

Bike and Pedestrian Master Plan

Executive Summary

2021

N NELSON
NYGAARD



City of Albany

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Setting the Stage

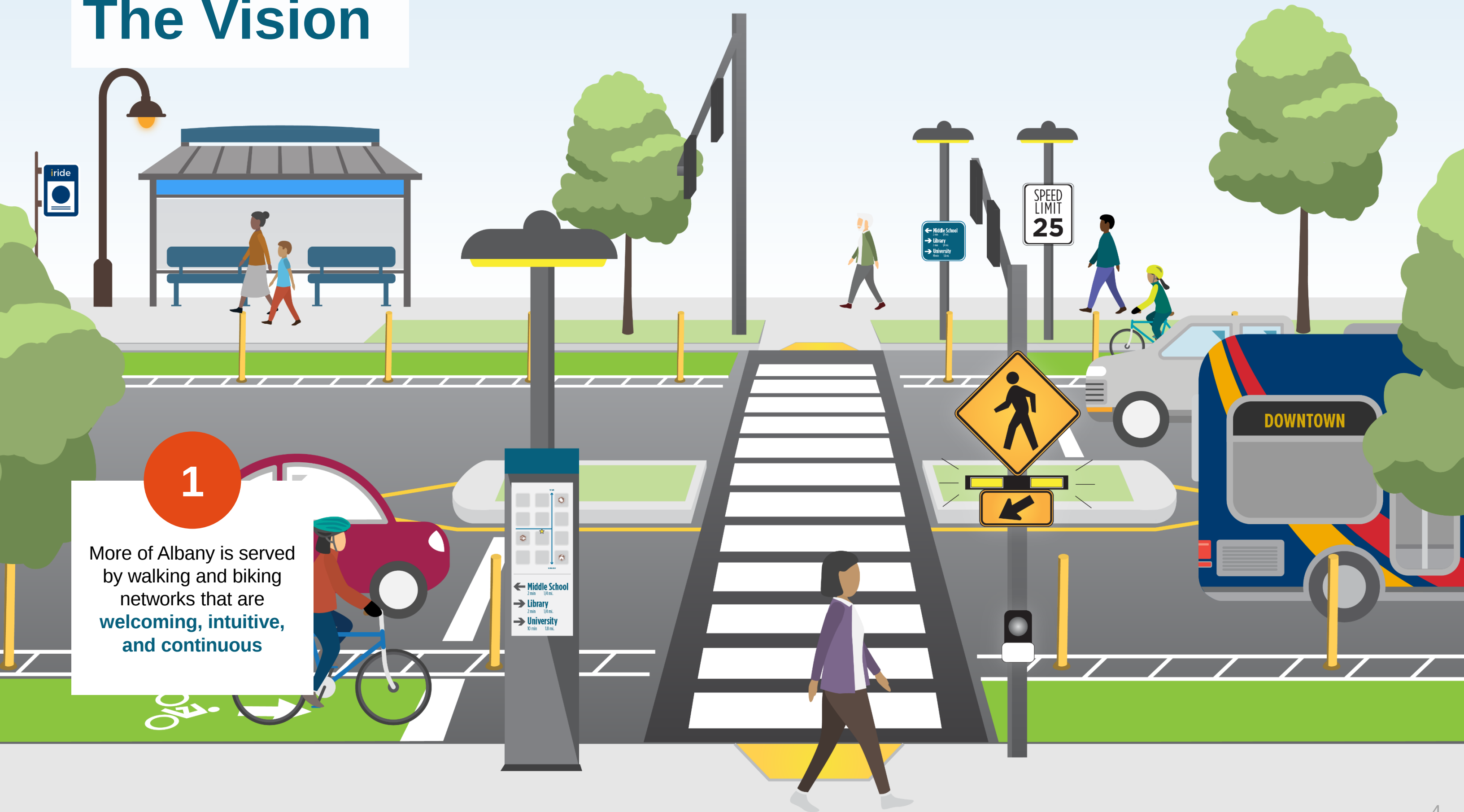
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1

The Vision

1

More of Albany is served by walking and biking networks that are **welcoming, intuitive, and continuous**



The Vision

2

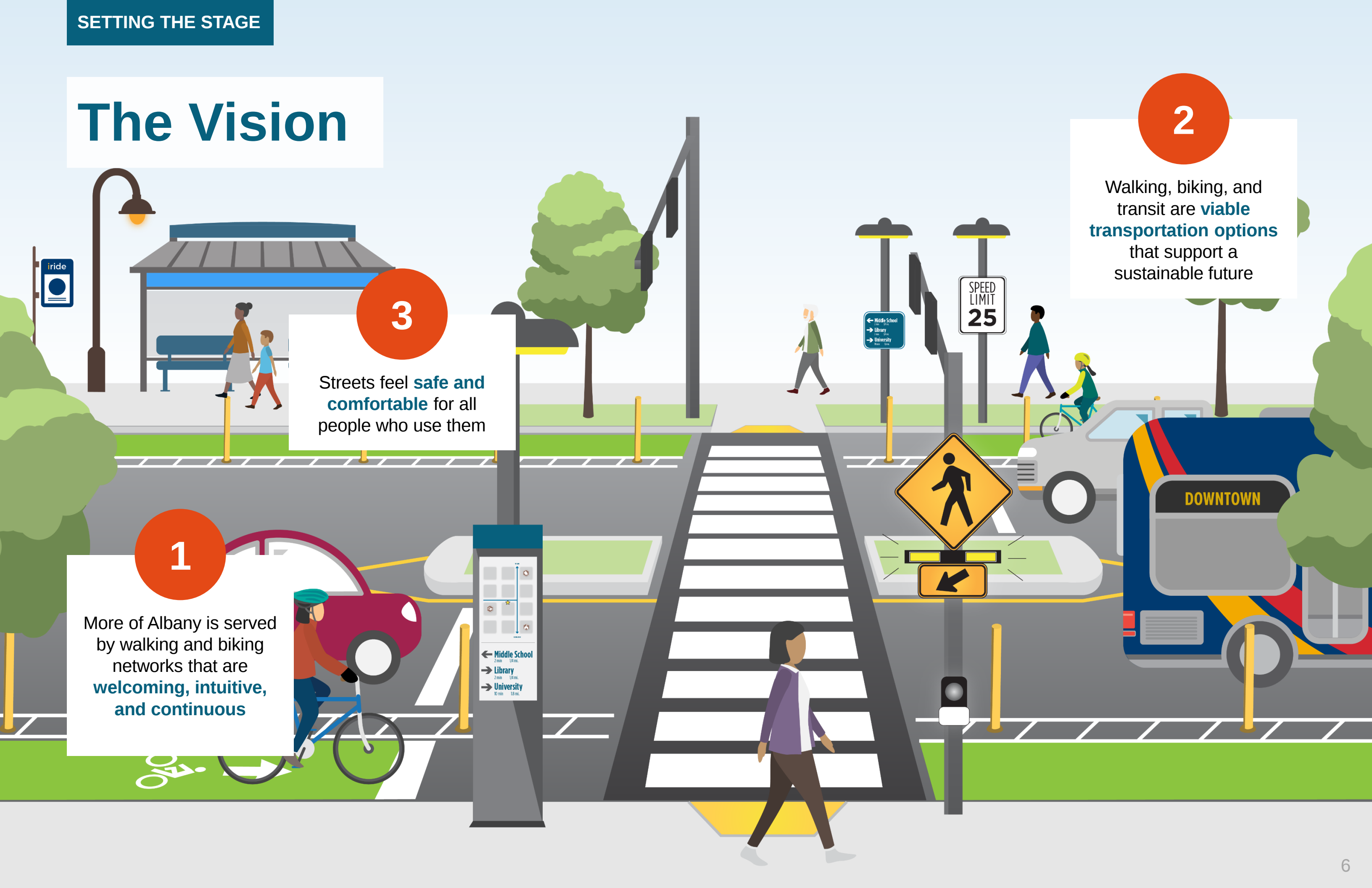
Walking, biking, and transit are **viable transportation options** that support a sustainable future

1

More of Albany is served by walking and biking networks that are **welcoming, intuitive, and continuous**



The Vision



1

More of Albany is served by walking and biking networks that are **welcoming, intuitive, and continuous**

3

Streets feel **safe and comfortable** for all people who use them

2

Walking, biking, and transit are **viable transportation options** that support a sustainable future

The Vision

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More of Albany is served by walking and biking networks that are **welcoming, intuitive, and continuous**

3

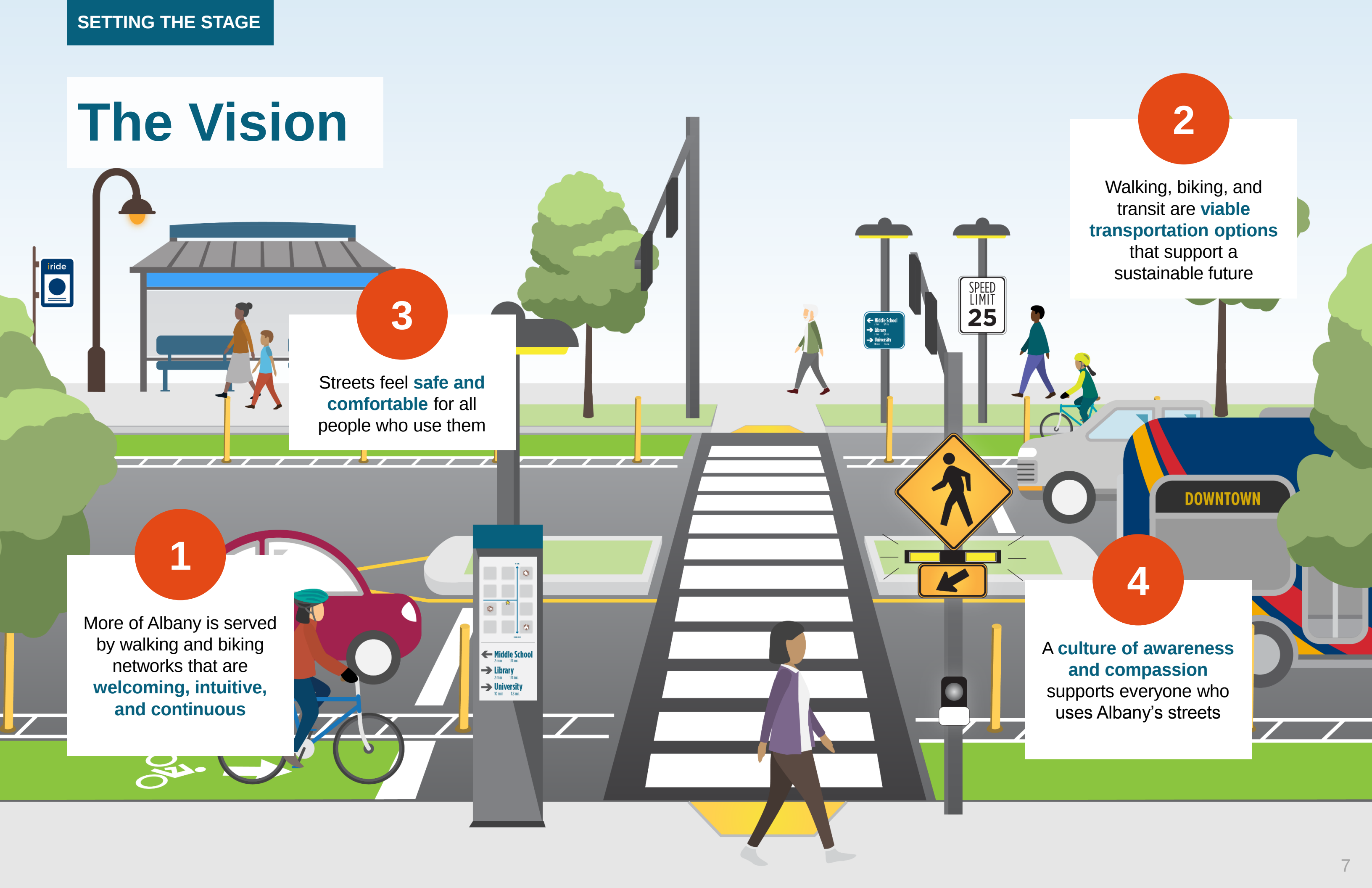
Streets feel **safe and comfortable** for all people who use them

2

Walking, biking, and transit are **viable transportation options** that support a sustainable future

4

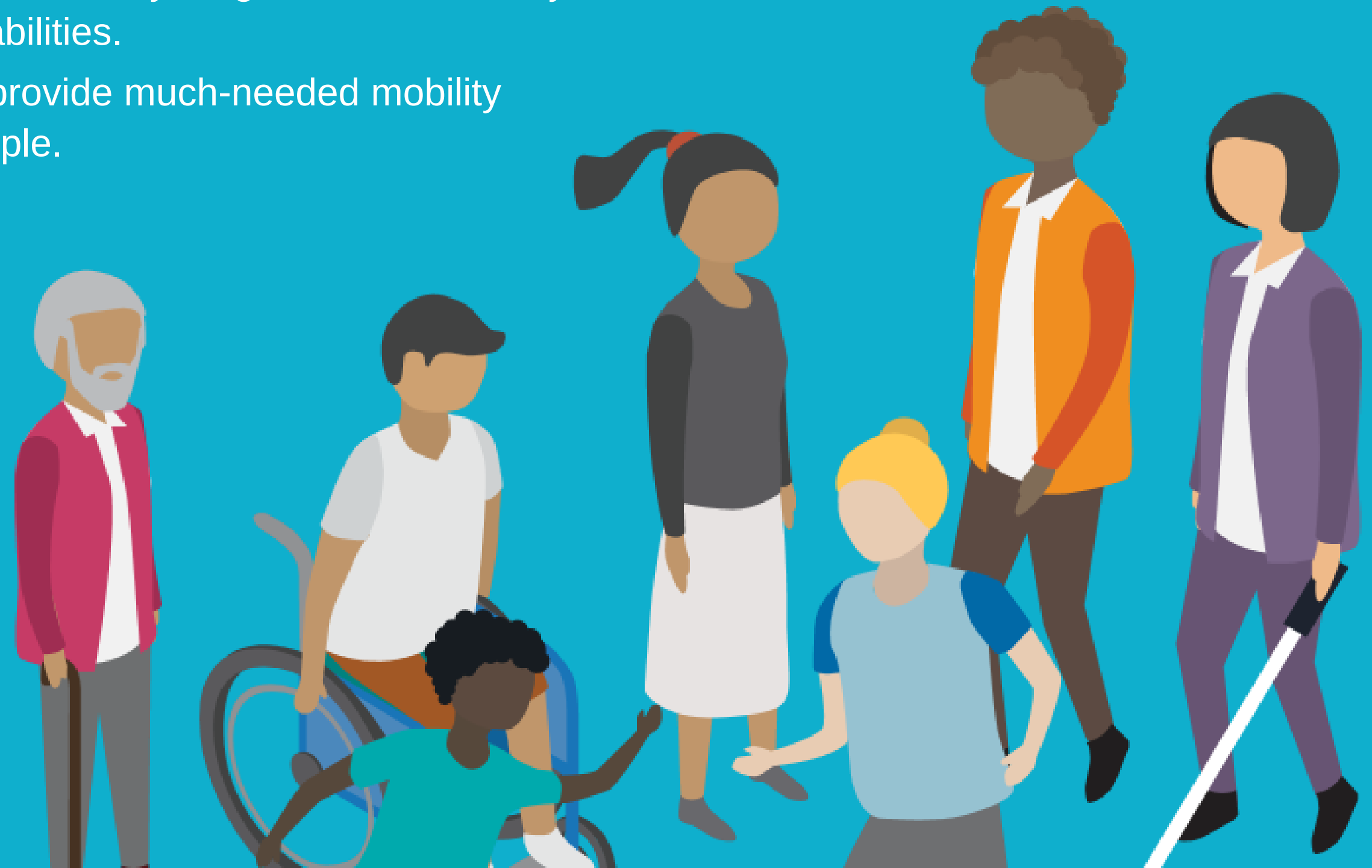
A **culture of awareness and compassion** supports everyone who uses Albany's streets



Promoting safe walking and cycling also promotes equity.

Non-drivers include people with lower incomes who cannot afford a car, children, young adults, the elderly, and people with disabilities.

Walking and biking provide much-needed mobility options to these people.



This Plan aims to close gaps in walking and biking infrastructure where it would have the most equitable impact.

Goals

THIS PLAN HAS SIX GOALS:

1

Networks

Improve walking and biking networks so they are viable transportation options

2

Leadership

Incentivize elected officials, policy makers, law enforcement officials, and roadway designers to take responsibility for including walking and biking as part of the transportation system

3

Awareness

Provide a shared awareness of and responsibility for street safety among all users of Albany streets

4

Encouragement

Educate community members about the pleasures and concrete benefits that arise from incorporating walking and biking into their daily lives

5

Resiliency

Prioritize walking and biking to create resiliency in Albany's transportation network

6

Funding

Delineate potential private and public funding sources for a strong bicycle and pedestrian network

Key Challenges

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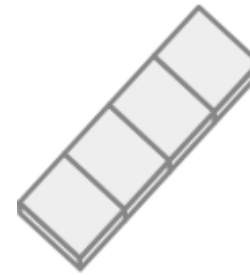
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Key Challenges



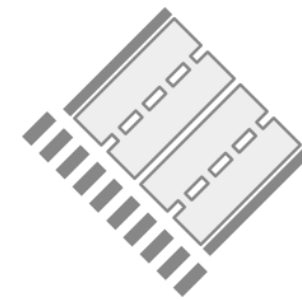
1. Pedestrian Signals

Need to continue increasing the number of pedestrian signals at signalized intersections



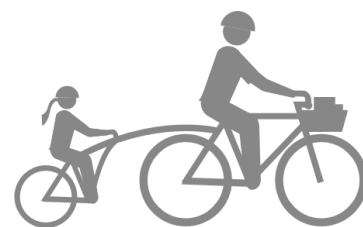
2. Presence of Sidewalks

Lack of sidewalks in the western part of the city



3. Wide Street Crossings

Pedestrian crossings of three lanes or greater can be unsafe, and a pedestrian barrier



4. Level of Traffic Stress (LTS)

Major bike corridors proposed in 2009 Bicycle Master Plan are unsuitable for all ages and abilities



5. Western Connections

Overall connectivity to the western part of the city



6. Crashes and Equity

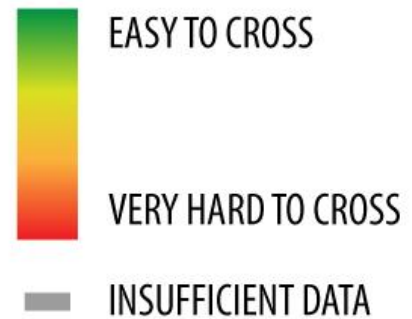
Cars are more likely to hit people walking and biking in areas with higher environmental justice sensitivity

Challenge 1:

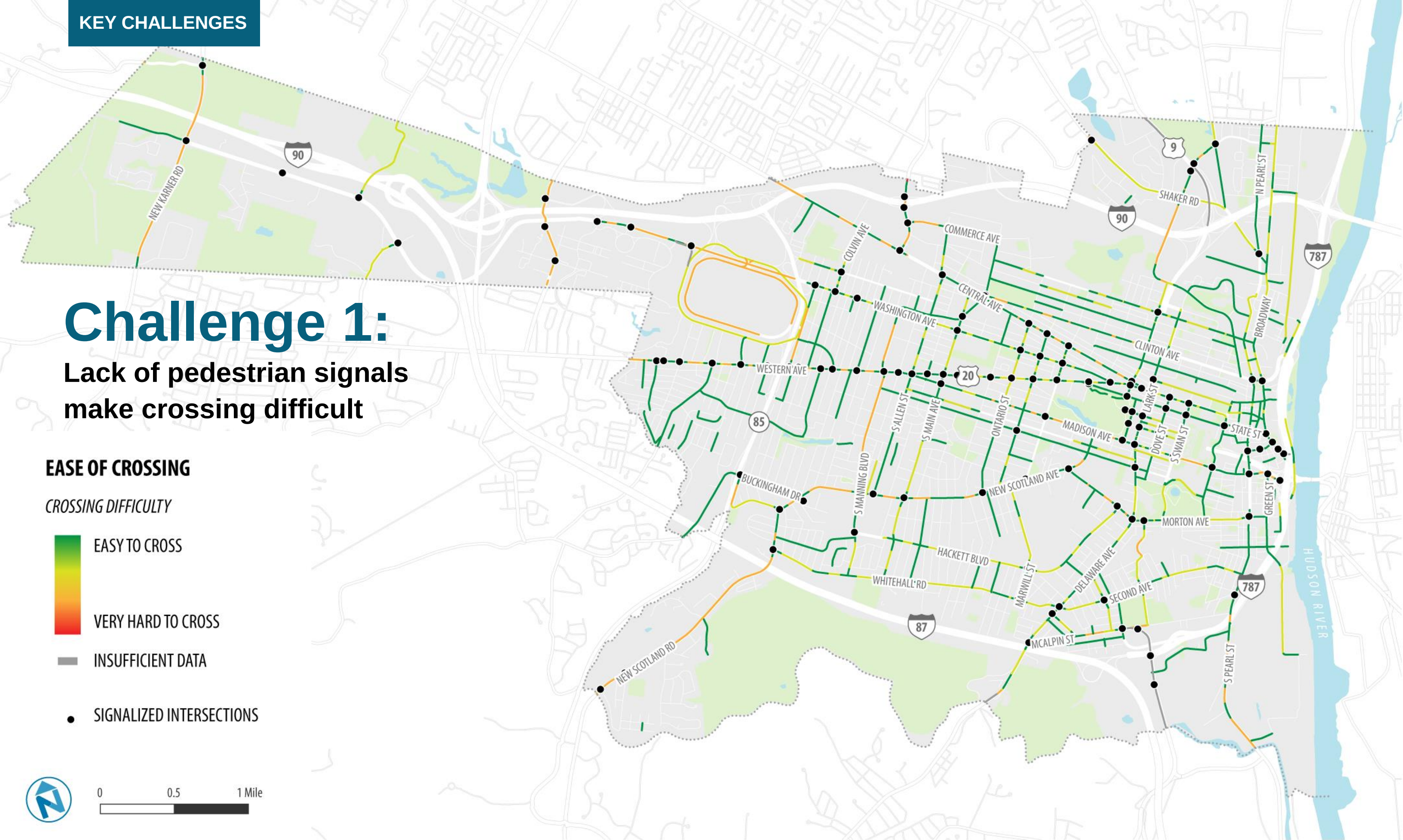
Lack of pedestrian signals make crossing difficult

EASE OF CROSSING

CROSSING DIFFICULTY



0 0.5 1 Mile



Challenge 2:

Lack of sidewalks in the western part of the city

EXISTING SIDEWALK

- SIDEWALK
- PAVED TRAIL
- UNPAVED TRAIL

DATA SOURCE: CITY OF ALBANY



Challenge 3:

Pedestrian crossings of three lanes or greater can feel unsafe, and create a pedestrian barrier

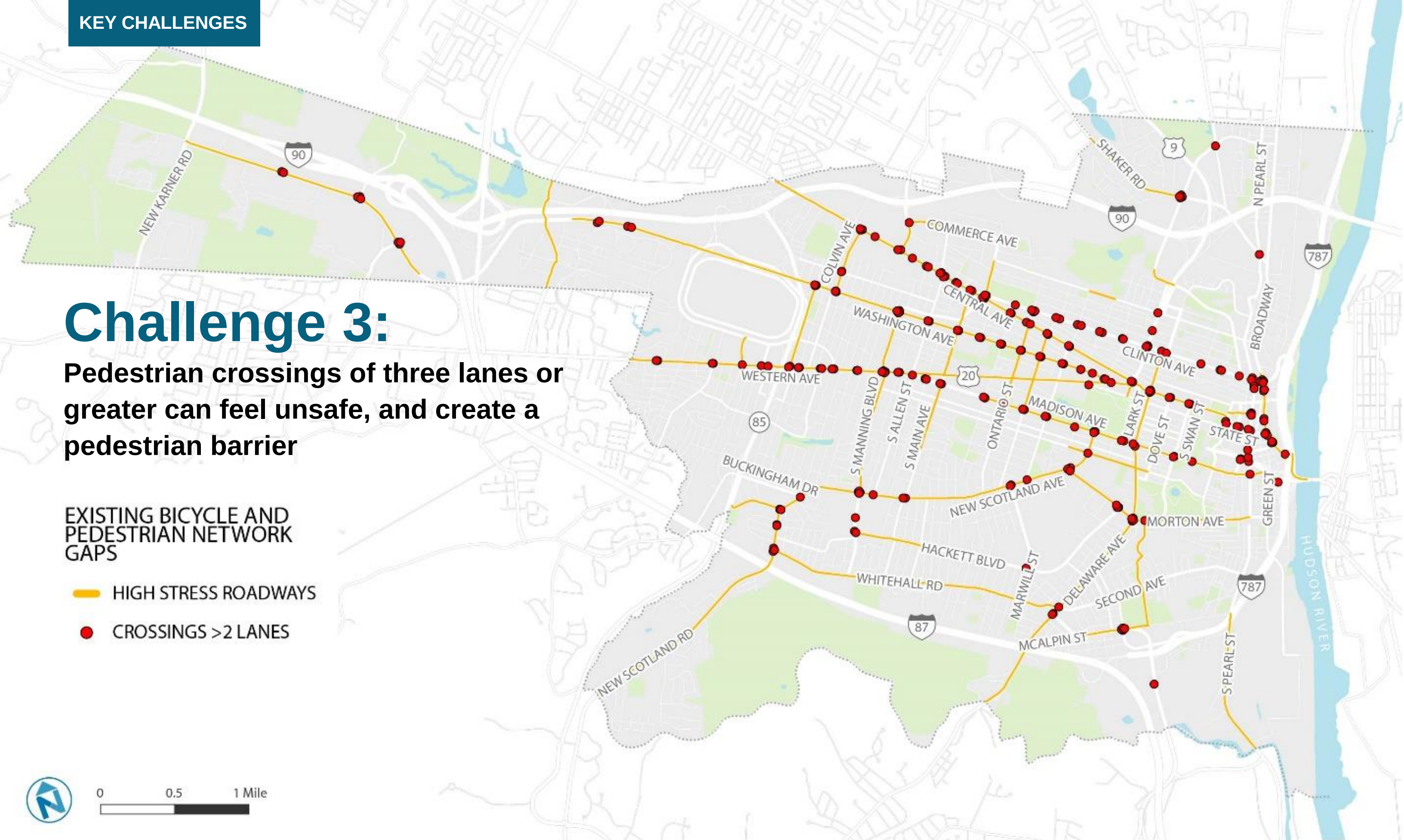
EXISTING BICYCLE AND PEDESTRIAN NETWORK GAPS

— HIGH STRESS ROADWAYS

● CROSSINGS > 2 LANES



0 0.5 1 Mile



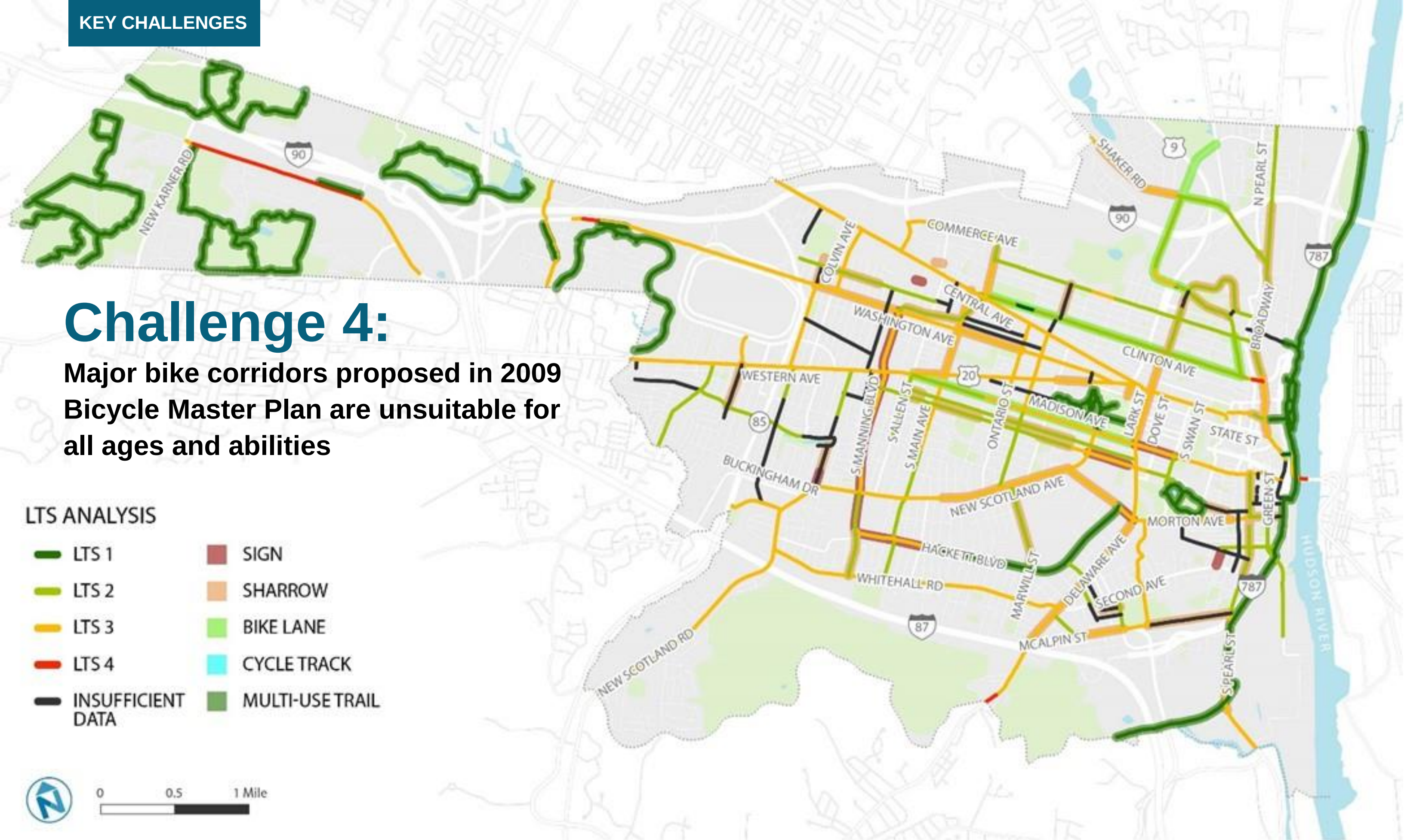
Challenge 4:

Major bike corridors proposed in 2009 Bicycle Master Plan are unsuitable for all ages and abilities

LTS ANALYSIS



0 0.5 1 Mile

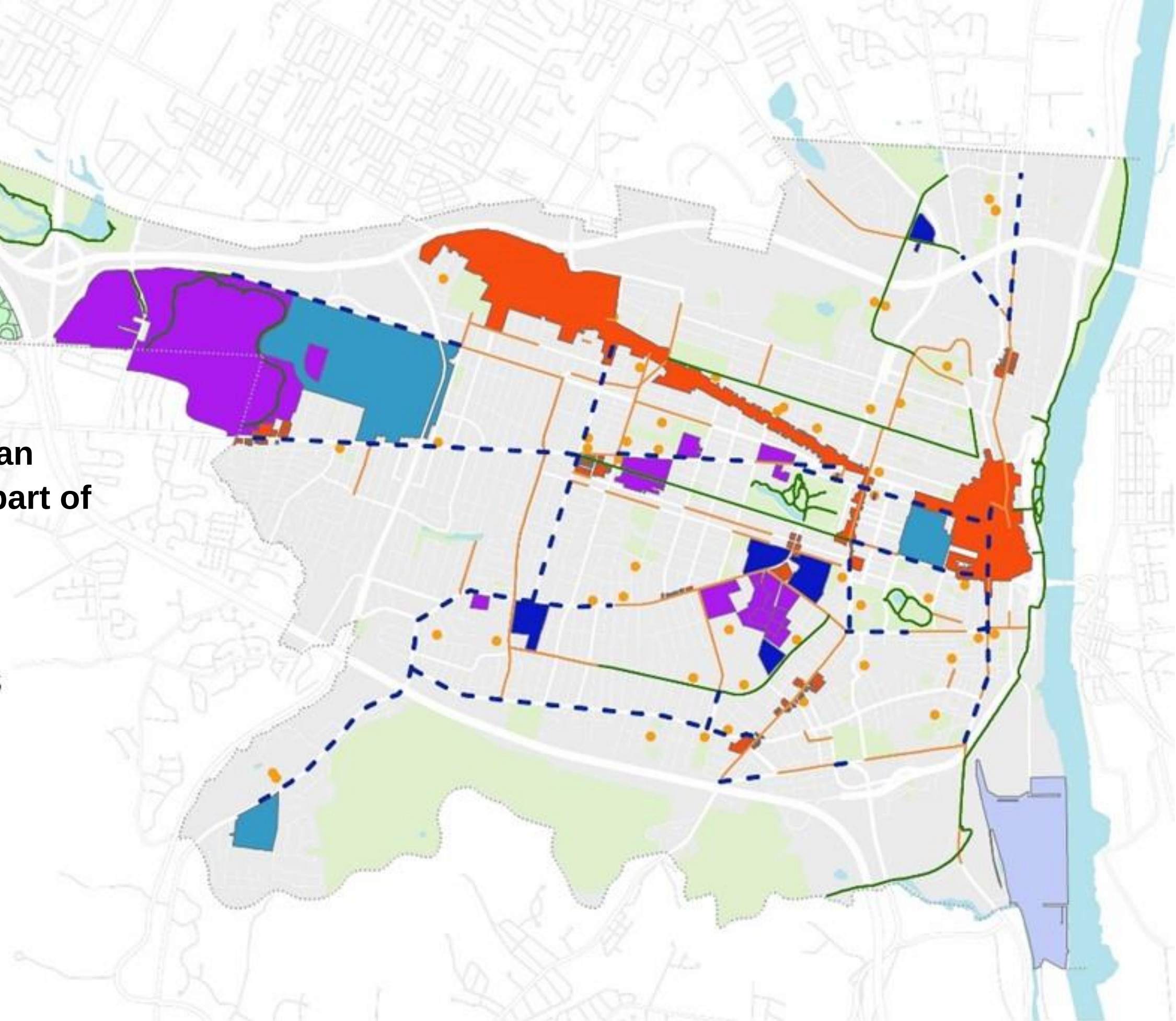


Challenge 5:

Lack of bicycle and pedestrian connectivity to the western part of the city

POTENTIAL NETWORK CONNECTIONS

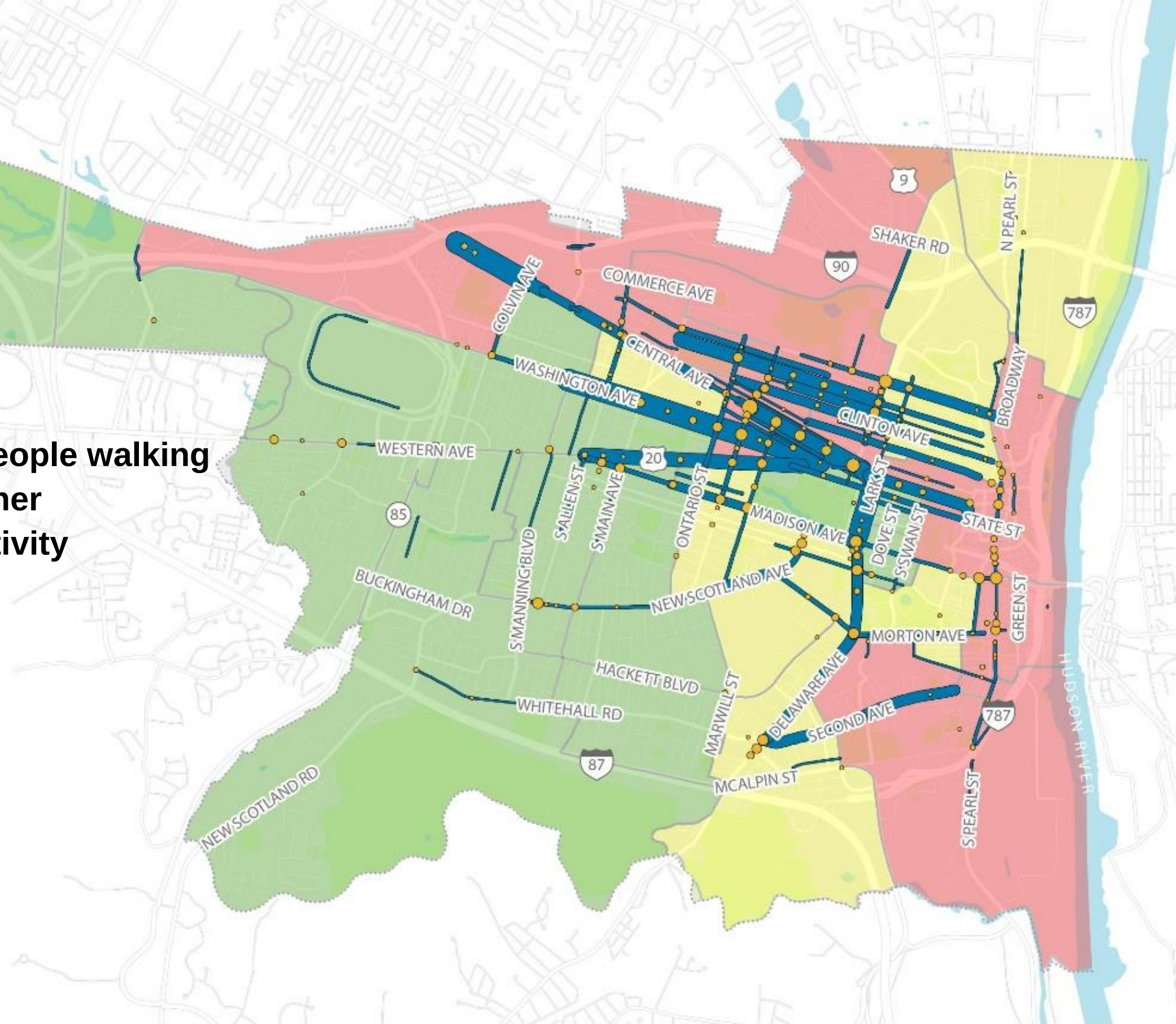
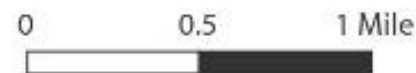
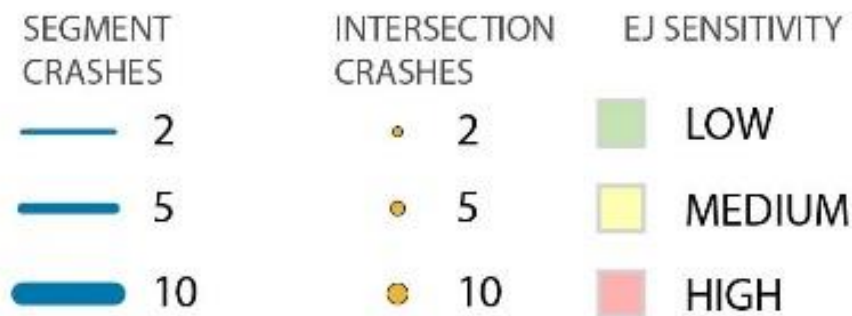
- POTENTIAL CONNECTION
- EXISTING BIKE LANES/CYCLE TRACKS/TRAILS
- EXISTING SHARROWS/SIGNS
- SCHOOLS/LIBRARIES
- COMMERCIAL AREA
- LARGE EMPLOYER (MEDICAL)
- LARGE EMPLOYER (GOVERNMENT)
- LARGE EMPLOYER (EDUCATION)
- LARGE EMPLOYER (OTHER)



Challenge 6:

Cars are more likely to hit people walking and biking in areas with higher environmental justice sensitivity

CRASH ANALYSIS



Community Engagement



3

Engagement Activities

JANUARY 2020 - JANUARY 2021

12

months online



Project Website

380

responses



Online Survey

624

online visits



WikiMAP Interactive
Map

8



Community Listening
Sessions

2



In-Person Meetings

5



Additional Meetings

12



Advisory Meetings
6 Technical + 6 Citizen

2



Quick Build
Pilot Projects

Community Input

BARRIERS TO WALKING

BARRIERS TO BIKING

ACCESS

It's hard to get where I need to go by foot

LACK OF SIDEWALKS

Often there aren't sidewalks, or they're in bad condition

DISTANCE

The places I want to go are too far away to walk to

SAFETY

Walking and biking don't feel safe enough to be realistic transportation options

SAFETY

I don't feel safe biking because of car traffic and speed

DISTANCE

The places I want to go are too far away to bike to

LACK OF BIKE LANES

There aren't enough safe bike lanes to try biking



Community Input

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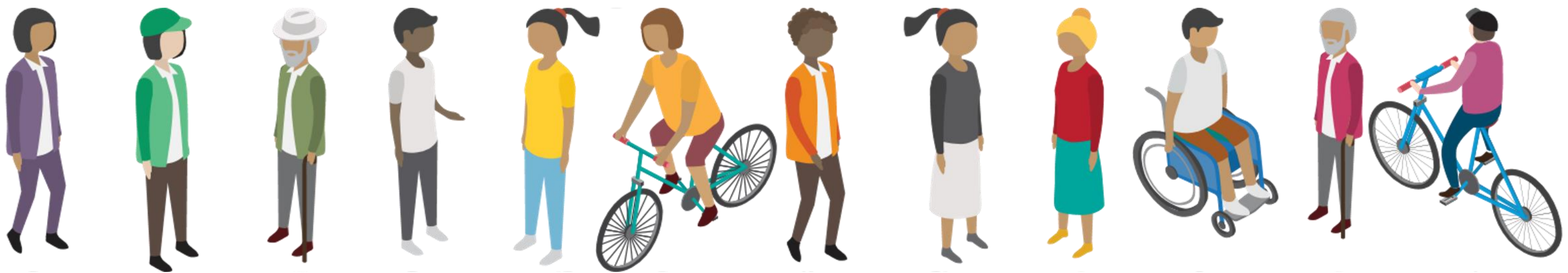
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Pedestrian and Bike Recommendations

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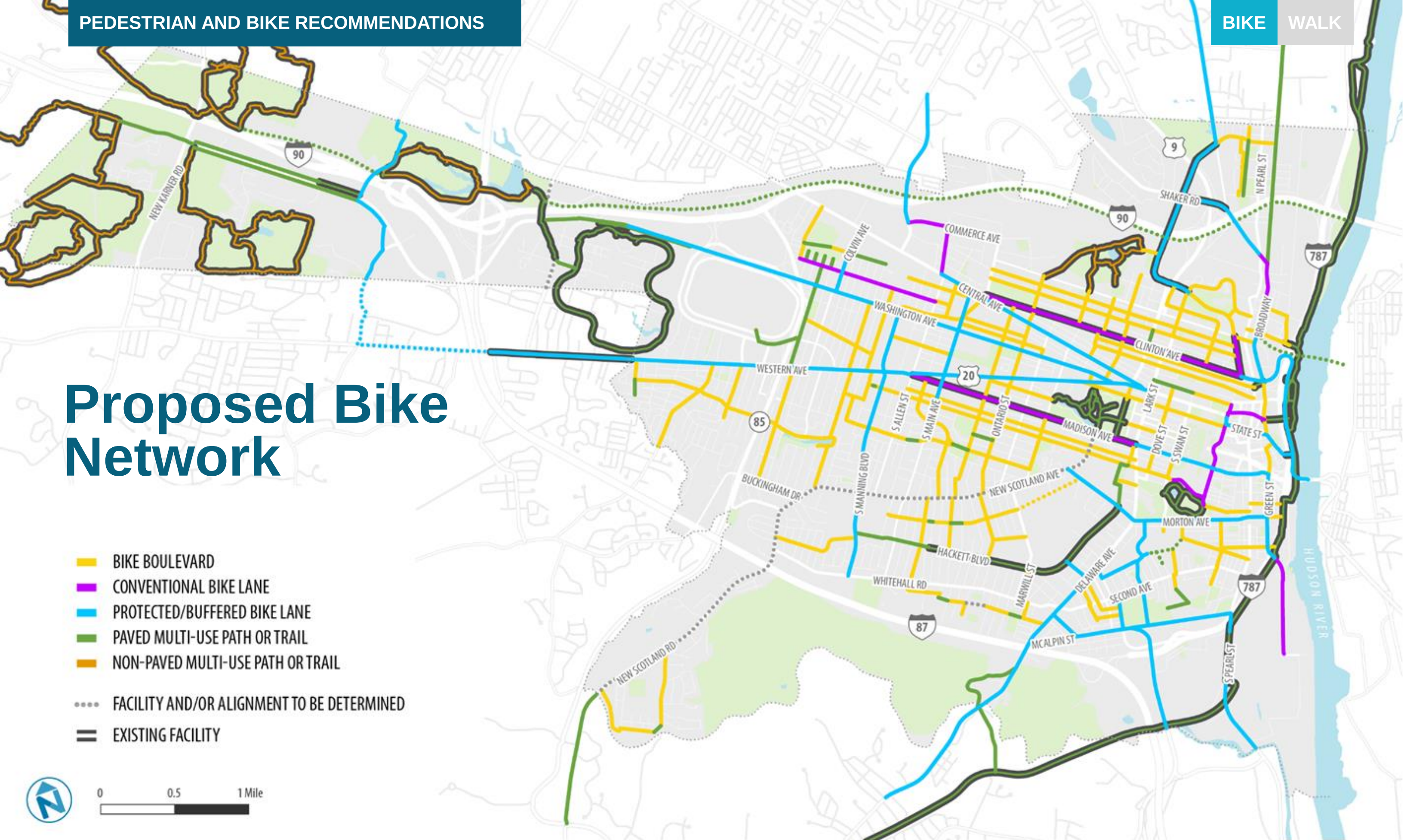
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Proposed Bike Network

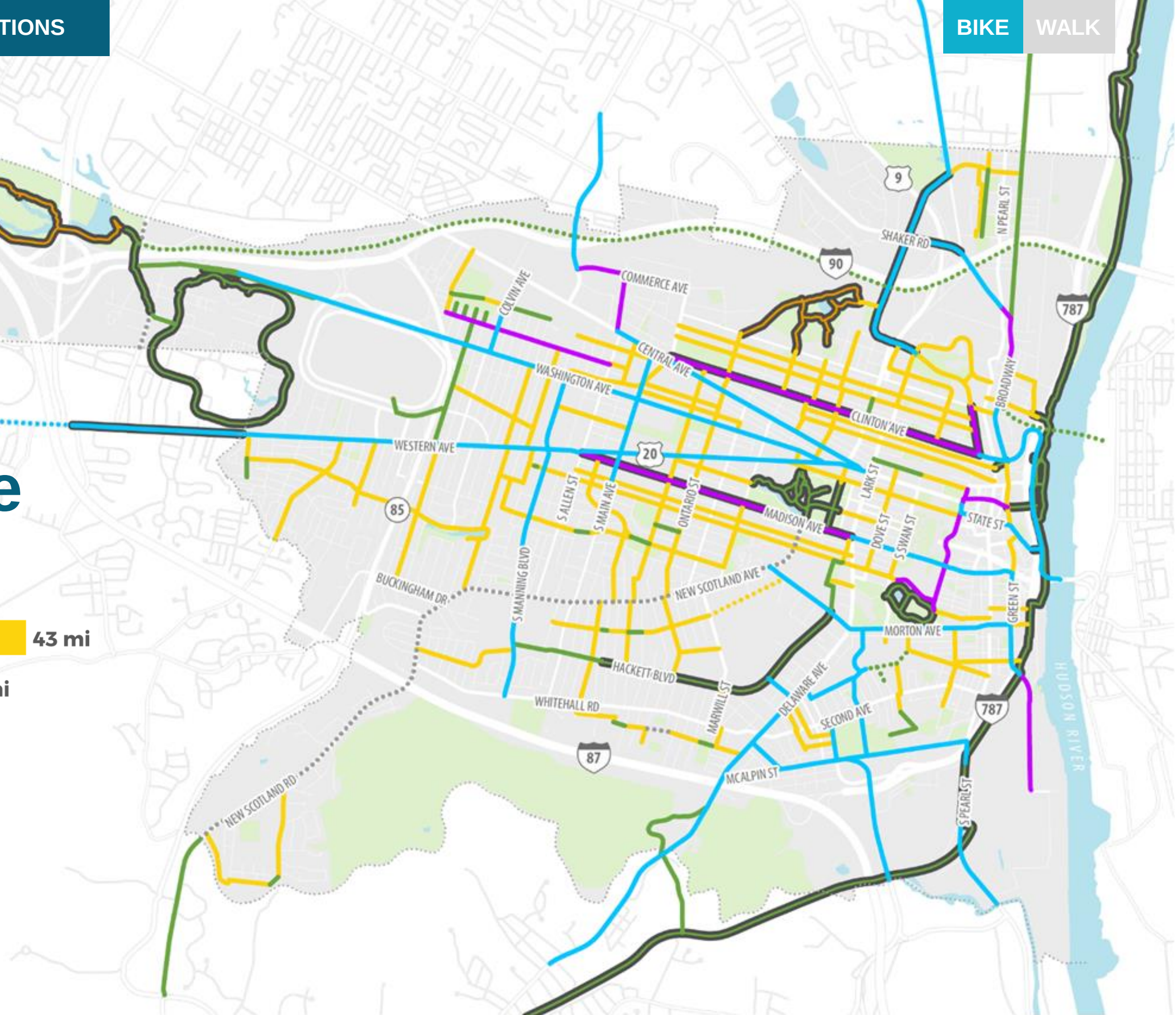
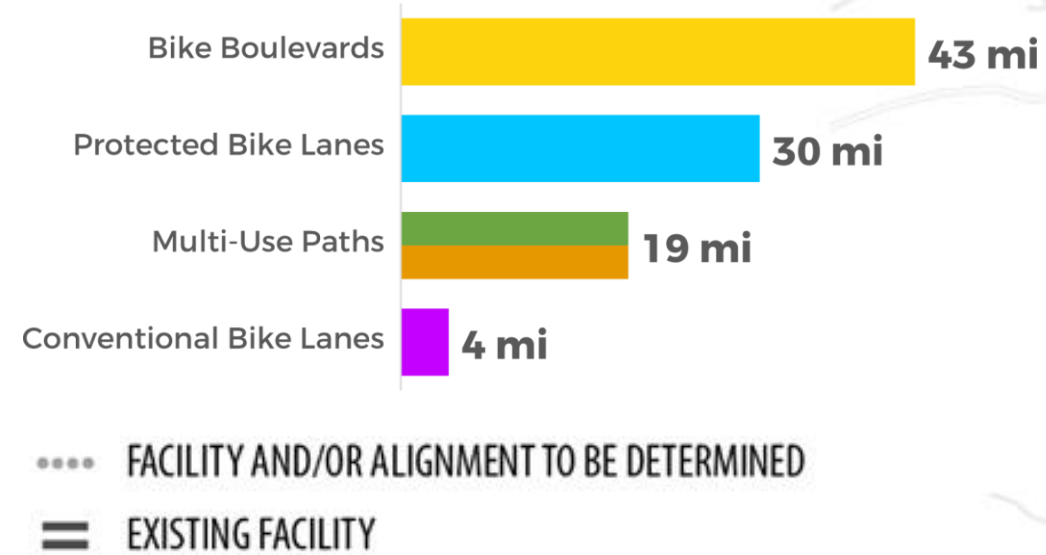
- BIKE BOULEVARD
- CONVENTIONAL BIKE LANE
- PROTECTED/BUFFERED BIKE LANE
- PAVED MULTI-USE PATH OR TRAIL
- NON-PAVED MULTI-USE PATH OR TRAIL
- ⋯ FACILITY AND/OR ALIGNMENT TO BE DETERMINED
- = EXISTING FACILITY



0 0.5 1 Mile



Proposed Bike Network



Safe Bike Facilities

DIFFERENT PEOPLE HAVE DIFFERENT OPENNESS TO BIKING



32%

No Way,
No How

No interest in riding a bike



60%

Interested but Concerned

Prefer complete separation from cars, or low-speed, low-volume routes



7%

Enthusied and Confident

Comfortable riding in traffic when they need to, but prefer dedicated bikeways



<1%

Strong and Fearless

Comfortable riding on streets with or without dedicated bikeways

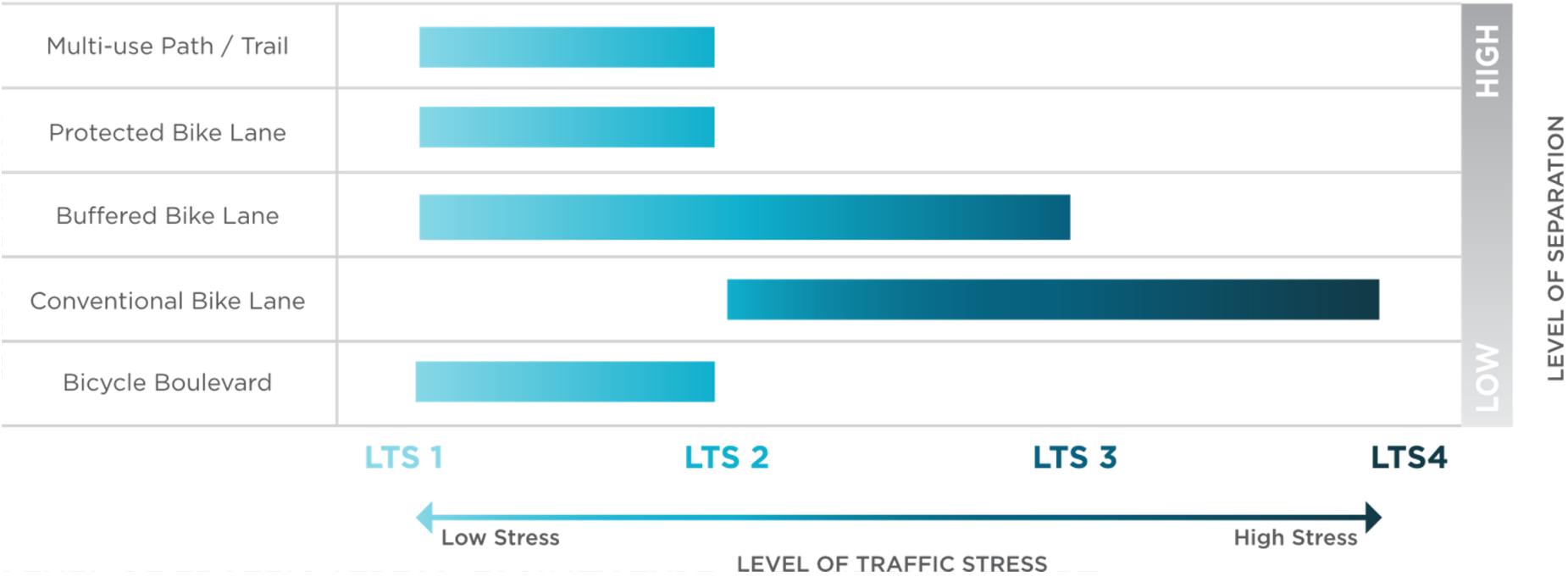
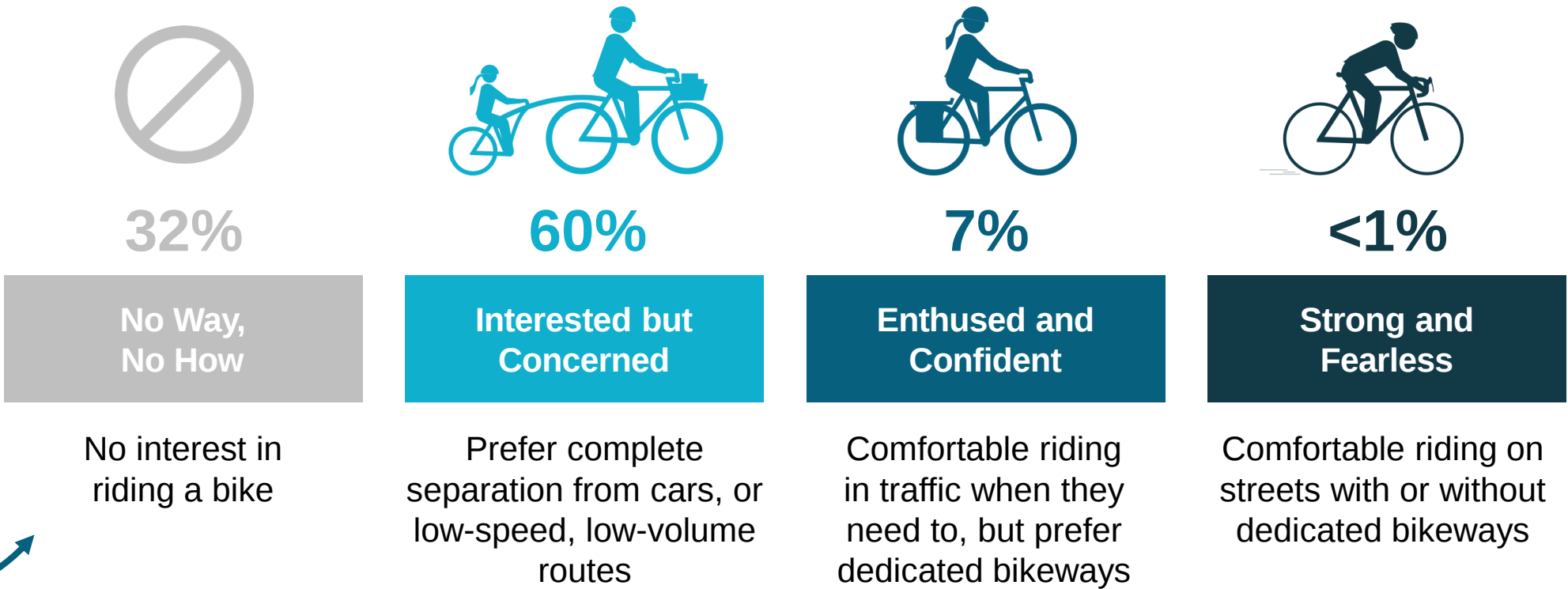


BIKE FACILITIES WITH A LOW LEVEL OF TRAFFIC STRESS (LTS) CAN ATTRACT A BROADER SET OF RIDER TYPES

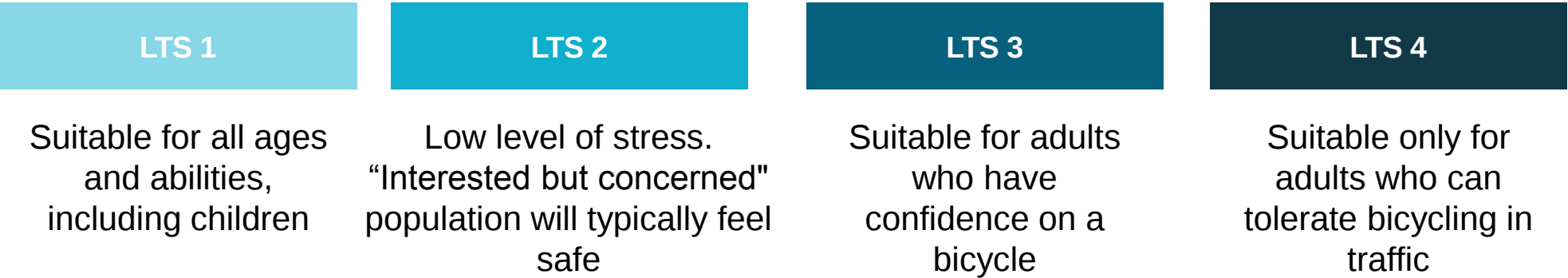


Safe Bike Facilities

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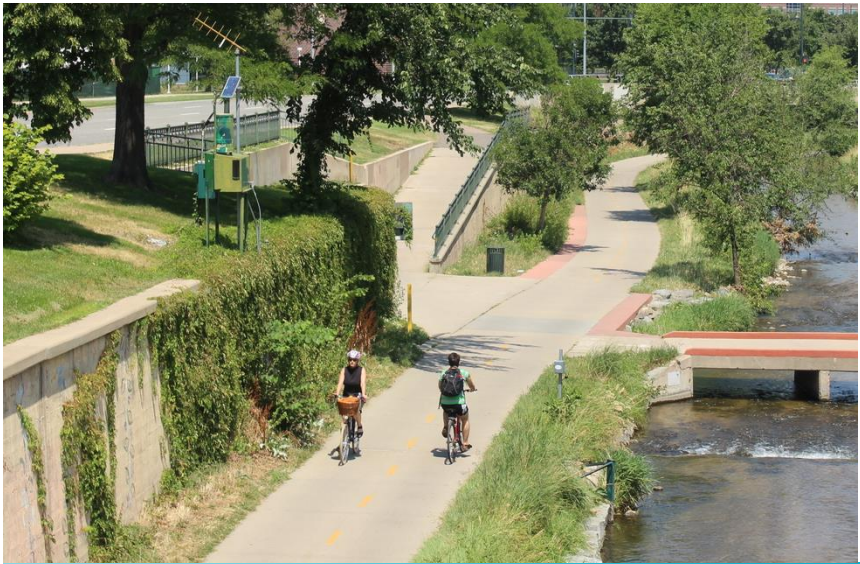


BIKE FACILITIES WITH A LOW LEVEL OF TRAFFIC STRESS (LTS) CAN ATTRACT A BROADER SET OF RIDER TYPES



Safe Bike Facilities

WHAT DO THE DIFFERENT BIKE FACILITIES LOOK LIKE?



Multi-use Path or Trail

LTS 1 ← → LTS 2



Bike Boulevard

LTS 1 ← → LTS 2



Protected Bike Lane

LTS 1 ← → LTS 2



Buffered Bike Lane

LTS 1 ← → LTS 3



Conventional Bike Lane

LTS 2 ← → LTS 4

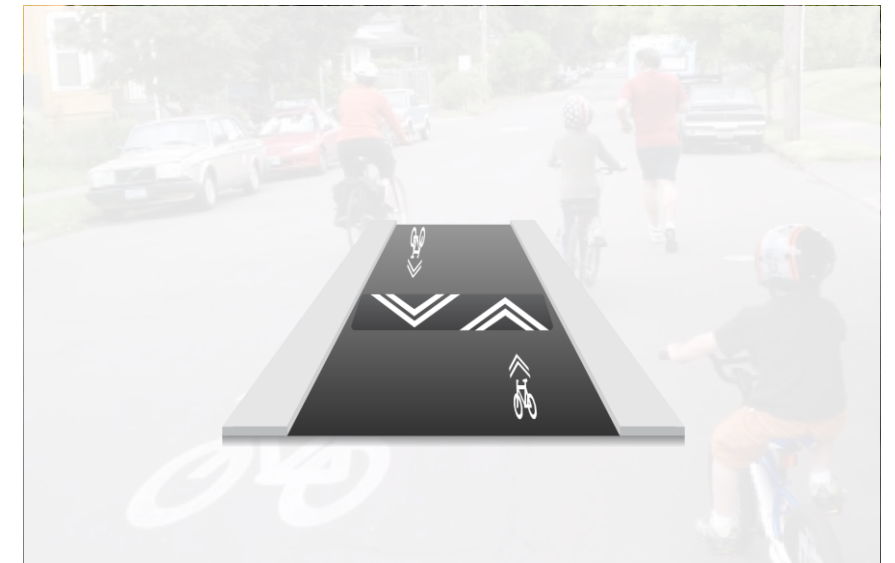
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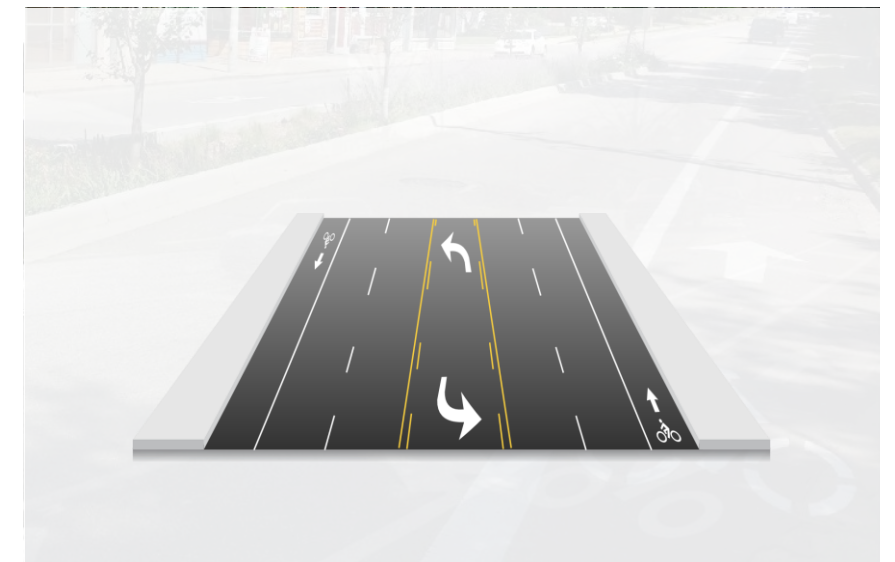
Protected Bike Lane

LTS 1 ← → LTS 2



Buffered Bike Lane

LTS 1 ← → LTS 3



Conventional Bike Lane

LTS 2 ← → LTS 4

Bike Facility Selection

1 BEGIN WITH LOW STRESS STREETS

BICYCLE BOULEVARDS

Fewer than 2,000 vehicles per day and speeds of 20 MPH or less

CONVENTIONAL BIKE LANES

Fewer than 3,000 vehicles per day and speeds of 25 MPH or less

BUFFERED BIKE LANES

Fewer than 6,000 vehicles per day and speeds of 25 MPH or less

PHYSICALLY SEPARATED BIKE LANES

If none of the previous conditions exist, determine if the street can accommodate physically separated or protected bike lanes using the following street reconfiguration approaches:



REMOVE ON-STREET PARKING

Do most residences have private parking?
Is there off-street parking nearby?

ROAD DIET

Convert roads with 4+ lanes to 3 or fewer lanes, one per direction and a center turn lane

NARROW ROAD LANES

Travel lanes should be 10', 11' where transit operates

2 REALLOCATE ROAD SPACE

- If needed
- Narrow travel, turning, and parking lanes
 - Road diets streets with four + lanes and fewer than 20,000 vehicles per day
 - Remove on-street parking

3 IDENTIFY MULTI-USE TRAIL LOCATIONS FOR STREETS

Edge of pavement to right-of-way line is a minimum of 10', ideally 12'-16'

3 ANALYZE ALTERNATIVE PARALLEL STREETS

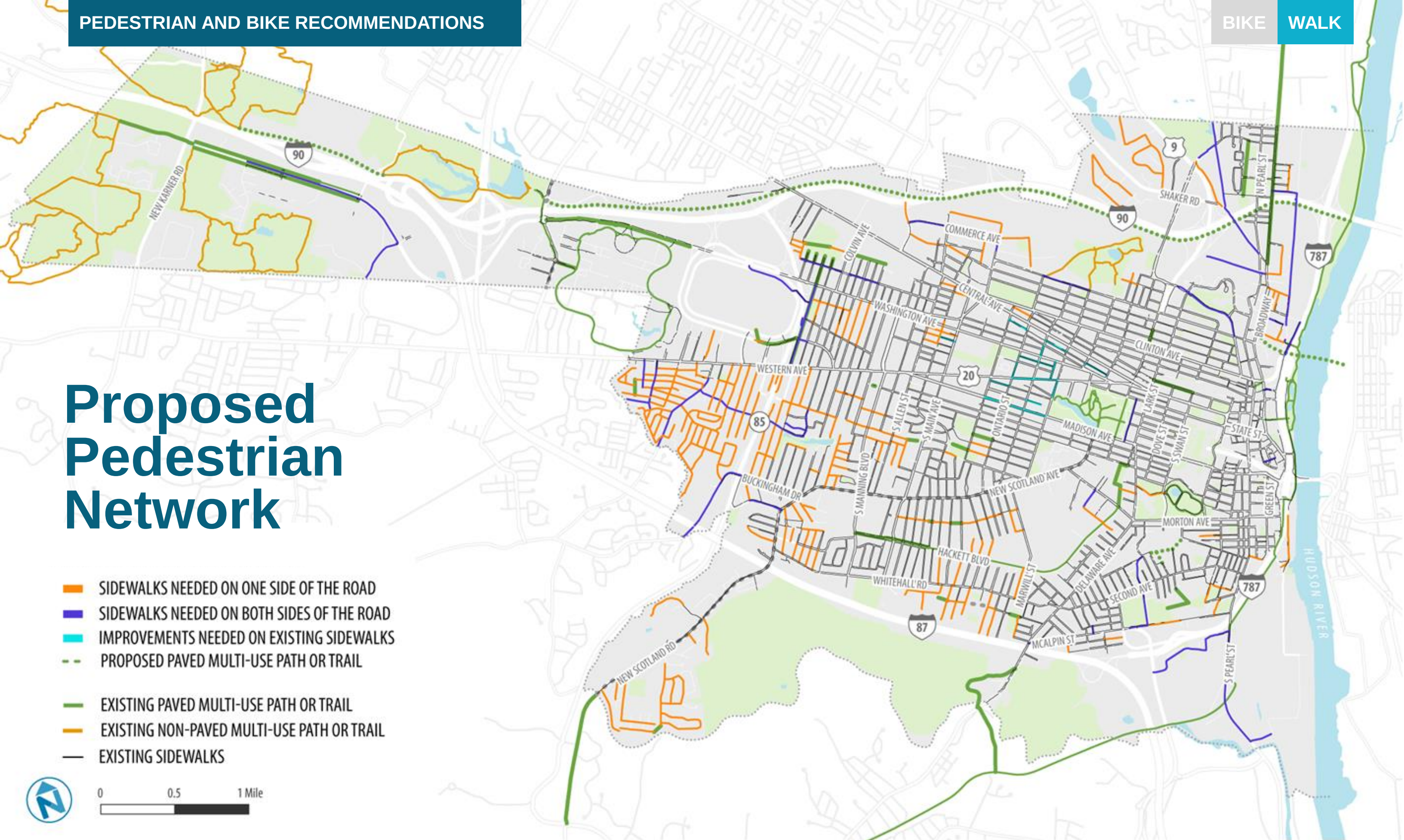
if a street segment cannot be reconfigured to allow for a low stress bike facility

Proposed Pedestrian Network

- SIDEWALKS NEEDED ON ONE SIDE OF THE ROAD
- SIDEWALKS NEEDED ON BOTH SIDES OF THE ROAD
- IMPROVEMENTS NEEDED ON EXISTING SIDEWALKS
- - - PROPOSED PAVED MULTI-USE PATH OR TRAIL
- EXISTING PAVED MULTI-USE PATH OR TRAIL
- EXISTING NON-PAVED MULTI-USE PATH OR TRAIL
- EXISTING SIDEWALKS



0 0.5 1 Mile



Pedestrian Infrastructure

ADA Curb Ramps

Provide access across intersections for people using mobility devices, walking bikes, or pushing strollers

No Right Turn on Red

Provide pedestrians with added safety when crossing the street by preventing right vehicle turns

Parking Restrictions for Visibility

Prohibit parking in close proximity to intersections to maintain sight lines

Pedestrian Head Start

Pedestrians allowed a few second head start to claim the right-of-way ahead of turning traffic

Painted or Raised Crosswalks

Raise driver awareness of pedestrian crossings

Pedestrian Signals

Tell people walking when they can cross the street safely

Curb Extensions

Shorten crossing distances, increase visibility, and slow turning vehicles

Pedestrian Infrastructure

Low-Cost Pilots

Pilot test infrastructure with low-cost, temporary materials

Access to Bus Stops

Pedestrian infrastructure near transit makes it easier to walk and take the bus

Mid-Block Crossing

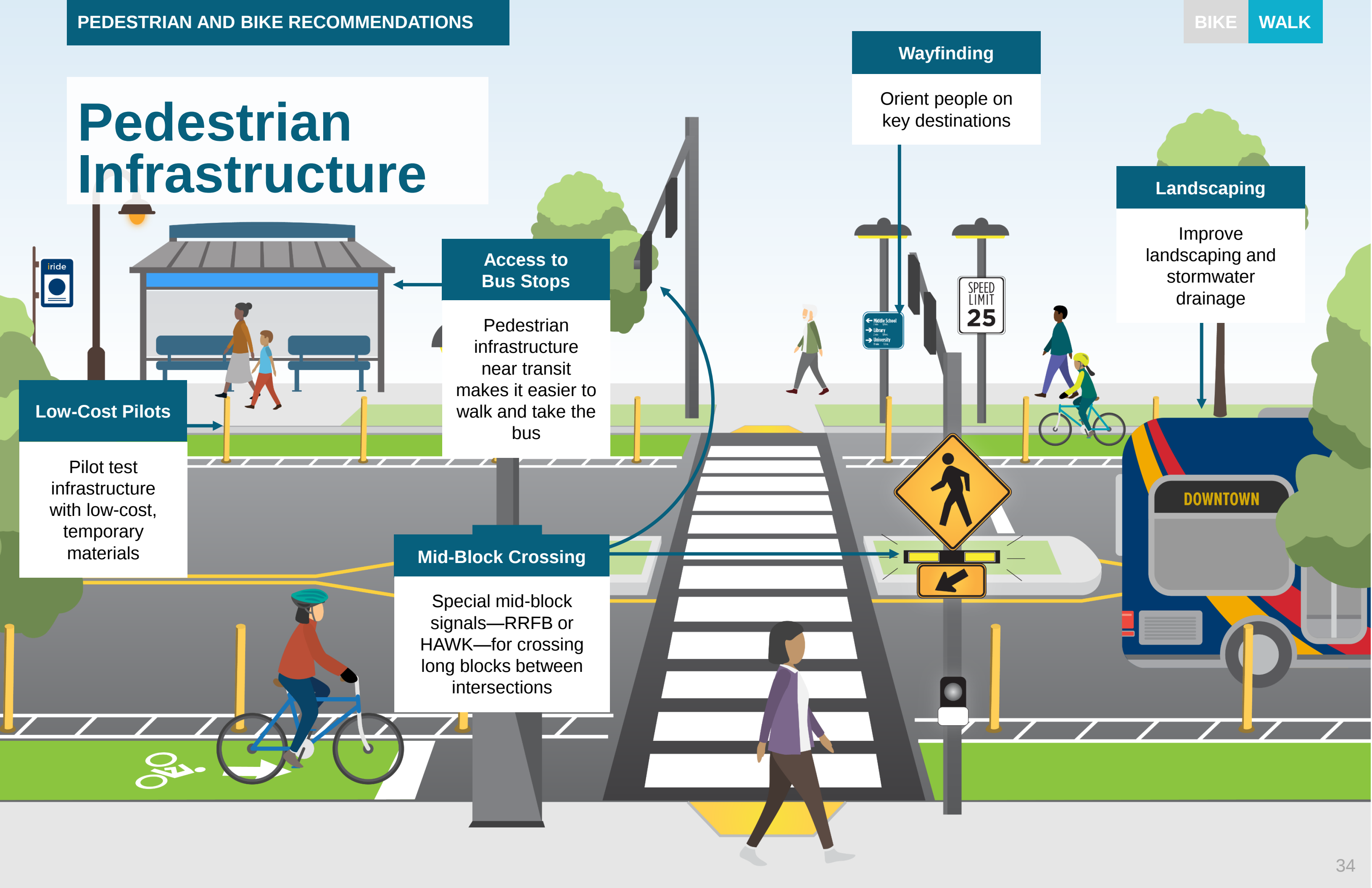
Special mid-block signals—RRFB or HAWK—for crossing long blocks between intersections

Wayfinding

Orient people on key destinations

Landscaping

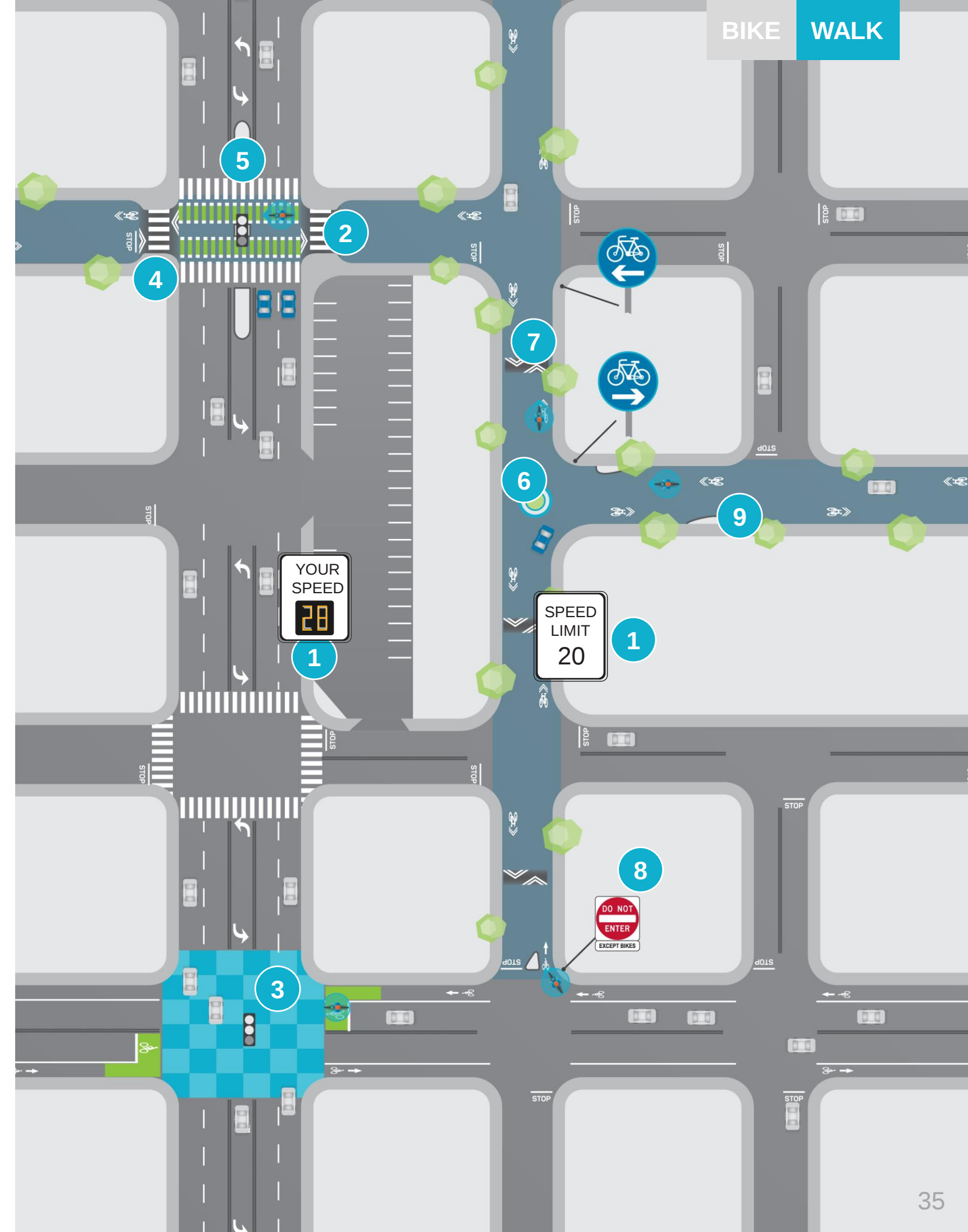
Improve landscaping and stormwater drainage



Traffic Calming

HOW CAN WE CALM TRAFFIC TO MAKE STREETS SAFER FOR PEOPLE WALKING AND BIKING?

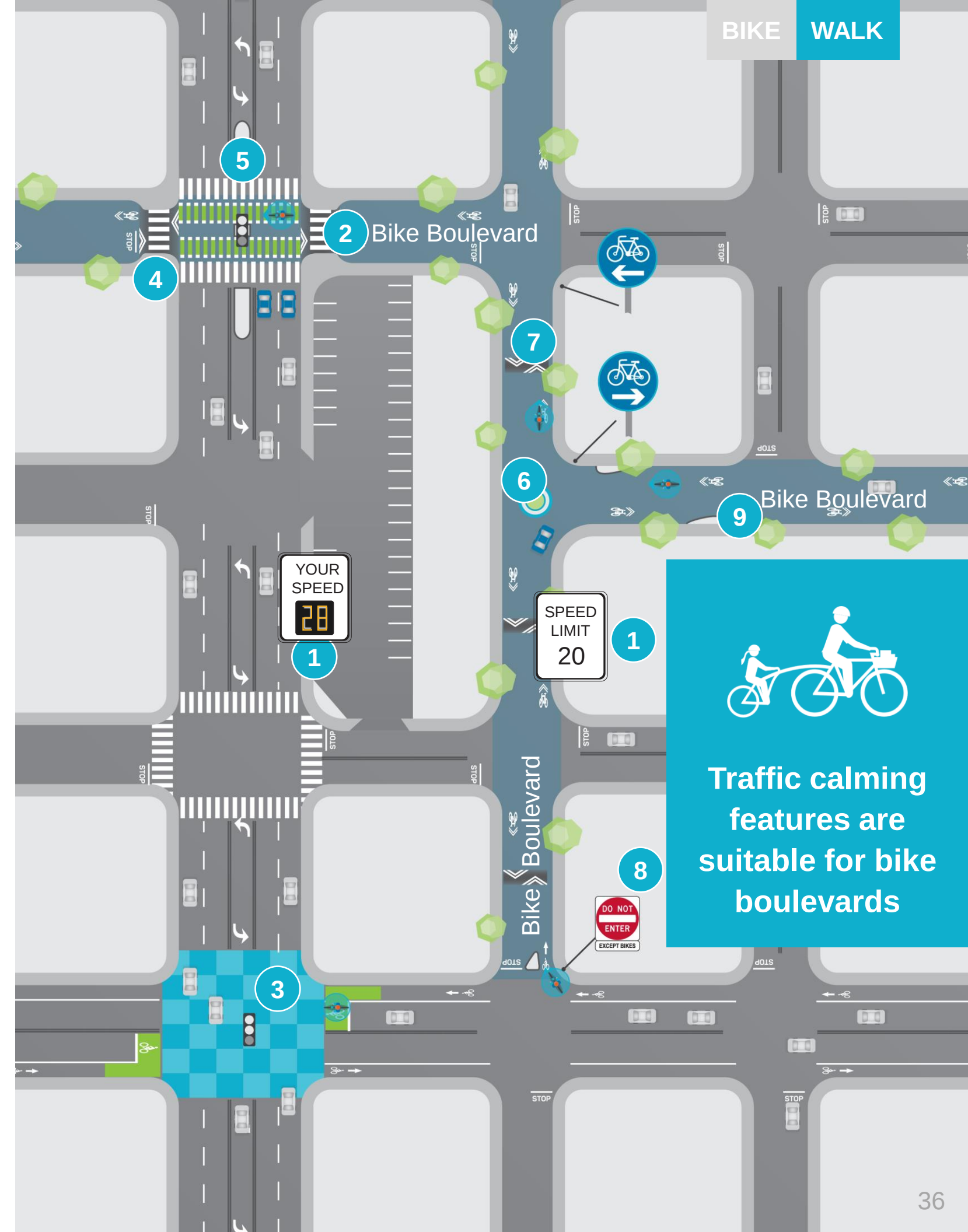
- 1 **Radar speed signs** and **reduced speed limits** to remind motorists to drive slowly
- 2 **Raised crosswalks** to slow car traffic and make it easier to cross the street
- 3 **Pavement treatments** to make an intersection feel unique and pedestrian-oriented
- 4 **Curb extensions** and reduced curb radii to prevent turns at high speeds
- 5 **Center median islands** to shorten crossing distances or prevent certain turn movements
- 6 **Traffic circles** or **mini roundabouts** to slow down car traffic at intersections with low volumes
- 7 **Speed humps** to slow down cars
- 8 **Traffic diverters** to prevent vehicular through traffic on local streets
- 9 **Chicanes** to slow down cars



Traffic Calming

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Policies, Programs, and Procedures

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5

Recommended Policies, Programs, and Procedures

1

Policies
▪ Implement this Plan ▪ Prioritize Bicycle and Pedestrian-related projects ▪ Eliminate Traffic Deaths ▪ Dedicated Funding

Policies translate plan goals into operational standards, guidelines, and practices, establishing street design, and operational and maintenance standards to increase safety and reduce collisions.

2

Programs
▪ Bicycle Share Programs ▪ Bicycle Parking and Repair Stations ▪ Wayfinding ▪ Education and Encouragement

Programs are targeted, actively managed City-led initiatives and partnerships that involve community members to create enthusiasm and attraction to cycling, spread education, and to elevate biking and walking as primary modes of transportation and to improve safety and comfort for people.

3

Procedures
▪ Refine maintenance standards ▪ Establish performance measures to track progress

Procedures are the day-to-day operations that can have a profound impact on the quality of the City’s walking and cycling network.

Example Policy: Eliminate Traffic Deaths

Establishing a **Toward Zero Death** or **Vision Zero policy** formalizes a commitment to eliminate traffic deaths.

By operating under the belief that every death in a traffic crash is preventable, Albany can work to produce the safest possible outcomes with every infrastructure project.

A key component of the Vision Zero mission is the reduction of auto speeds on streets where people walk and bike. Toward this end, cities across the US and the world have begun **adopting “20 is Plenty” policies** that reduce speed limits, encourage design changes to reduce the design speeds of roads, and encourage targeted, equitable prioritization of speed enforcement.

An *Eliminate Traffic Deaths* policy will involve:

- Advocating to the State Legislature to reduce City Speed Limit
- Design changes and speed limits that reduce auto speed
- Preventing parking close to intersections
- Reevaluating sections of Albany’s vehicle and traffic ordinance

THE EFFECT OF VEHICLE SPEED ON PEDESTRIAN FATALITIES



5%

chance of
pedestrian
fatality



45%

chance of
pedestrian
fatality



85%

chance of
pedestrian
fatality



Source: Killing Speed and Saving Lives, UK Dept. of Transportation, London, England. See also Limpert, Rudolph. Motor Vehicle Accident Reconstruction and Cause Analysis. Fourth Edition. Charlottesville, VA. The Michie Company, 1994, p. 663.

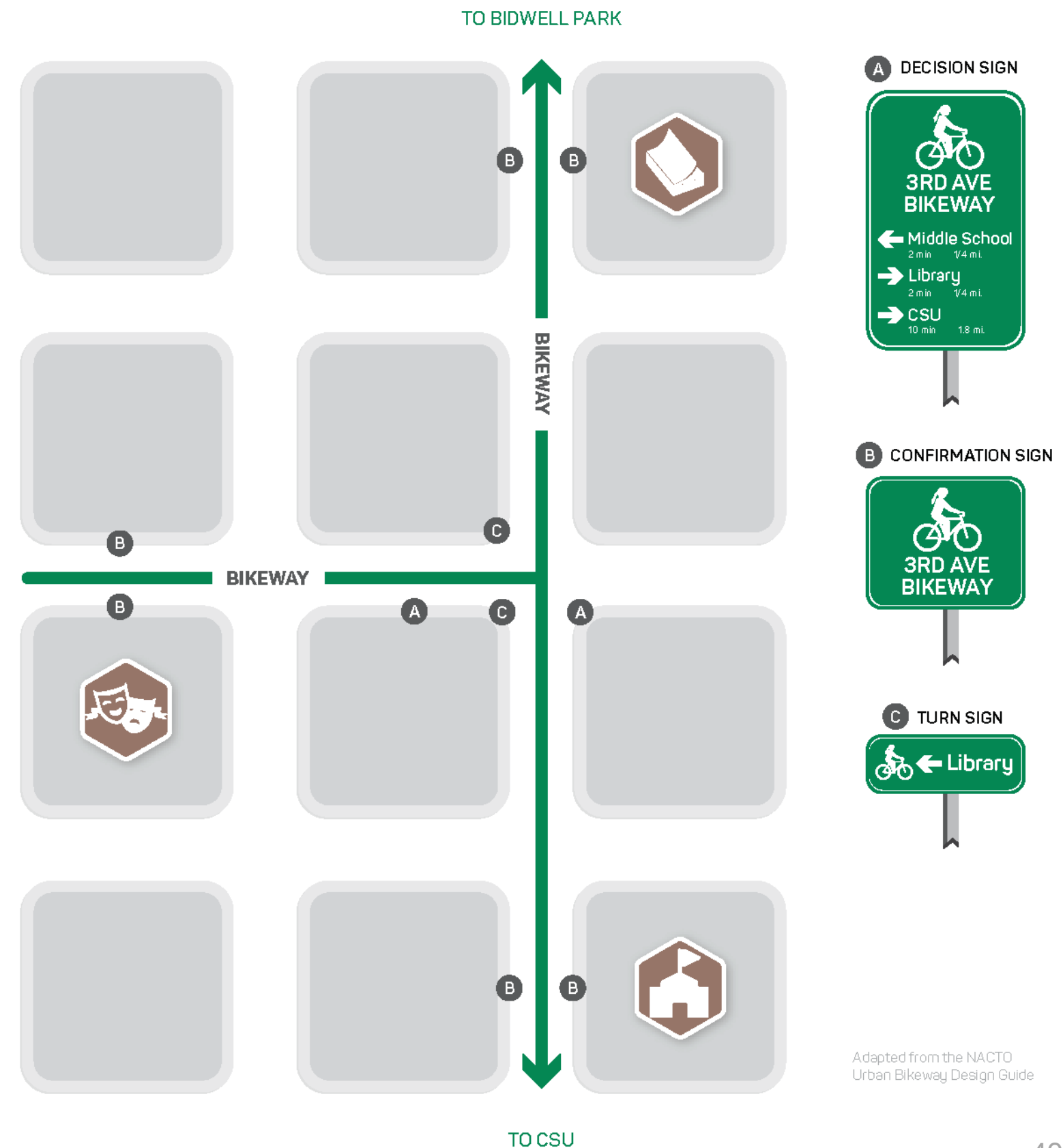
Example Program: Wayfinding

A wayfinding system is crucial to building a successful bicycle and pedestrian network.

Wayfinding provides information that allows people to make informed decisions about which streets and routes to choose to arrive to their destinations. It can also be an economic development tool, by directing people walking and biking to retail, farmers markets, and special events.

A *Wayfinding* program will involve:

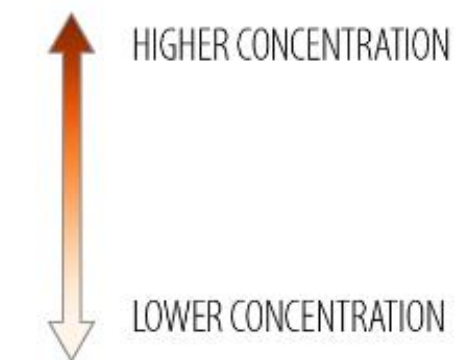
- Consistent design
- Different sign types at different stages of a journey, e.g., “decision signs”, “confirmation signs”, and “turn signs”
- Placement near major retail, employment, education, and tourist destinations
- Inclusion of time and distance to reach destinations



Adapted from the NACTO
Urban Bikeway Design Guide

Example Procedure: Bike and Pedestrian Counts

PUBLIC INPUT
WALKING IMPROVEMENTS REQUESTED



● PROPOSED BICYCLE & PEDESTRIAN
COUNT LOCATIONS

DATA SOURCE: WIKIMAP AS OF 9/28/2020



0 0.5 1 Mile

Developing and using performance measures—like Pedestrian Counts—is an important step in monitoring progress toward meeting the goals of this plan.

Implementation Considerations

A large orange circle containing the white number 6.

6

Implementation Considerations

1

Project Scoring

- Safety
- Equity
- Connectivity
- Demand
- Proximity to parks

2

City's Complete Streets Process

- City-sponsored projects
- Private-sponsored projects

3

Agency Coordination

- Task Force to meet quarterly
- City of Albany
- CDTC
- NYSDOT
- Utility agencies

4

Funding

- Public and Private Funding sources
- Expenditure Plan
- Timeline

5

Key Performance Factors

- Activity
- Funding pursued or secured
- Priority project funded annually
- Miles of constructed bike facilities
- Miles of new/fixed sidewalks and new/updated crossings



Thank you



City of Albany