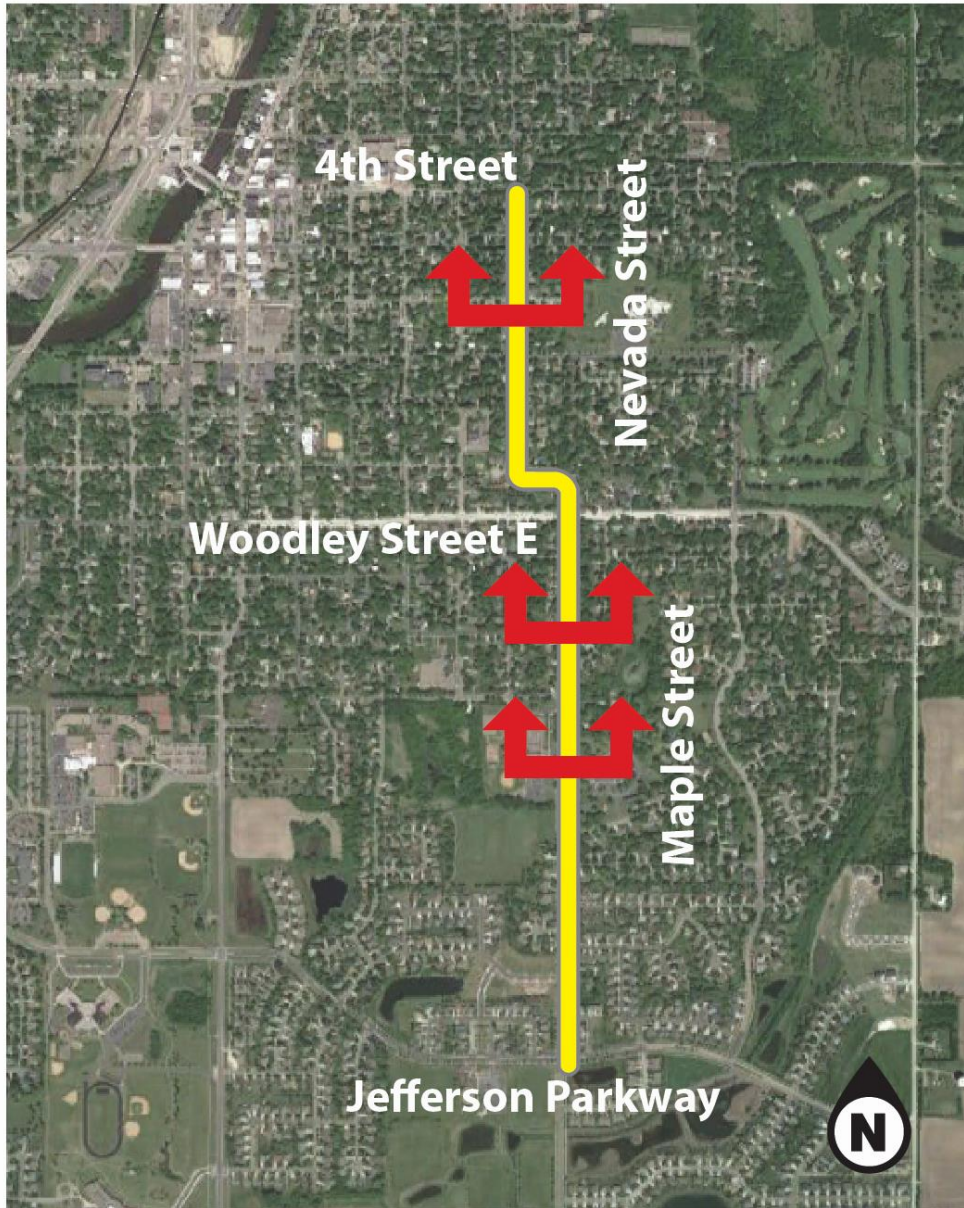
Recommendation between Sumner St and Fremont St



Recommendation south of Sibley Dr

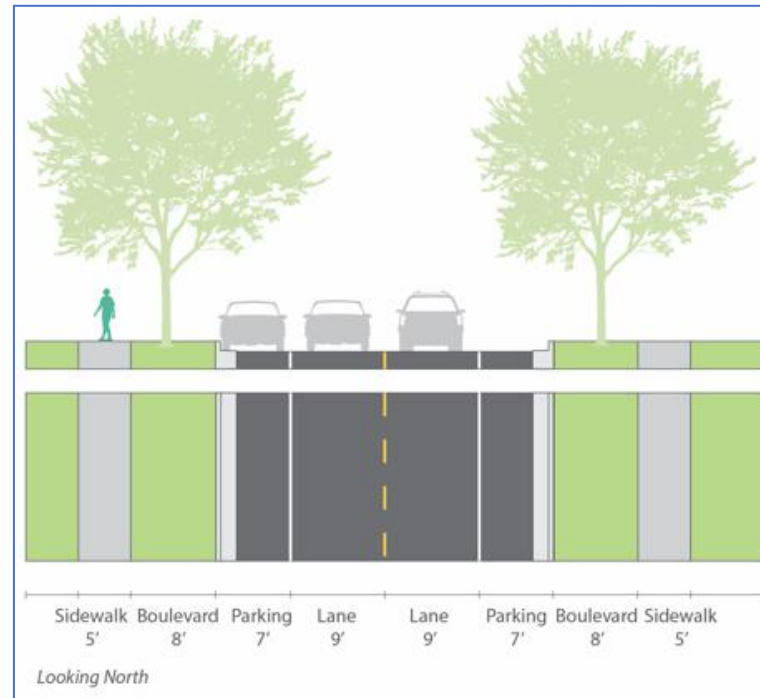


# Maple St & Nevada St

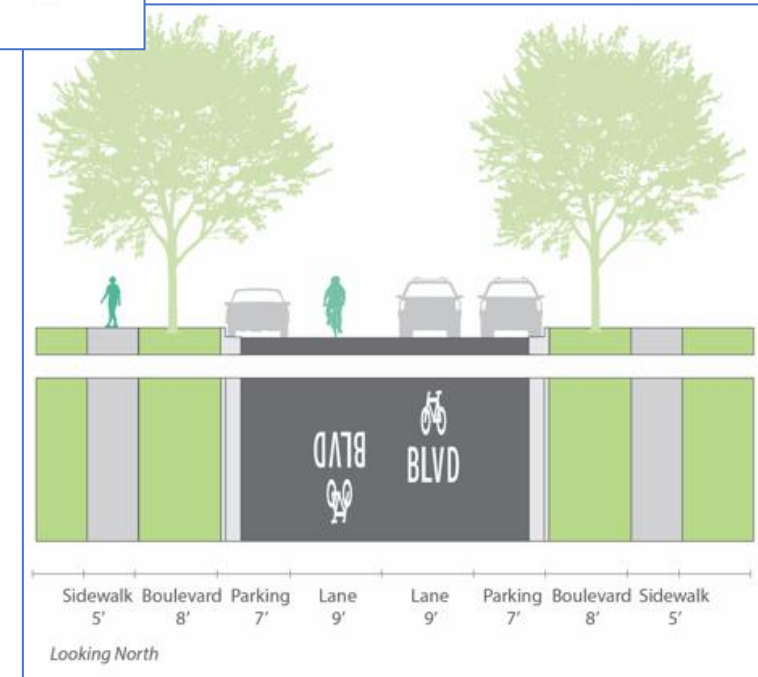


 Proposed bikeway extents  Location of cross section

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Existing cross section (Nevada St)



Recommendation between 6<sup>th</sup> St and 7<sup>th</sup> St





# Draft Pedestrian Design Concepts and Report

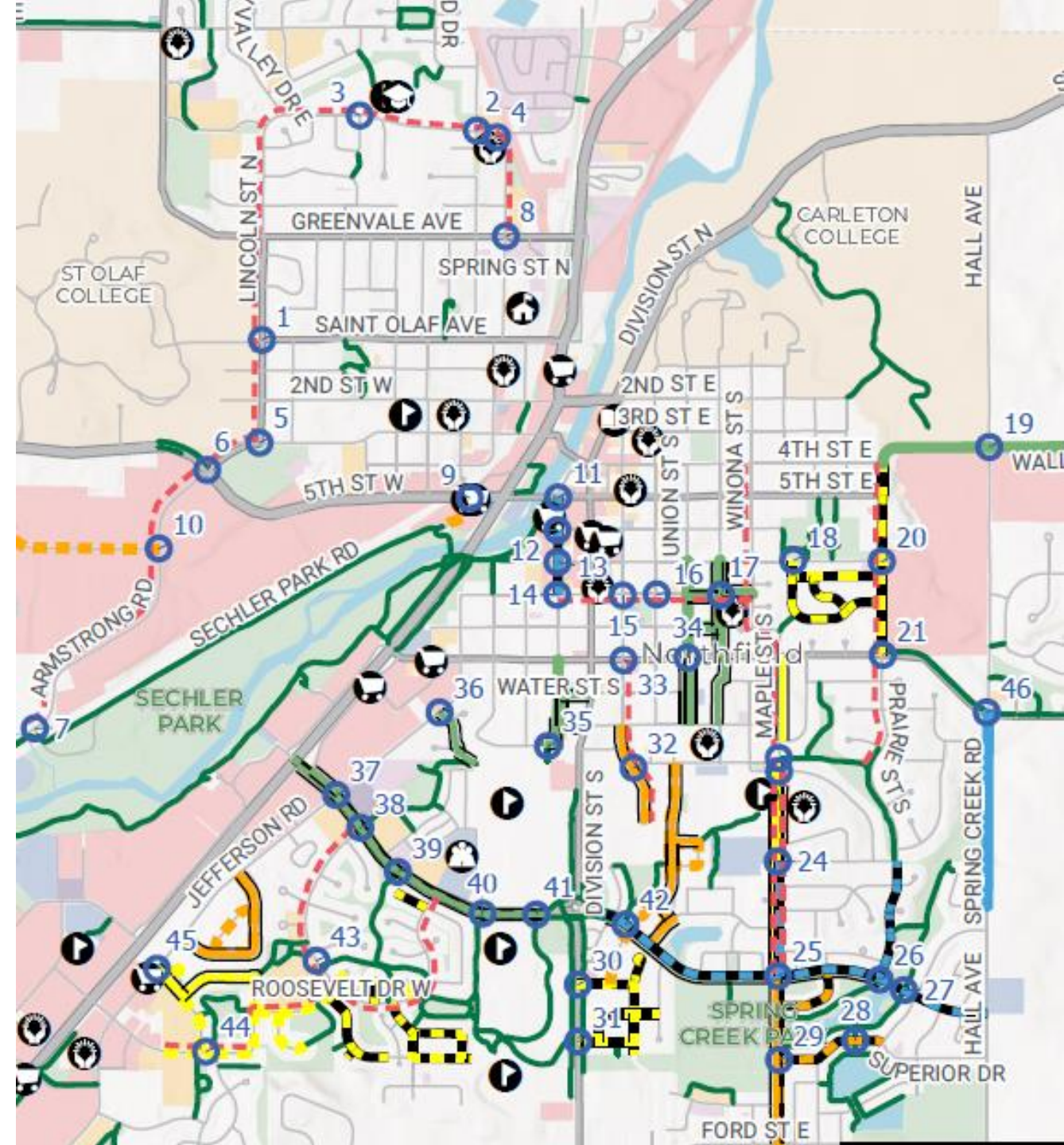
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## **Overview of pedestrian analysis**

- Origin and destination analysis
- Street and intersection types
- Exploring tools for different CIP projects
- Pedestrian Toolbox
- How to use



## Pedestrian Origin and Destination Analysis



# Pedestrian Toolbox tools relevant to Capital Improvement Projects

**Table 3: Pedestrian Toolbox tools relevant to Capital Improvement Projects**

Tool	Mill and Overlay	Reconstruction and Reclamation	Sidewalk/Trail Improvements
Curb ramps	Standard	Standard	Standard (except bike lane striping/signing with no other associated project)
Corner treatments*	Opportunistic (especially curb extensions)	Standard	Opportunistic (especially curb extensions)
Crosswalks	Standard	Standard	Standard
Median refuge islands	Opportunistic	Opportunistic	Opportunistic
RRFBs	Opportunistic	Opportunistic	Opportunistic
Raised crossings	Opportunistic	Standard	Opportunistic (not applicable for sidewalk gap or bike lane striping projects)
Raised intersections	Limited	Opportunistic	Limited
Trees	Standard	Standard	Limited
Green stormwater infrastructure	Limited	Standard	Opportunistic
Roundabouts	Limited	Opportunistic	Limited
Other speed and volume control measures	Limited	Opportunistic	Opportunistic

\*Curb extensions, corner radii, mountable truck aprons, and protected Intersections



# *Questions & Discussion*

*Thank you!*