# Appleton Complete Streets Study

February 12, 2024

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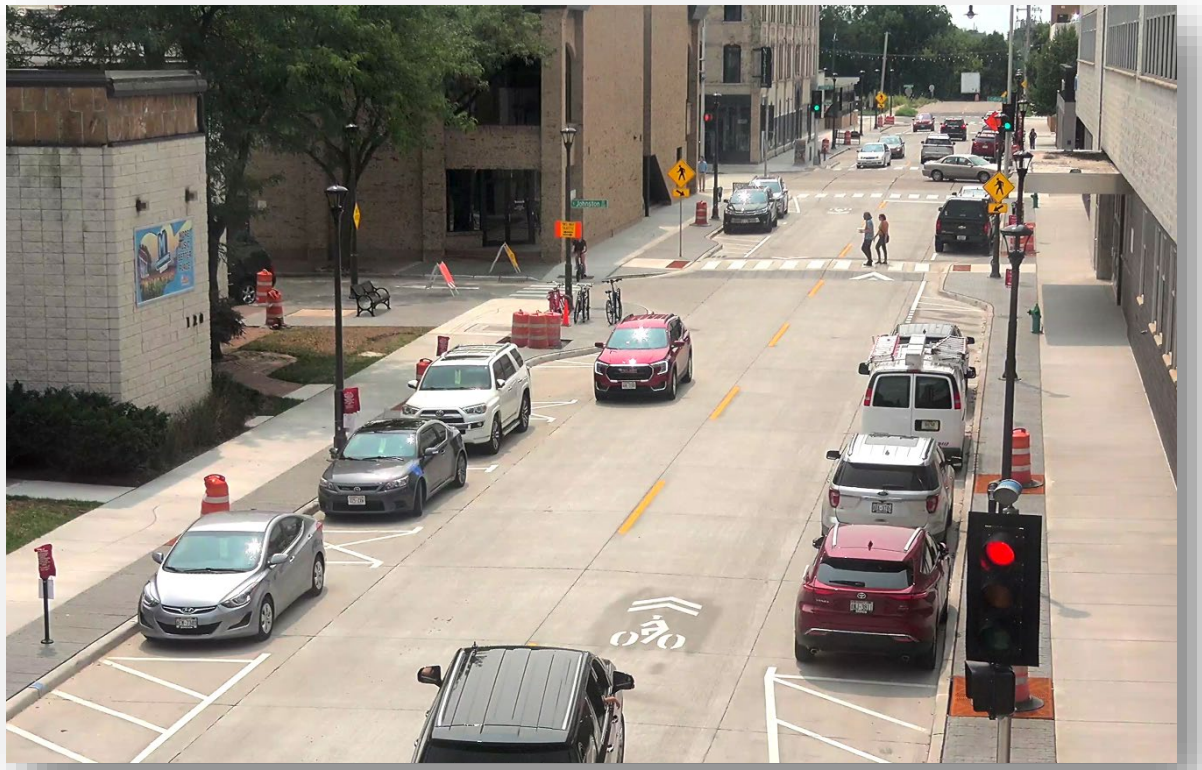
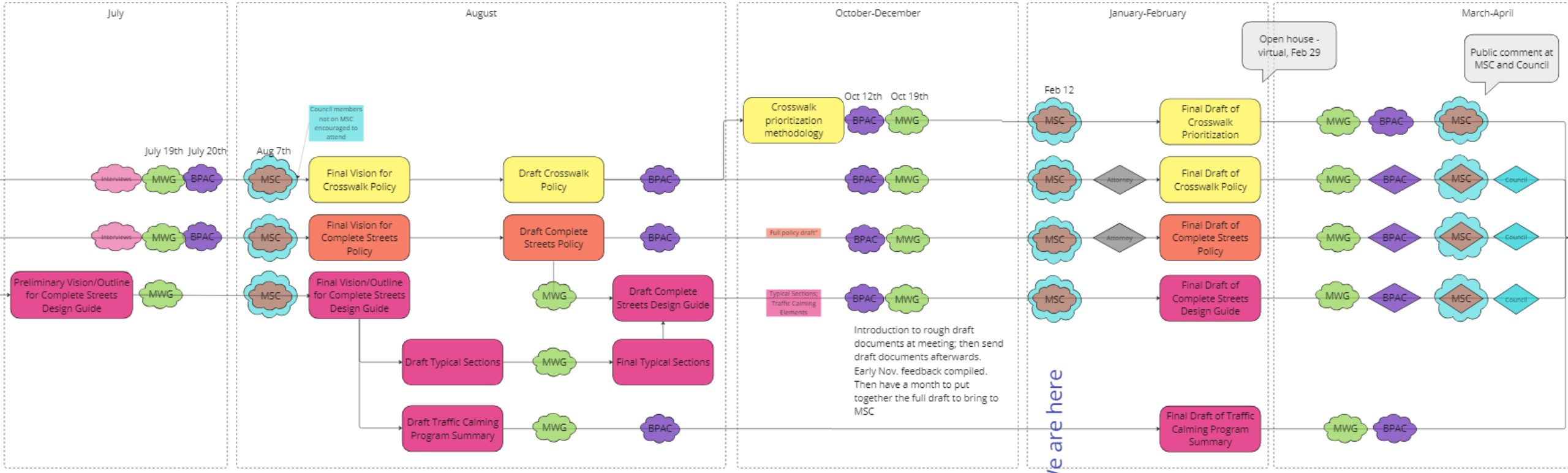
# Agenda

- Complete Streets Policy Update
- Complete Streets Design Guide
- Pedestrian Crossings Approach



# Project Timeline




**Stakeholder Engagement:**

- ✓ Stakeholder Interviews: July 2023
- ✓ BPAC: regular updates from July 2023 to present
- ✓ Multimodal Work Group: July, August, October
- ✓ Municipal Services Commission: August, today

Link to project board

# Stakeholder Input Themes

- **Safety for all ages and abilities** is a high priority across stakeholders
- Strong consensus to **calm traffic** and support **transportation options**
- Desire to **prioritize** within budget constraints and **plan for maintenance**
- Increased **staff coordination** is seen as beneficial
- **Context** is important: commercial, developed and new residential areas
- Standout value: shared commitment to **youth and education**

# Complete Streets Policy Vision

Appleton will strategically use resources to plan, design, build and maintain a multi-modal network of streets so that community gathering and traveling by walking, rolling, biking, transit and driving is a safe and positive experience for people of all backgrounds, ages and abilities, supporting Appleton's local economy, health and environment.

# Pedestrian Crossing Improvements Vision

To improve access to destinations, the City of Appleton will invest in pedestrian crossing improvements using a consistent prioritization process grounded in the latest evidence on roadway safety treatments that are aligned with the Complete Streets Policy and Complete Streets Design Guide.

- Assess **Safety**
- Assess **Community Priorities**
- Identify **Highest Opportunity Locations**

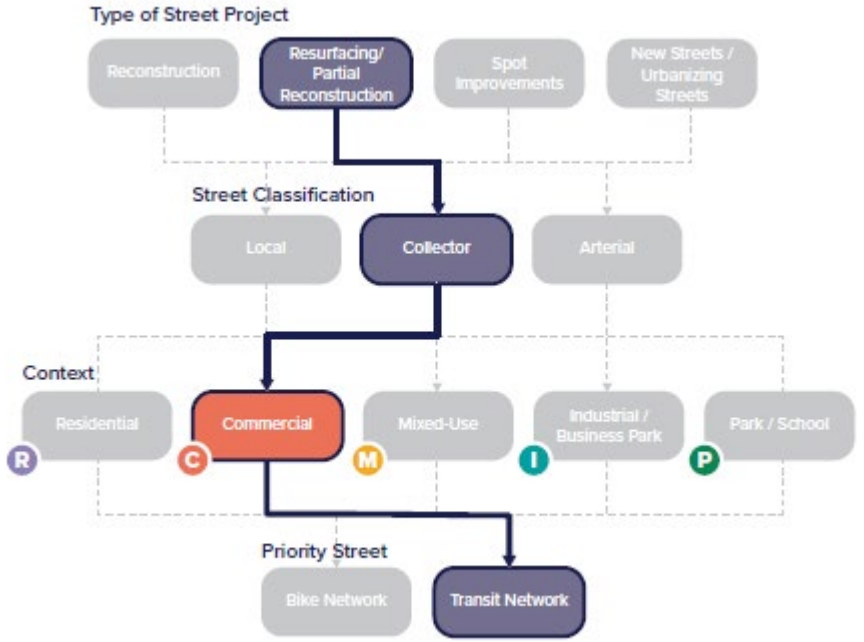
# Complete Streets Policy Update

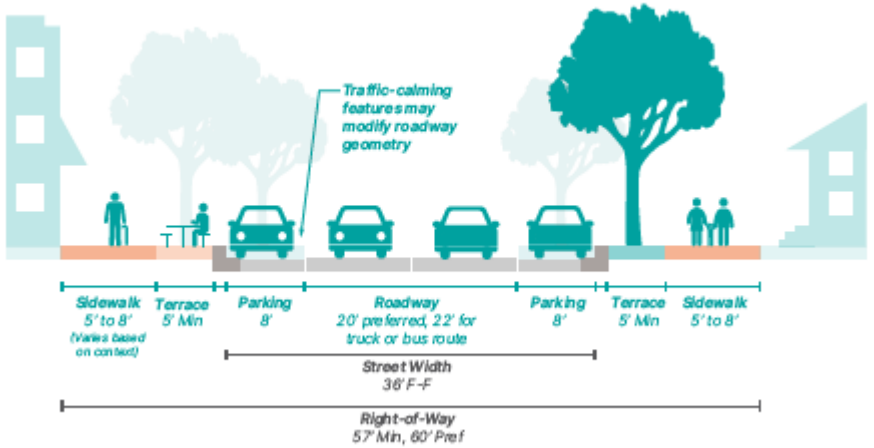
# Complete Streets Policy

- Applies to **all transportation projects**, including new construction, reconstruction, rehabilitation and maintenance projects and street projects related to land subdivision or development
- **Safety and mobility** for the most **vulnerable road users** will be prioritized
- This policy allows **exceptions to be approved in writing** by the Director of Public Works

# Complete Streets Policy

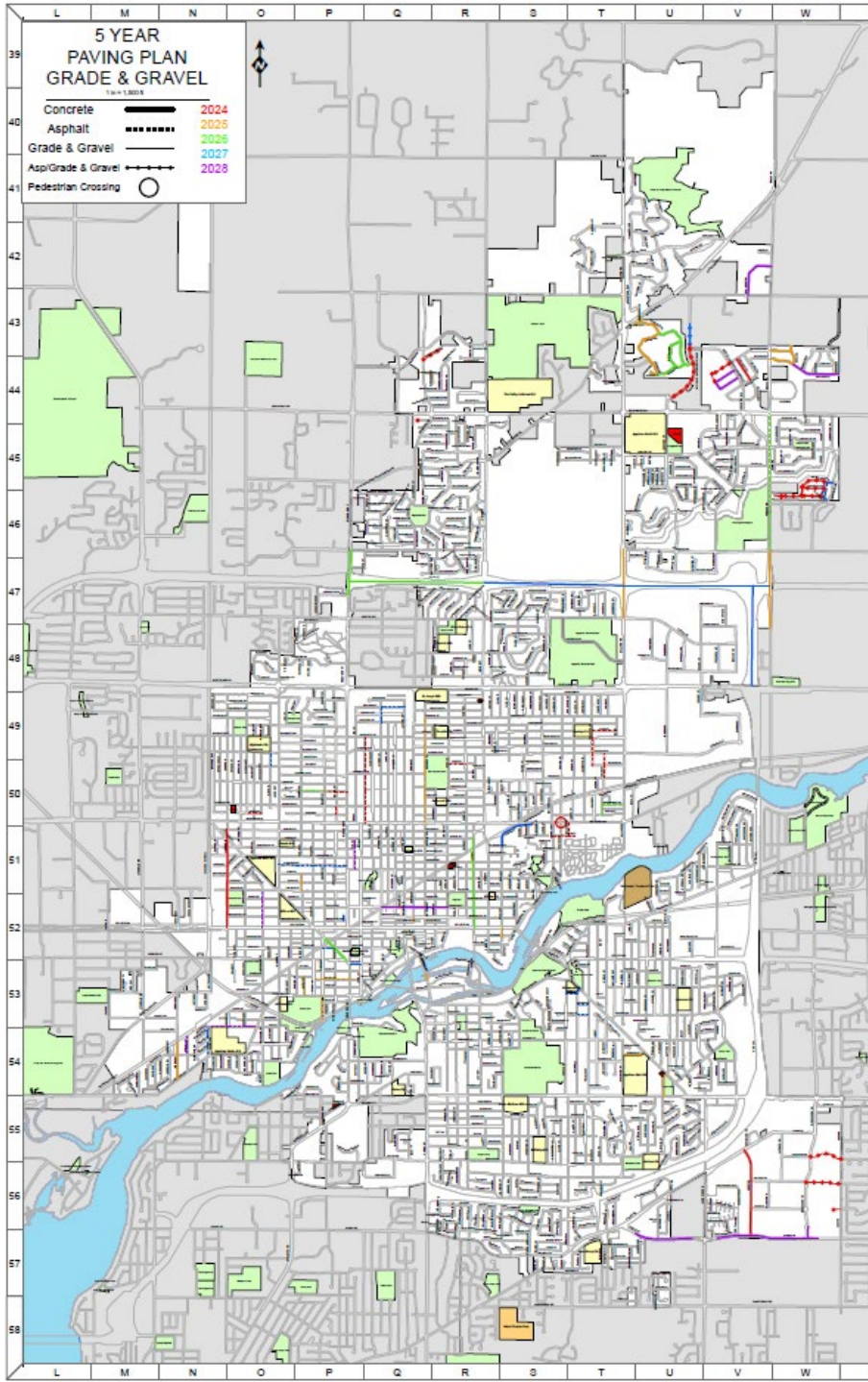
- Consult the latest **best practices** while designing projects, including national guidelines and the new **Design Guide** in project scoping and design
- The Complete Streets process **reflects context** including roadway classification and land use. Land use or zoning policies that conflict with the Complete Streets Policy will be revised.
- Departments of Public Works and Community Planning will **coordinate with partner agencies** and **private developers** to implement the policy on public and private projects



# Complete Streets Policy

- Implementation: leverage and prioritize **existing resources** + seek **additional funding**
- **Prioritize projects** that: fill gap in user network (pedestrian, bicycle), serve vulnerable users, serve areas of the city with high potential for active trips, or meet other city-adopted mobility goals
- **Set aside funding** for specific network priorities, such as closing pedestrian or bicycle network gaps, making stand-alone crossing improvements, and Complete Streets demonstration and quick build projects
- Public Works will **report annually** to the Municipal Services Commission



# Complete Streets Policy Worksheet

## Appleton Complete Streets Design Worksheet

### Project Overview

Street name:

Project extent:

Funding source:

Construction Year:

### Context

*This section summarizes the context for the street project. For more background information on the street context questions, see pages 7-11 of the Appleton Complete Streets Design Guide.*

What type of project is this?

Reconstruction | Resurfacing | Spot Improvements | New Streets / Urbanizing Streets | Quick Build

What is the official class designation of the street?

Local | Collector | Arterial

What is the existing land use context?

Residential | Commercial | Mixed-Use | Industrial / Business Park | Park / School

Are there any anticipated land use or development changes in the future?

Is any part of the segment on a priority network?

Bike Network | Transit Network | Other

Does this project fall within an area of highest equity concern (in the top 20%)?

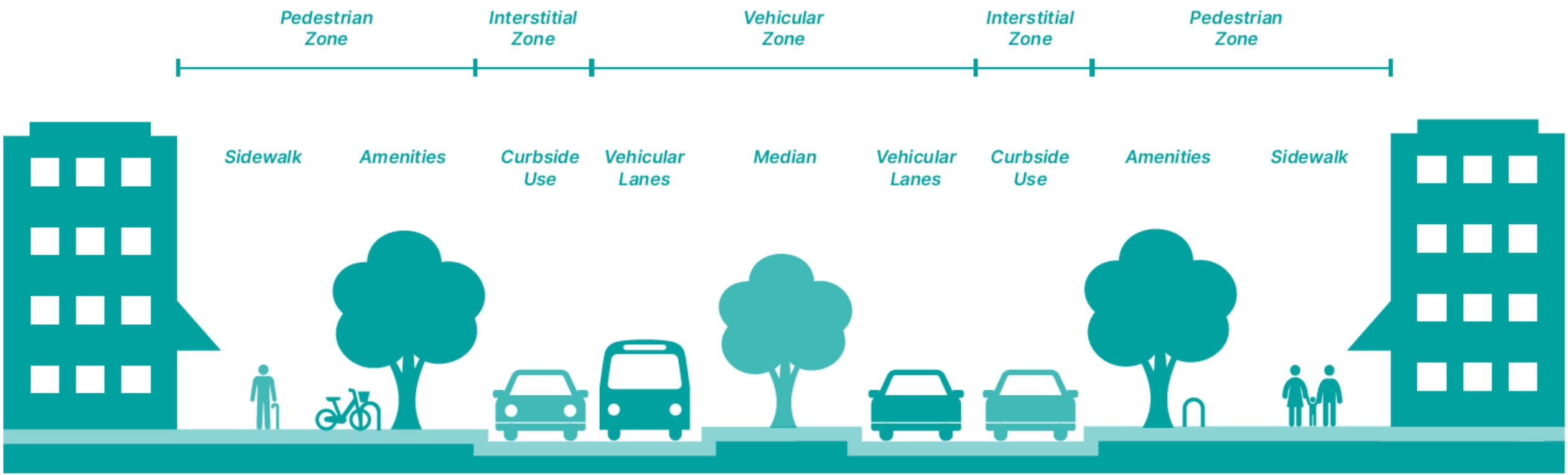
Yes | No

Are there any known equity considerations for the area served by this street project, i.e., priority populations in the project area, or destinations that serve priority populations?

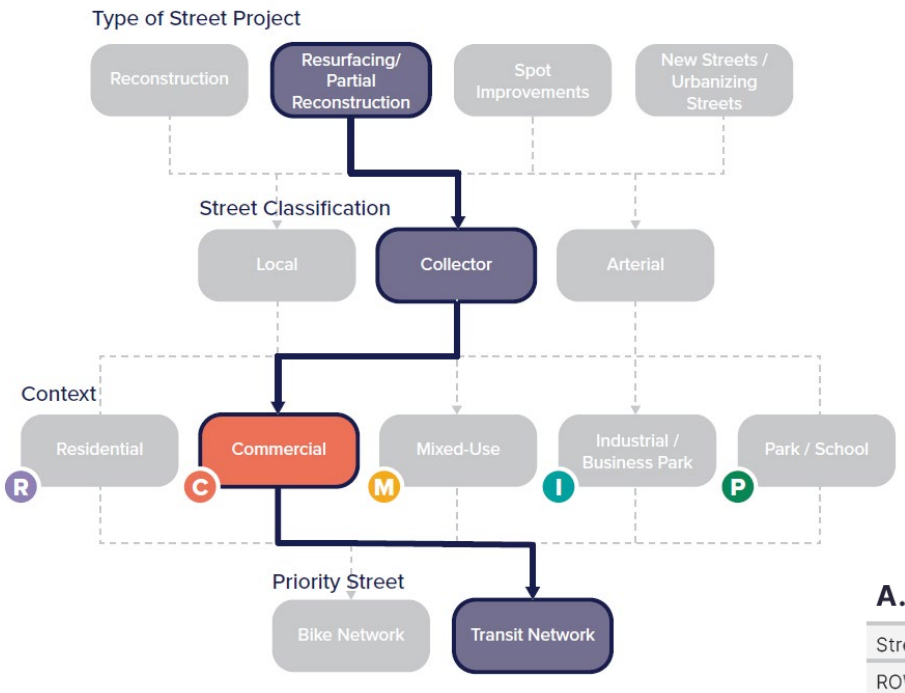
# Complete Streets Design Guide

# Design Guide Content

- Complete Streets Cross-Sections
- Design Guide Toolkit
- Traffic Calming Retrofit Program

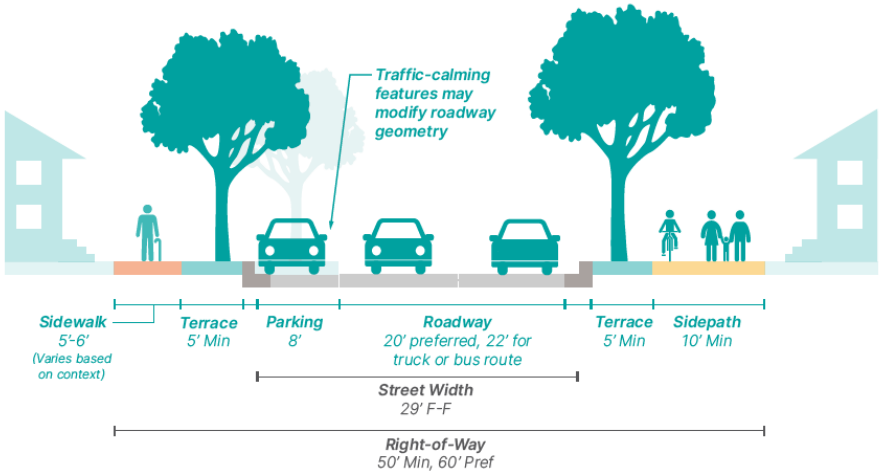


# Design Guide: Cross-Sections



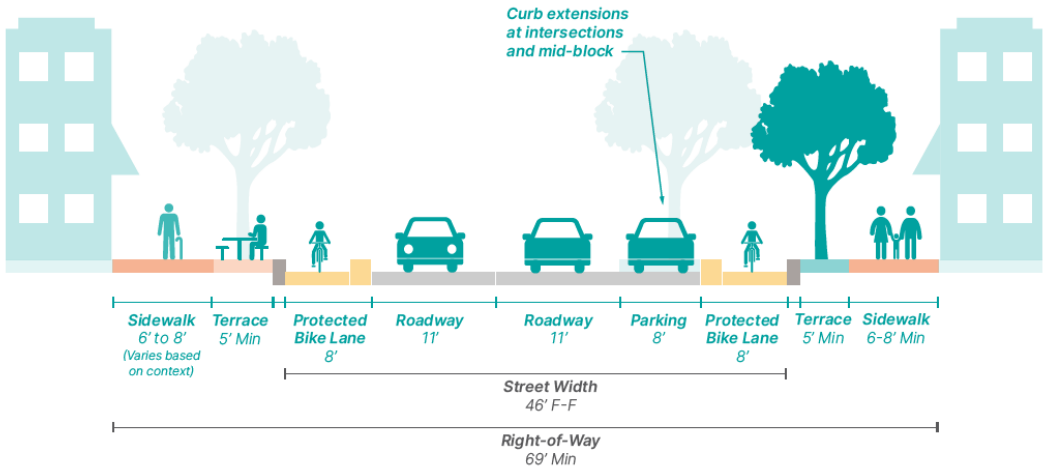

## C.1 Low-Density Residential Collector

| | |
|---|---|
| Street Width | 29ft F-F |
| ROW | 50ft Min, 60ft Preferred |
| Parking | 1 side |
| Context | R P I |
| Description | Residential collector street with parking along one side and a sidepath along the opposite side. |
| Use | • Residential collectors in outlying lower-density neighborhoods<br>• Low parking demand<br>• May also apply to park/school and industrial contexts in outlying areas |
| Traffic Calming Features | • Curb extensions<br>• Mid-block crossings<br>• Street trees |




## A.2 Multimodal Arterial

| | |
|---|---|
| Street Width | 46ft F-F |
| ROW | 69ft Min |
| Parking | 1 side |
| Context | C M P I |
| Description | Arterial with parking on one side and protected bike lanes. |
| Use | • Critical corridor for bike connectivity<br>• High to average parking demand, particularly in commercial, mixed-use, or school contexts |
| Options Traffic Calming Features | • Curb extensions<br>• Mid-block crossings<br>• Street trees |

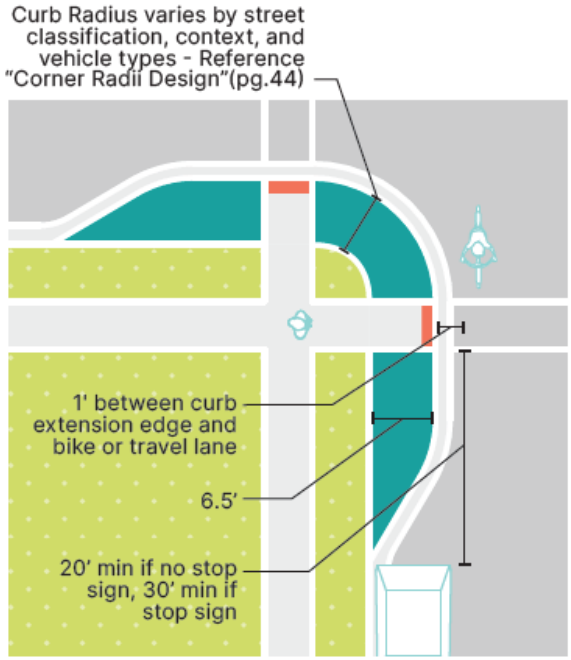


# Design Guide: Toolkit

- General Traffic Calming Treatments
- Intersection & Mid-block Crossing Treatments
- Multimodal Street Improvements
- Intersection Operations & Signal Modifications

## CURB EXTENSIONS

Curb Extensions are a traffic calming and pedestrian safety measure that help delineate parking, maximize landscaping, and shorten crossing distance, giving pedestrians and bicyclists a better chance to see and be seen before committing to crossing. In addition to shortening crossing distances and slowing traffic, they protect parked cars and provide space for trash receptacles and other amenities without blocking the sidewalk.




### Typical Application

- Arterial, Collector, and Local Roads.
- May be placed mid-block or at an intersection.
- May be combined with crossing treatments.
- Most effective on streets with parking lanes.

### Features

- In most cases, the curb extensions should be designed to transition between the extended curb and the running curb to approximately match the existing no parking/no standing area design standards.
- Curb extensions are most appropriate where there is an on-street parking lane and where transit and bicyclists would be traveling outside the curb edge for the length of the street.
- The turning needs of larger vehicles, such as school buses or emergency vehicles, need to be considered in curb extension design at intersections. For curb radii requirements, reference Table 6 (on page 44).
- Curb extensions should not block bicycle lanes or shoulders being used by bicyclists. In locations with protected bike lanes next to a parking lane, the curb extension begins at the inside edge of the bike lane and occupies the parking lane.
- Curb extensions can contain grass, landscaping, decorative concrete, public art, and tree grates in larger curb extensions.

### Quick-Build Option

- Quick-build implementation with paint, traffic tape, and flexible posts.

### Maintenance Considerations

- For efficient street sweeping and snow plowing, minimum radius for the reverse curves of the transition is 10 feet and the two radii should be balanced to be nearly equal.

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**SOURCES**

NACTO Urban Street Design Guide: curb-extensions
FHWA Pedestrian Safety Guide and Countermeasure Selection System
Appleton Downtown Streetscape Design Guide

# Design Guide: Traffic Calming Retrofit Program

- Quick-build projects are low-cost roadway projects that can be used to provide and evaluate solutions to improve safety and mobility.








# Design Guide: Traffic Calming Retrofit Program

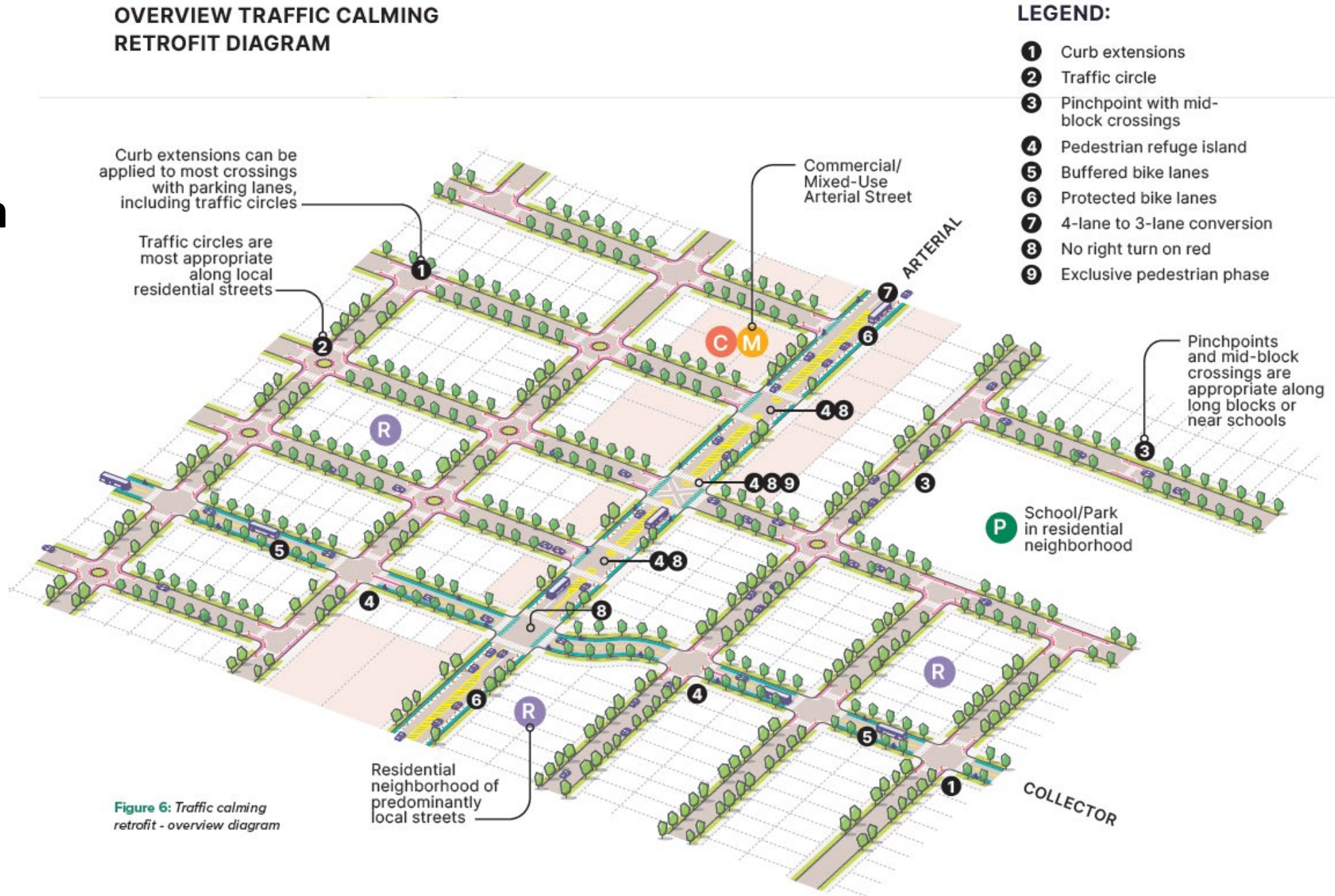



Figure 6: *Traffic calming retrofit - overview diagram*

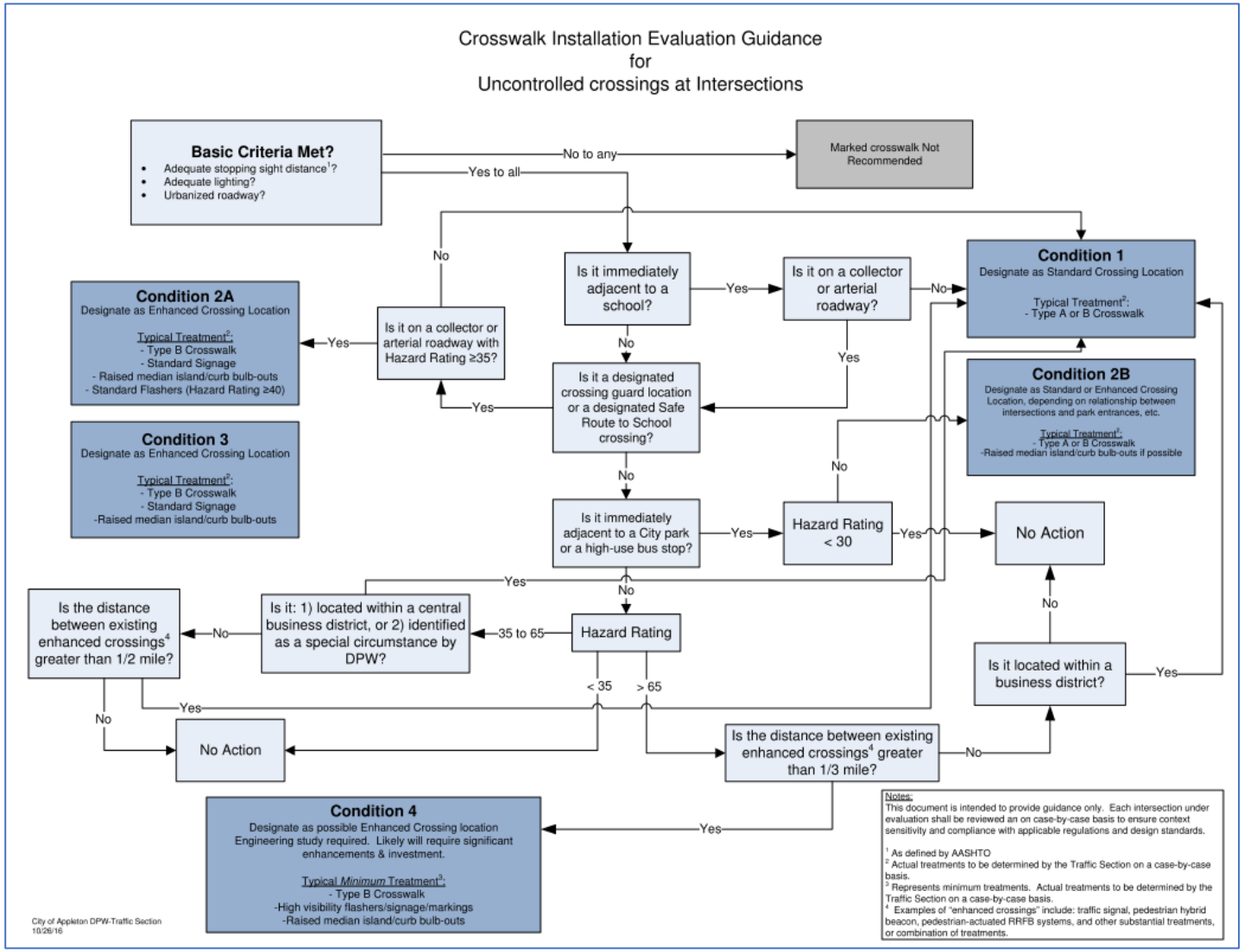
# Improving Pedestrian Crossings

# Improving Pedestrian Crossings: Previous Efforts

- Many successes
- 25 RRFB crossings + additional neighborhood improvements
- Completing last project this summer
- Projects are popular, with high demand

# Improving Pedestrian Crossings: Previous Efforts

- Hazard index: speed, traffic volume, number of lanes, crossing width, number of pedestrians, special circumstances
- Decision flowchart
- Requests exceed budget and staff capacity



# Improving Pedestrian Crossings: Lessons from Efforts to Date

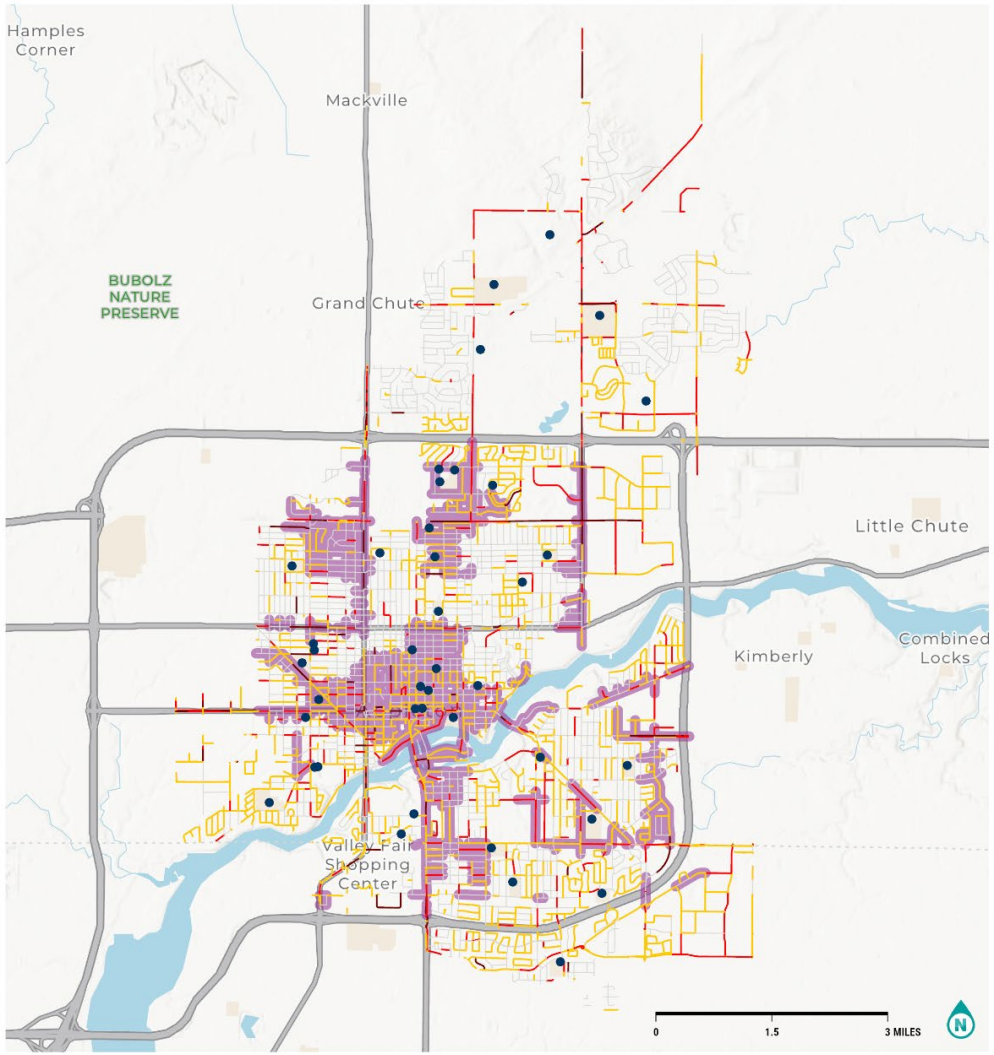
- There is a lot of community demand for pedestrian improvement projects
- Need a way to prioritize the next phase of work
- Arterial corridors rise to the top of the hazard index
- RRFBs are not the best fit for some wide, fast arterials
- Complete Streets Design Guide provides expanded toolbox of intersection safety tools – including corridor approaches

# Recommendations:
# Expanding the Toolkit for Pedestrian Safety

- Incorporate safety improvements into planned maintenance projects
- Look at 4-lane roadways at the corridor level, not intersection by intersection
- Utilize map-based data to identify potential projects based on the highest priority locations
- Consider a mix of quick-build and permanent treatments at as many locations as budget allows each year
- Follow the Complete Streets Policy and use input from the Complete Streets Design Guide

# Community Priorities for Future Projects

- Safety
- Areas with high numbers of trips under one mile
- Areas of equity focus
- Streets adjacent to schools, parks, trails, transit stops, and commercial areas
- Crossings of major barrier, such as wide roadways, the Fox River, and railroads




REVISED CROSSING PRIORITIZATION

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School
Top 20%
Crash Analysis Rank
Less than 100
100 - 499
500 - 2499
2500 or Higher

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Equity and density of trips account for 75%, the remaining factors account for 5% of the score (crossing a major barrier, and proximity to parks/schools, commercial areas, trails, or transit)

# Safety

- Streets ranked based on crash analysis score
- Source: East Central Wisconsin Regional Planning Commission (ECWRPC)

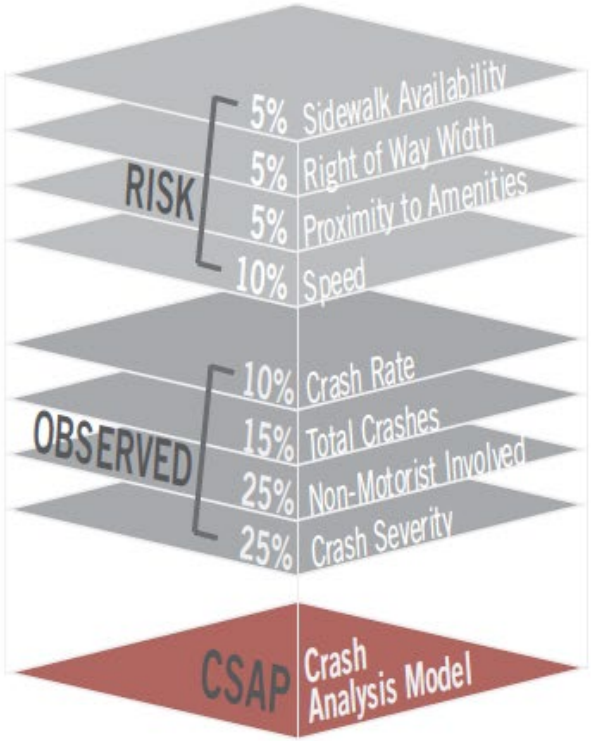
## CITY OF APPLETON

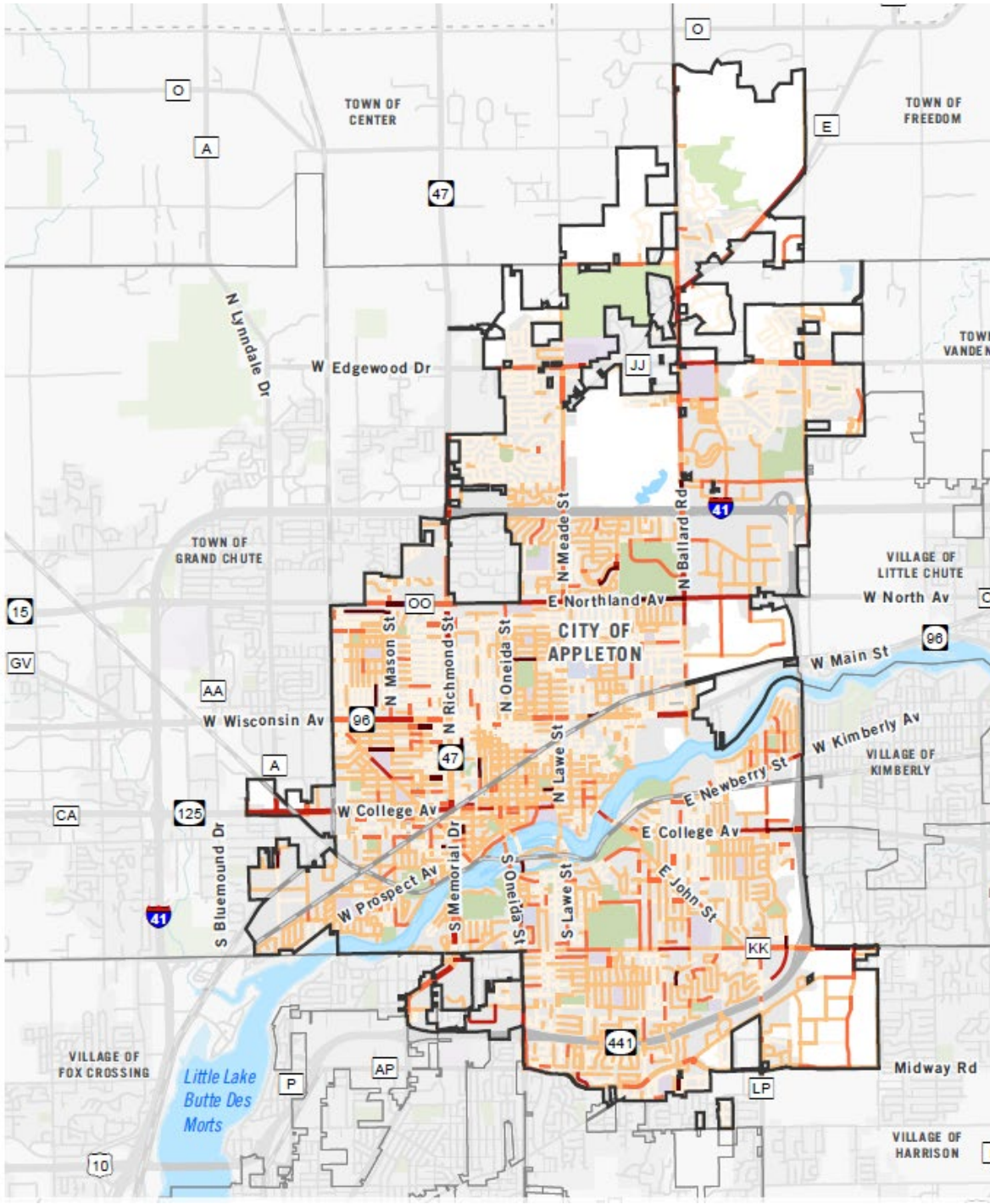
### CRASH ANALYSIS

**CSAP Crash Analysis Model**

The crash analysis model weighs eight criteria to determine areas of traffic safety concern. The model considers observed crash factors as well as environmental factors which increase risk of crashes and injury for non-motorists. The criteria weights are adjusted to best fit the safety concerns of the Comprehensive Safety Action Plan requirements.

Weighting of the eight criteria are as follows:

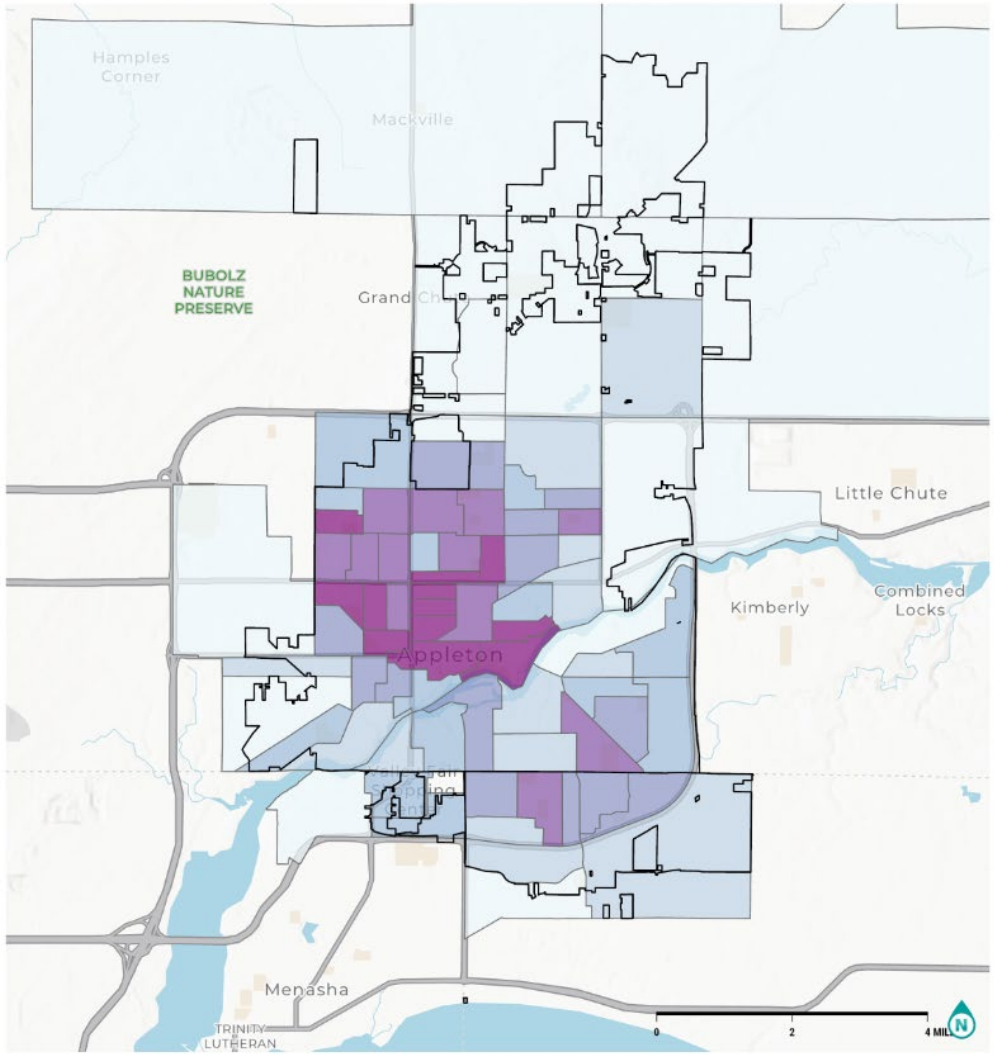


# Density of Short Trips by Block Group

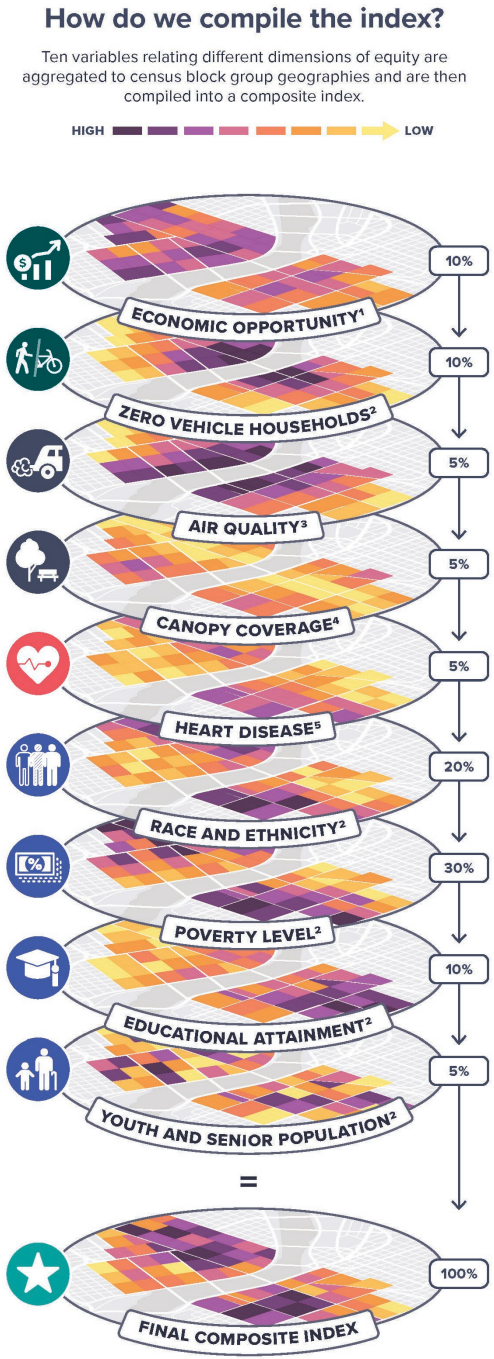
- Identifies areas where driving trips could shift to walking
- Streets ranked from lowest density of trips under 1 mile to highest
- Weighted at 37.5% of total demand score
- Source: Replica*

*Replica is an activity-based travel demand model simulating trips based on a combination of mobile location data, consumer/resident data, built environment data, and economic activity data. The model is calibrated using ground truth data. The latest available data represents a typical Thursday in Spring 2023.

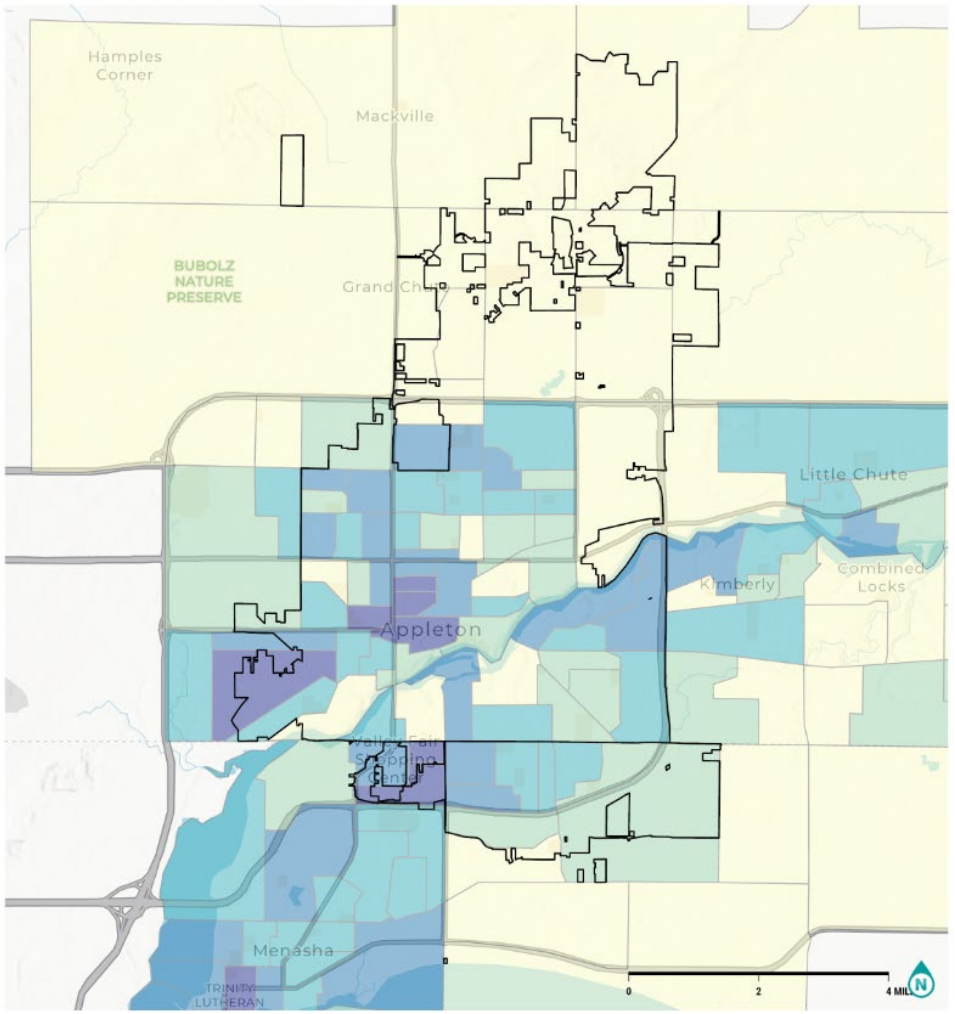


# Equity Focus Areas by Block Group

- Streets ranked from lowest equity concern to highest
- Weighted at 37.5% of total demand score
- Source: Weighted combination of nine dimensions of equity from public sources




¹ Opportunity Atlas. ² Census Bureau's American Community Survey 5-Year Estimates.
³ Environmental Justice Screening and Mapping Tool. ⁴ Tree Equity Index.
⁵ Centers for Disease Control and Prevention.




AREAS OF EQUITY CONCERN
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City of Appleton
Areas of Equity Concern
Low Equity Concern
High Equity Concern

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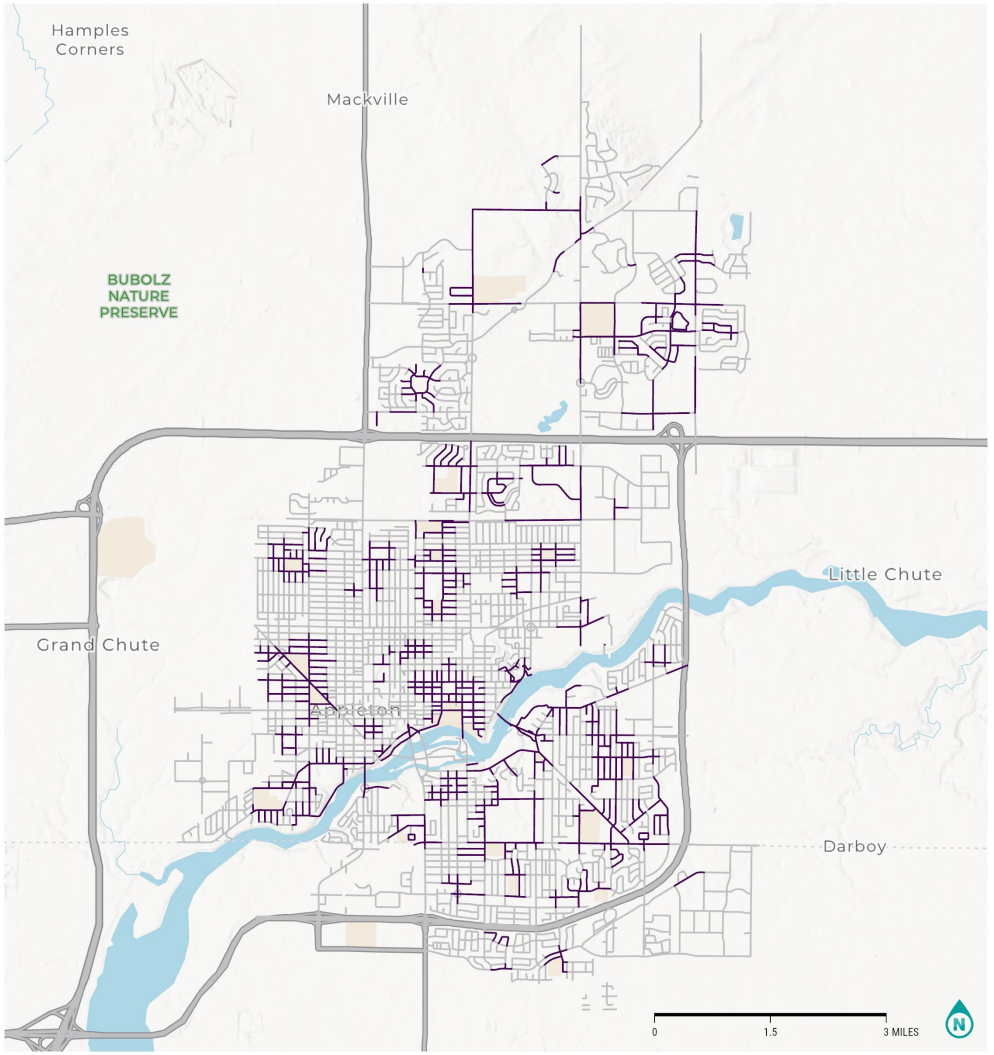
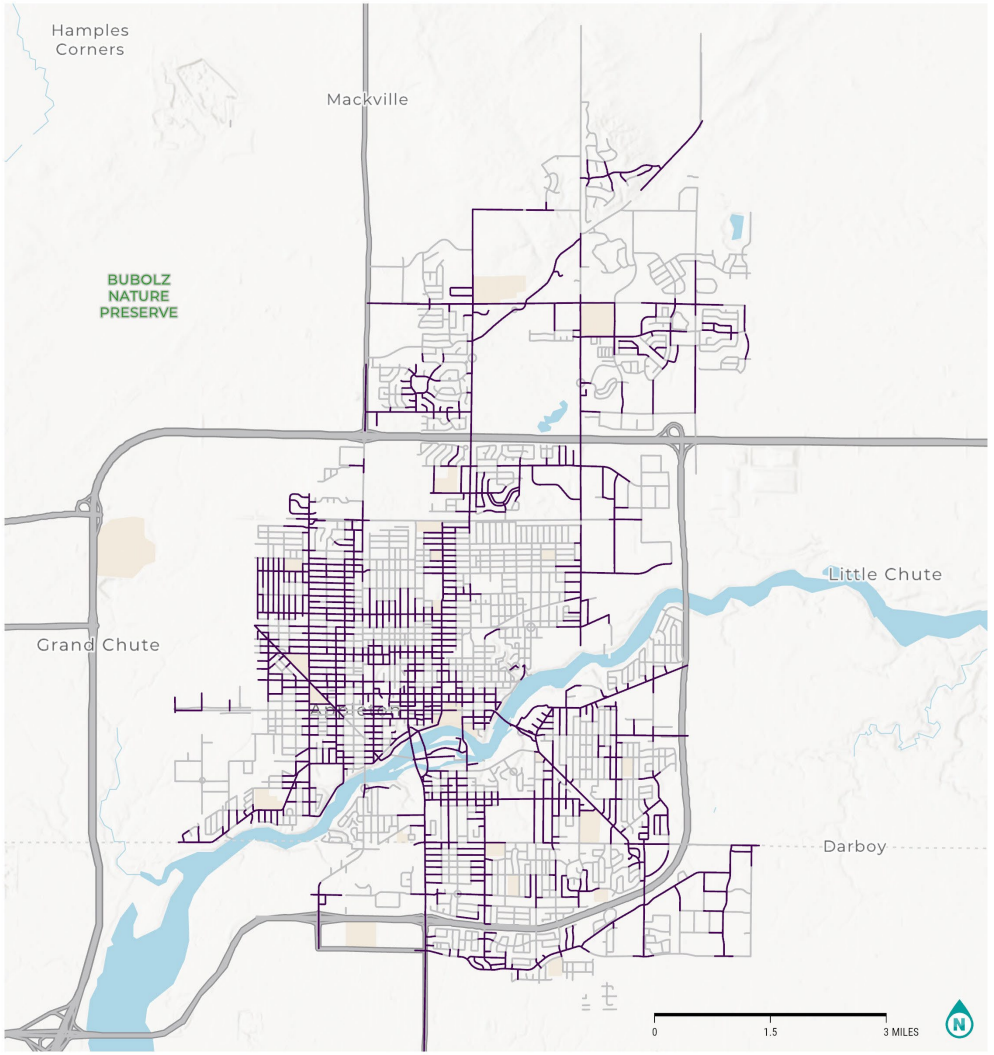
# Proximity to a Park and/or School

- Streets within 100 feet of a parcel zoned as a park and/or school
- Weighted at 5% of total demand score
- Source: Data provided by City of Appleton



# Proximity to a Trail

- Streets within 100 feet of a trail
- Weighted at 5% of total demand score
- Source: Data provided by City of Appleton




CROSSING PRIORITIZATION

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DEMAND FACTOR
— Streets within 100 feet of a Trail

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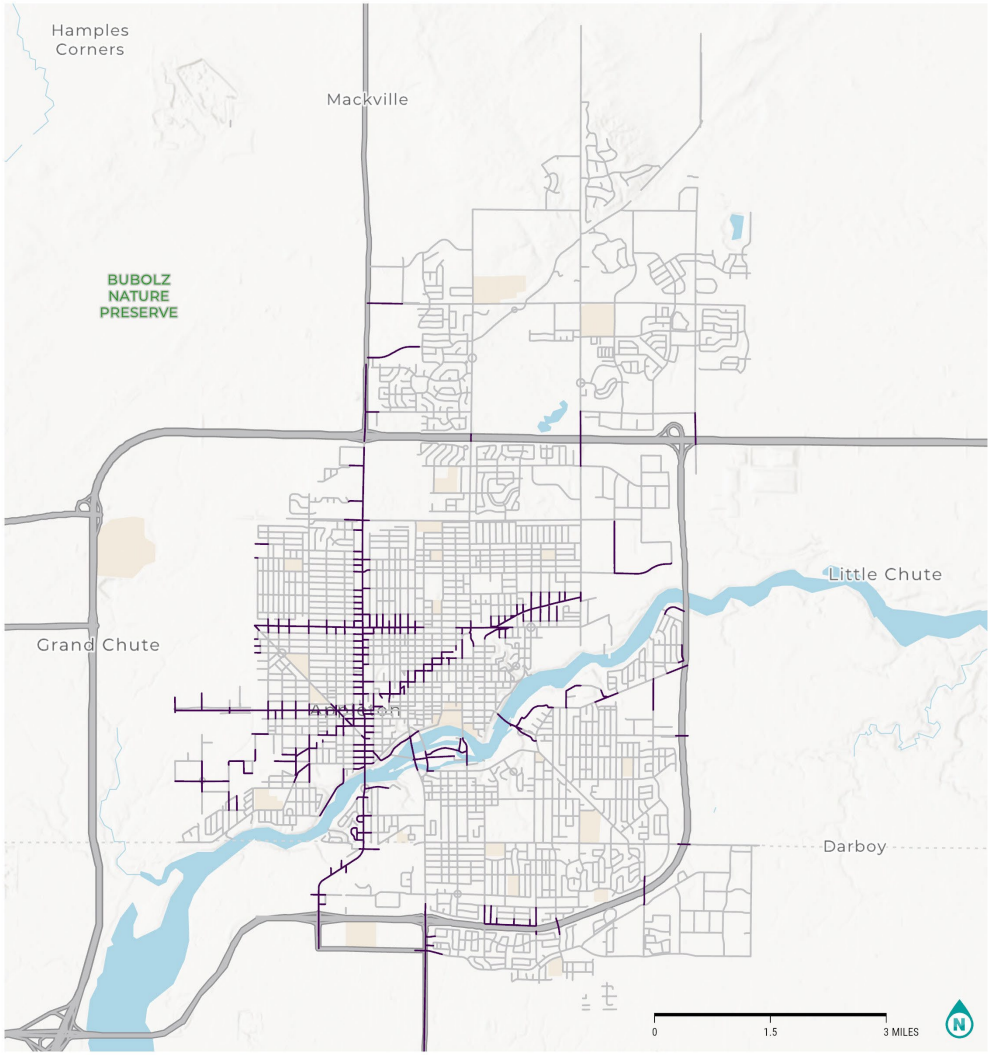
# Proximity to Major Barriers

- Crossings of major roadways, the Fox River, and railroads
- Weighted at 5% of total demand score
- Source: Wisconsin DNR (major roadways); USGS (railroads); City of Appleton (river)




CROSSING PRIORITIZATION

CITY OF APPLETON
COMPLETE STREETS STUDY

DEMAND FACTOR

Streets within 100 feet of a Major Roadway, the Fox River, and Railroads

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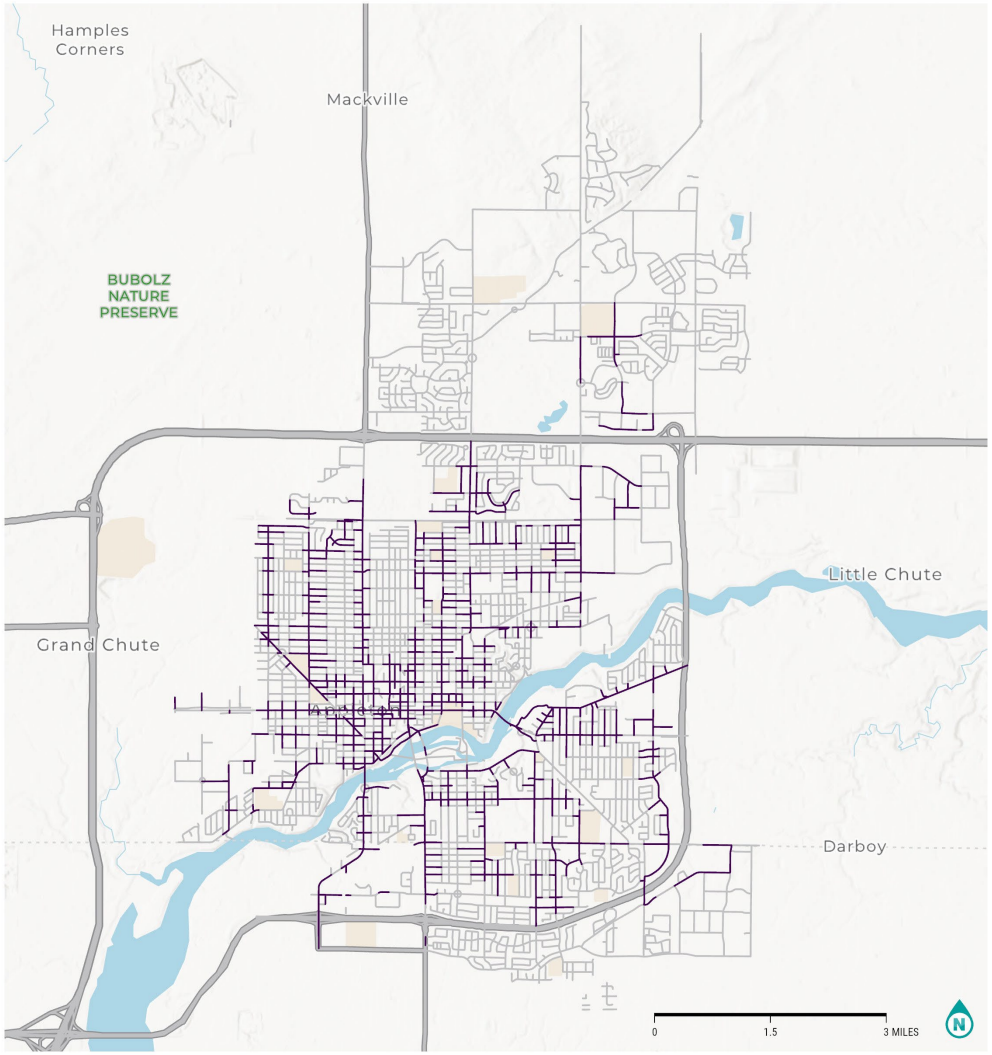
# Proximity to a Transit Stop

- Streets within 100 feet of a transit stop
- Weighted at 5% of total demand score
- Source: Data provided by City of Appleton




CROSSING PRIORITIZATION

CITY OF APPLETON
COMPLETE STREETS STUDY

DEMAND FACTOR
— Streets within 100 feet of a Transit Stop

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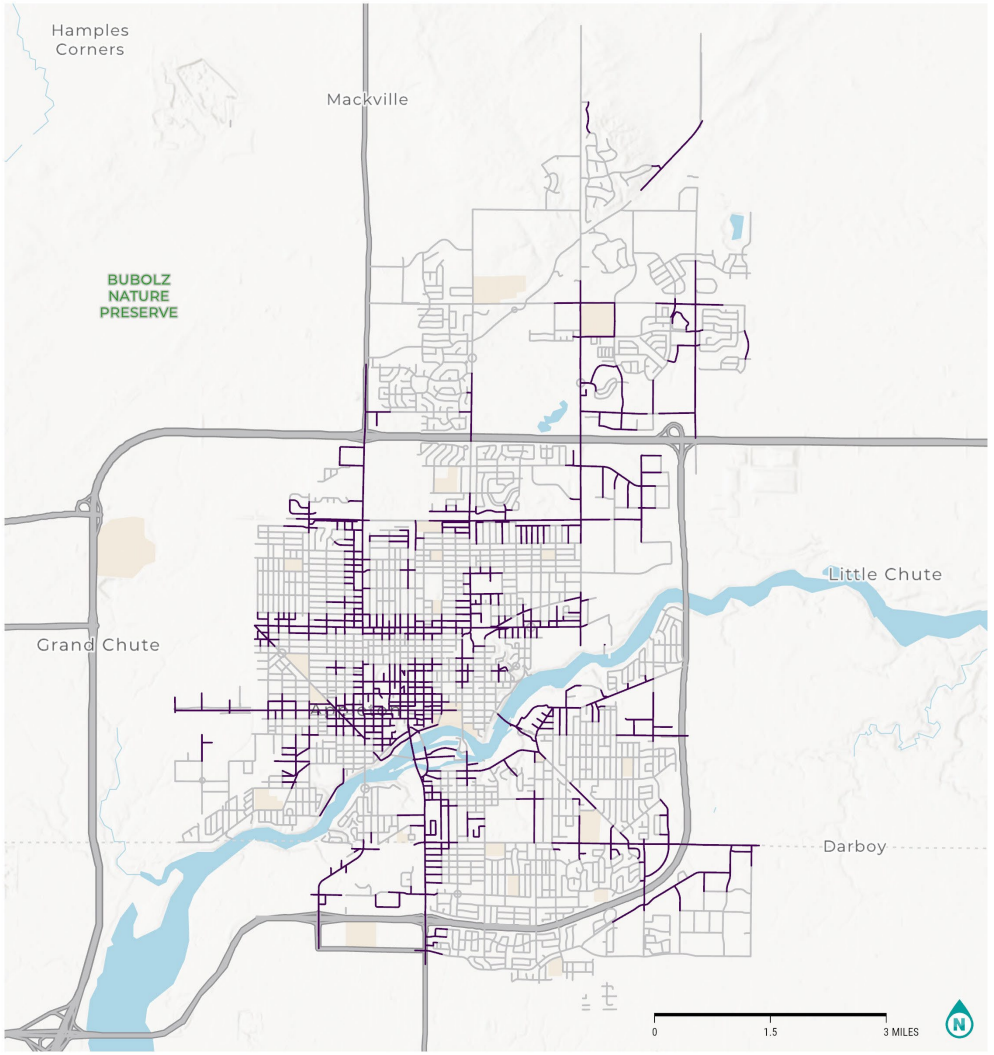
# Proximity to a Commercial Area

- Streets within 100 feet of a parcel zoned for commercial land use
- Weighted at 5% of total demand score
- Source: Data provided by City of Appleton




CROSSING PRIORITIZATION

CITY OF APPLETON
COMPLETE STREETS STUDY

DEMAND FACTOR

— Streets within 100 feet of a Commerical Land Use

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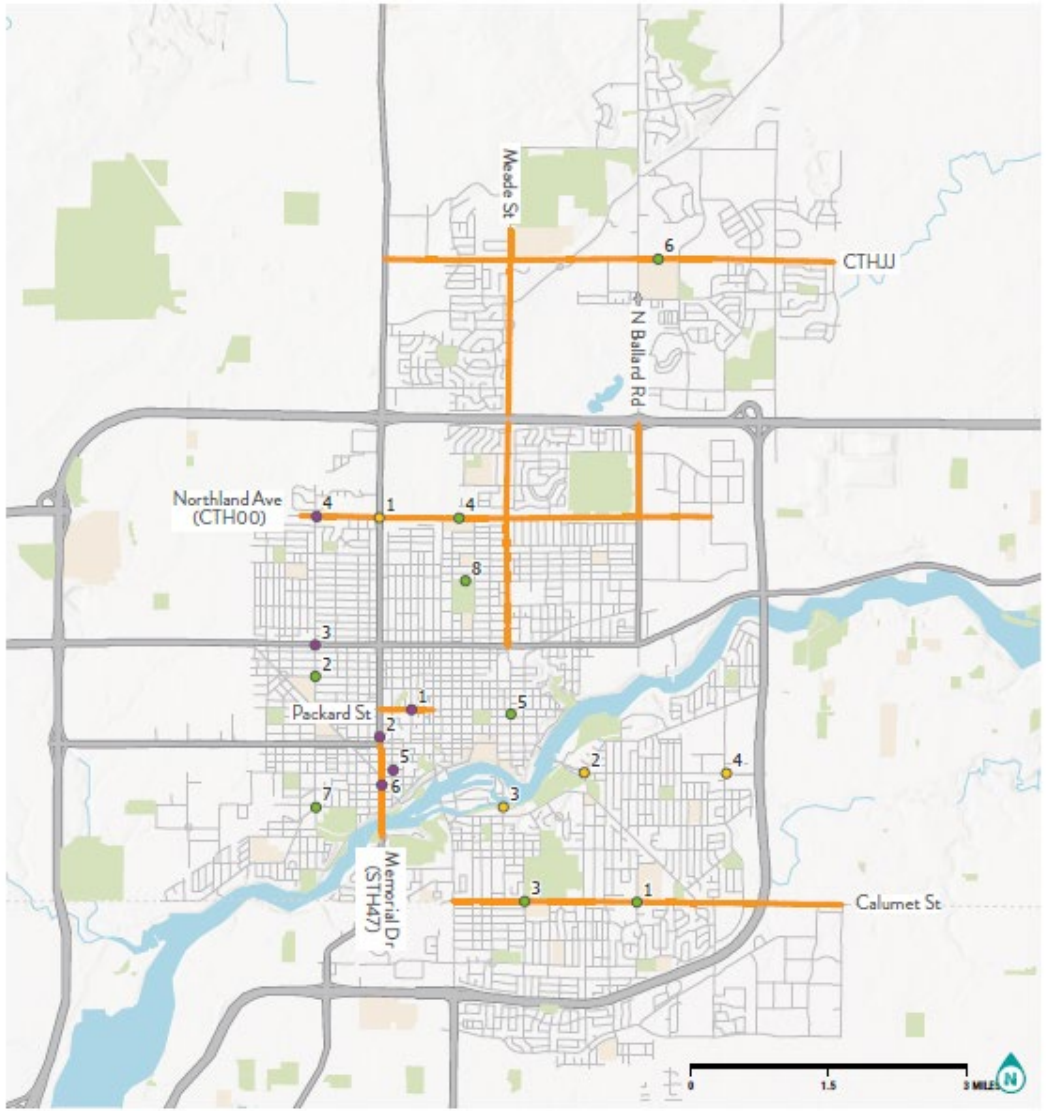
# Potential Project Recommendations: Project Types

- Incorporate improvements into capital projects
- High-priority corridors
- Unique safety hazards
- Intersections in areas with high active trip potential
- Intersections in areas near schools and parks




DRAFT PRIORITY PROJECT LOCATIONS
CITY OF APPLETON
COMPLETE STREETS STUDY

Potential Project Category
- Downtown/High Active Trip Potential
- School/Park
- Other Spot Loction
- Priority Arterial or Collector

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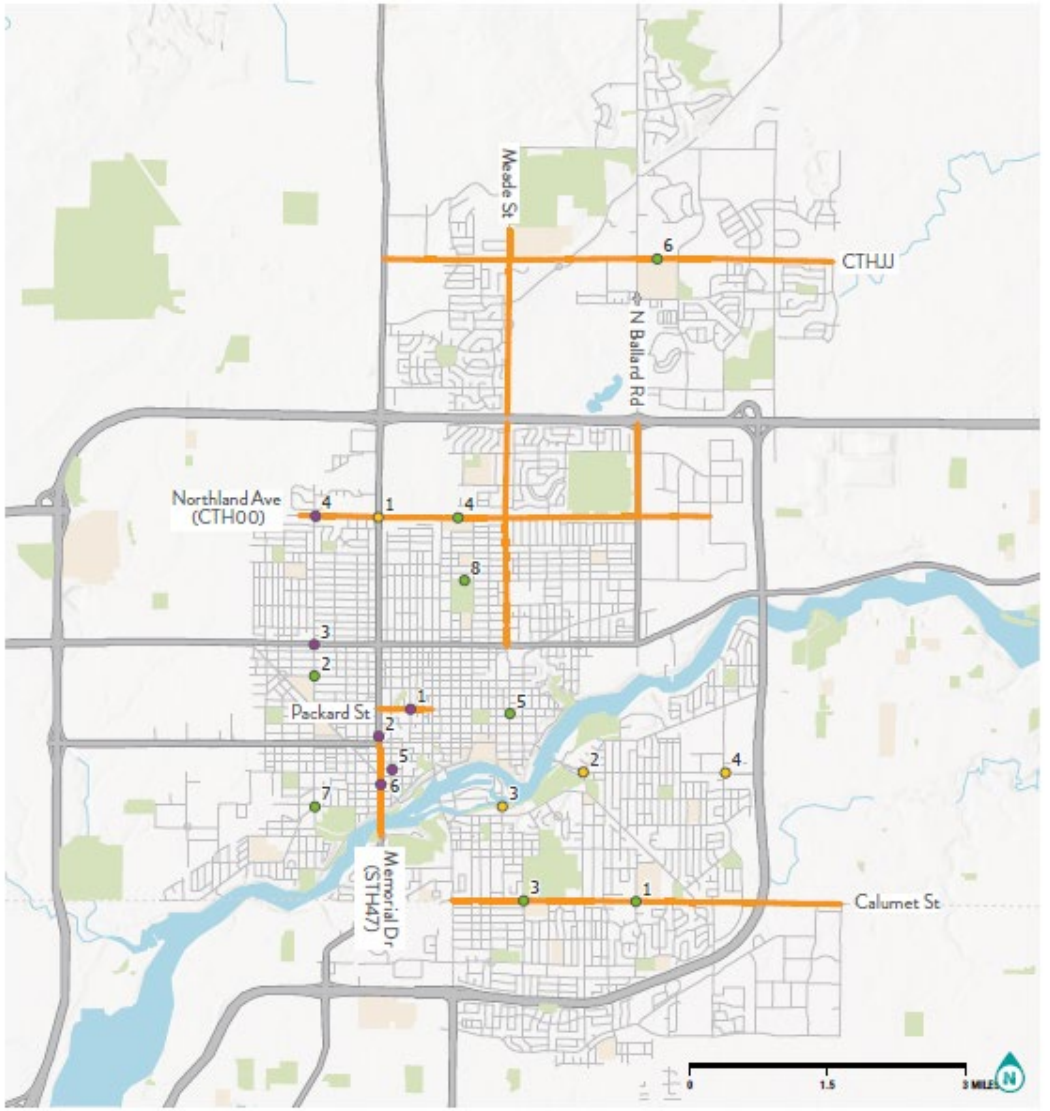
See accompanying spreadsheet for project number key

# Potential Projects: Corridor Studies

- Calumet Street from Oneida Street to John
- Meade Street – from Wisconsin Ave (STH96) north to the city limits
- Northland Ave (CTH00) – length of city limits
- CTHJJ – length of city limits
- W Packard St – from North Richmond (STH47) to N Appleton
- Memorial Dr (STH47) – W Prospect Ave to W College Ave




DRAFT PRIORITY PROJECT LOCATIONS
CITY OF APPLETON
COMPLETE STREETS STUDY

Potential Project Category
- Downtown/High Active Trip Potential
- School/Park
- Other Spot Loction
- Priority Arterial or Collector

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See accompanying spreadsheet for project number key

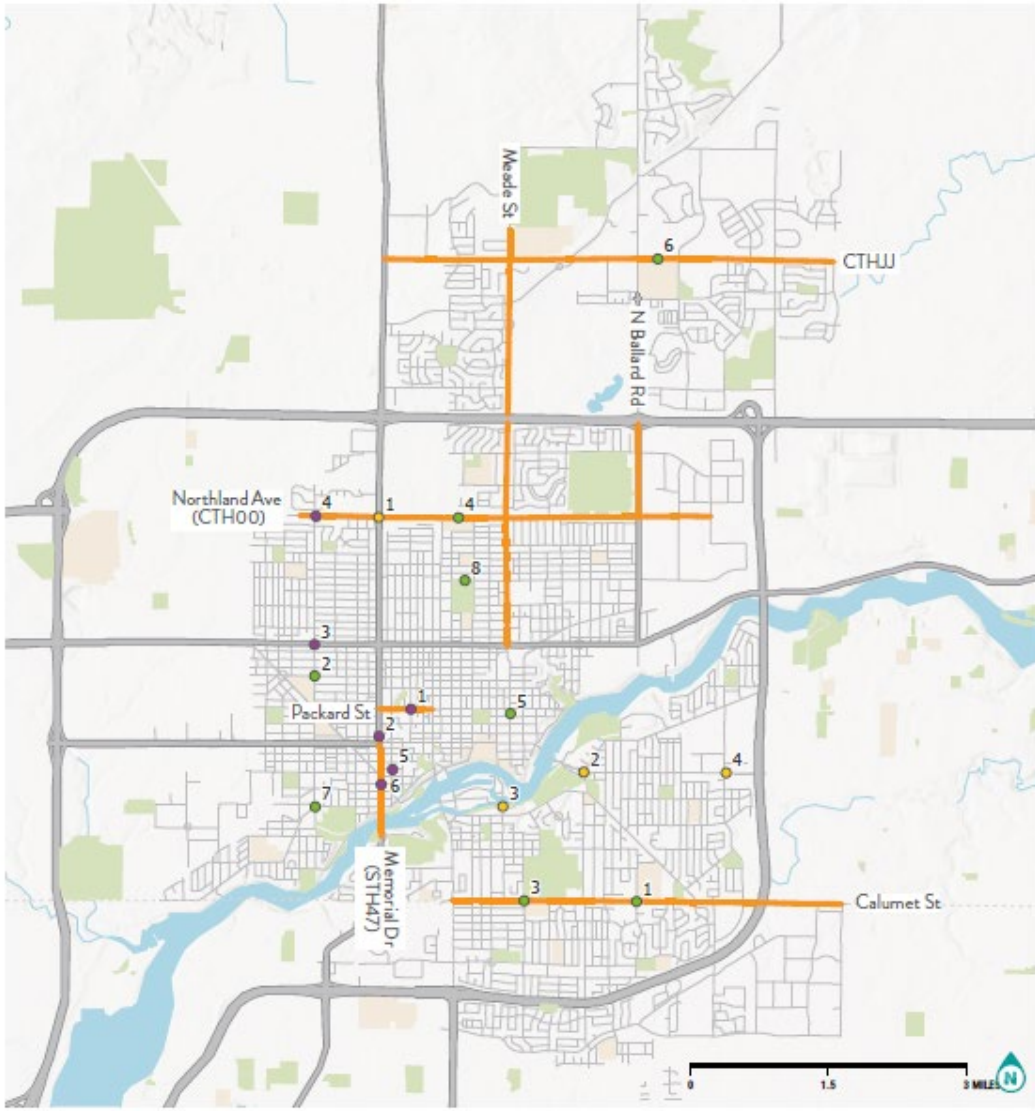
# Potential Projects: Unique Safety Hazards

## Multi-Lane Roundabouts:

- W Northland Ave and N Richmond St
- E College Ave and E John St.

## Trail Crossings:

- Newberry Trail Crossing at Lawe St
- E College Ave and S Kensington Dr




DRAFT PRIORITY PROJECT LOCATIONS
CITY OF APPLETON
COMPLETE STREETS STUDY

Potential Project Category
- Downtown/High Active Trip Potential
- School/Park
- Other Spot Loction
- Priority Arterial or Collector

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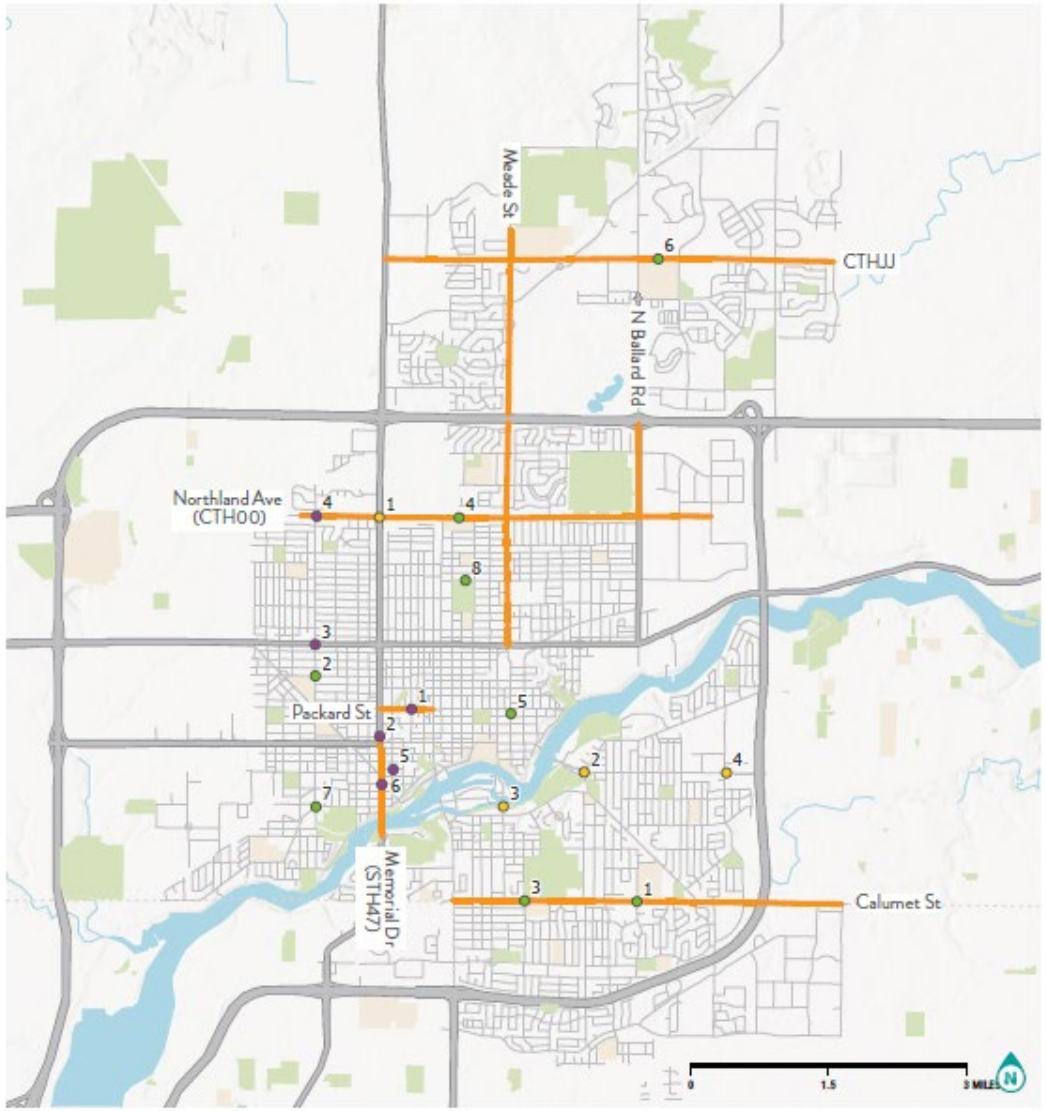
See accompanying spreadsheet for project number key

# Potential Projects: High Active Trip Potential

- E Calumet St and S Schaefer St
- W Winnebago St and N Mason St
- E Calumet St and S Carpenter St
- E Northland Ave (CTH00) – N Oneida to N Meade
- N Meade St – E North St to E Eldorado St
- Edgewood Dr at North High School
- W Prospect Ave and S Mason St
- E Glendale Ave at N Morrison St to N Drew St




DRAFT PRIORITY PROJECT LOCATIONS
CITY OF APPLETON
COMPLETE STREETS STUDY

Potential Project Category
- Downtown/High Active Trip Potential
- School/Park
- Other Spot Loction
- Priority Arterial or Collector

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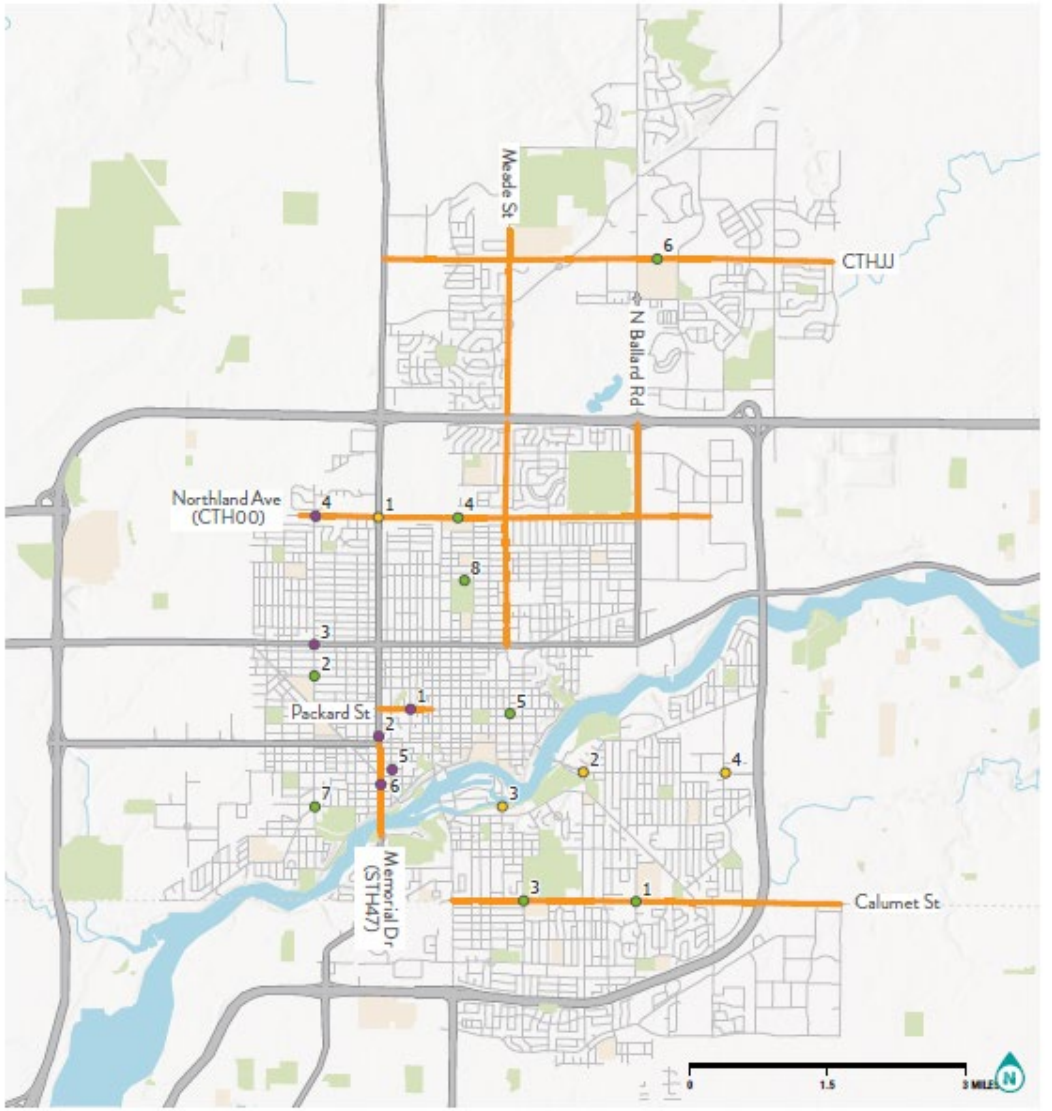
See accompanying spreadsheet for project number key

# Potential Projects: Schools and Parks

- W Packard St and N Division St
- W Washington St and N Richmond St (STH47)
- W Wisconsin Ave (STH96) and N Mason St
- W Northland Ave (CTH00) and N Mason St
- W Seventh St and S State St
- W Fifth St and S Memorial Dr (STH47)




DRAFT PRIORITY PROJECT LOCATIONS
CITY OF APPLETON
COMPLETE STREETS STUDY

Potential Project Category
- Downtown/High Active Trip Potential
- School/Park
- Other Spot Loction
- Priority Arterial or Collector

alta

See accompanying spreadsheet for project number key

# Next Steps

# Next Steps

- February 26: Posting of draft documents on the city website
- February 29: Virtual Open House
- Late March/April: Action item at Municipal Services Committee

*thank you!*