

# Appendix D: Bicycle and Pedestrian Master Plan

Adopted October 9, 2018

# Goshen Bicycle and Pedestrian Master Plan Executive Summary

The Michiana Area Council of Governments (MACOG), in partnership with the City of Goshen, received a grant from the Indiana State Department of Health Division of Nutrition and Physical Activity to develop a bicycle and pedestrian master plan for Goshen. This document outlines existing bicycle and pedestrian facilities in the city and provides recommendations to improve conditions to ultimately increase bicycling and walking in the area. This Executive Summary provides a vision, goals, and objectives to support and increase bicycling and walking in Goshen.

## Vision

Plan recommendations envision communities in which walking and bicycling are safe, attractive, and convenient for people of all ages and abilities.

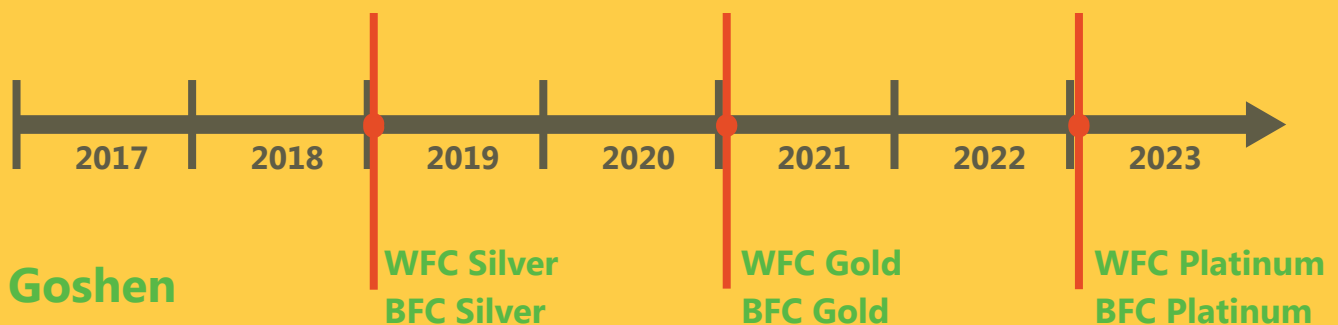
## Mission Statement

The plan presents solutions to:

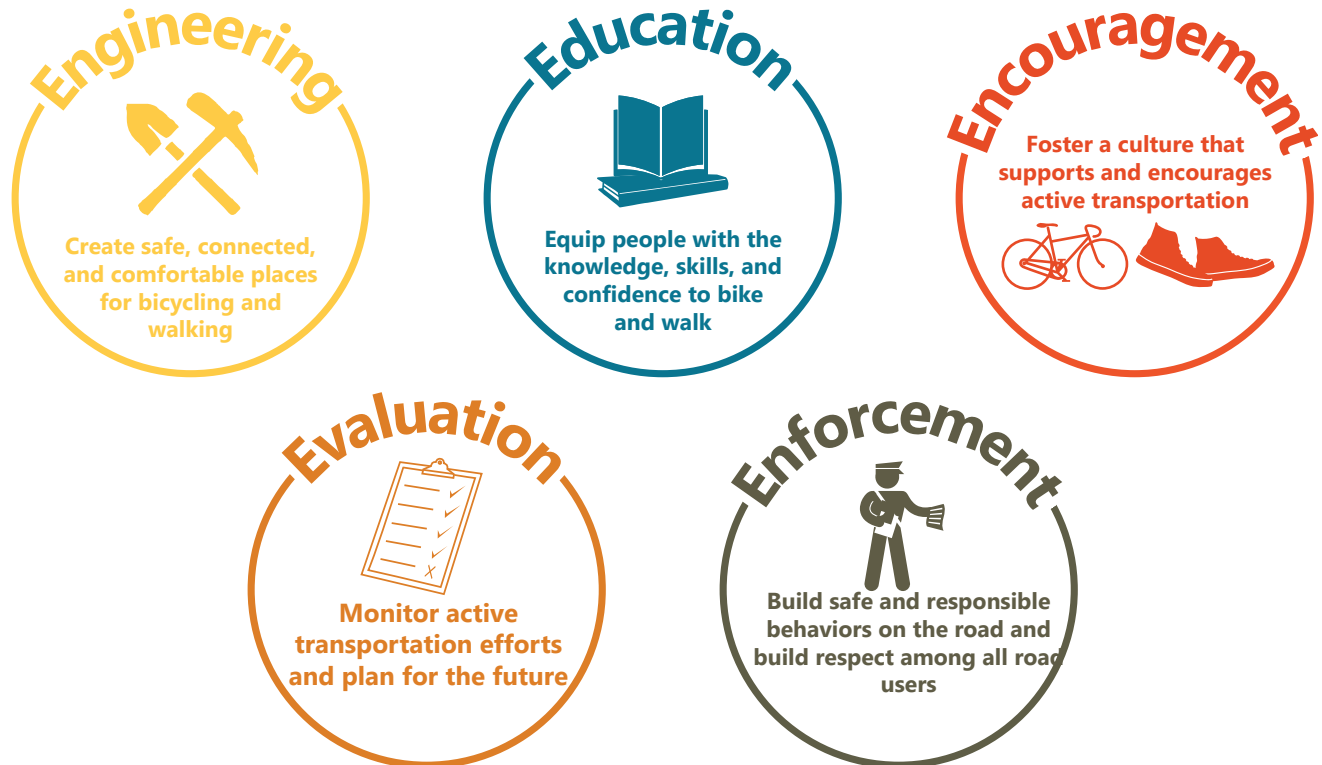
- Build and maintain transportation networks that follow Complete Street philosophies, are welcoming, and connect people to the places they want to go.
- Create networks that are useful at all times of day and throughout the year.
- Educate and promote predictable behaviors to ensure that people who walk, bike, and drive can travel to and around Goshen safely and comfortably.

## Goals

The two overarching goals identified for the City of Goshen are to: (1) achieve Platinum-Level Walk Friendly Community (WFC) and (2) achieve Platinum-Level Bicycle Friendly Community (BFC) status, as recognized by the UNC Highway Safety Research Center and the League of American Bicyclists (LAB), respectively. A proposed timeline for these achievements is shown below.



# The Five Es of Bicycle and Pedestrian Planning



## Objectives

This plan provides objectives in five key areas, known as the “Five E’s”, to help guide the City of Goshen through the implementation of the plan’s infrastructure and programming recommendations. Implementing these recommendations involves coordination among multiple city departments, as well as with the neighboring City of Elkhart and other external agencies. Also integral to the implementation of this plan will be support from walking and bicycling advocates, community partners, and other stakeholders who share a common interest in improving walking and bicycling in Goshen.

The objectives presented in the each of the “Five E’s” should be led by a City employee identified as the pedestrian and bicycle coordinator (e.g., Right-of-Way Engineer), supported by other staff involved in planning, engineering, public works, public safety, health, and education sectors. The establishment of a pedestrian and bicycle coordinator can be done either as a new part or full-time appointment by the city, identification of a role within existing municipal staff, or identification of a coordinator to serve at the regional level.

The plan’s objectives correspond with the “Five E’s” of bicycle and pedestrian planning: engineering, education, encouragement, enforcement, and evaluation. A sixth “E,” equity, underlies each of the “Five E’s”. Objectives were formed based on the plan’s existing conditions analysis and public input process. The plan will use these objectives to develop infrastructure and programmatic recommendations. Bulleted lists under each objective represent potential recommendations that will assist in reaching that objective.



## Engineering

- Use best practice design guidelines to reduce crashes on roadways, particularly to protect people walking and bicycling.
- Overcome gaps and barriers to safe walking and bicycling through infrastructure delivery that focuses on Complete Streets principles. Use creative suggestions to improve stressful roadways.
- Create a system of low stress facilities that do not rely on arterial and collector roadways.
- Coordinate restriping and resurfacing projects to include street redesigns that accommodate people walking and bicycling.
- Create a method for residents to participate in operations and maintenance discussions and delivery.
- Improve coordination with other agencies to deliver continuous walking and bicycling network coverage across jurisdictional boundaries. Provide a coordinated method for improved maintenance across all seasons.
- Keep active transportation networks in good repair.
- Work with the future MACOG wayfinding working group to implement a uniform, regional wayfinding system.
- Provide bicycle and pedestrian supportive facilities in high profile areas.



## Education

- Creatively make use of city resources to broadcast public amenities and improve education opportunities.
- Formalize education opportunities so residents of all ages are knowledgeable about safe driving, bicycling, walking, and transit use.
- Coordinate educational program development and delivery with MACOG and other local, regional, and state-level stakeholders.
- Provide City staff, across all departments, with training related to best practice pedestrian and bicycle planning and design.



## Encouragement

- Organize public events and other opportunities for residents to experience existing and proposed walking and bicycling amenities.
- Monitor the number of residents, employers, community organizations, and other stakeholders engaged in walking and bicycling programming.
- Promote ways for health providers and the public health community to become involved in furthering the plan's vision and mission statement.
- Use public information channels to promote opportunities for businesses to collaborate with walking and bicycling promotional initiatives.
- Now that bike share has launched in South Bend, create supportive infrastructure and policies that help bring a successful bike share model to Goshen.
- Grow the number of City staff whose work involves walking and bicycling issues.





Figure 1. Partnerships between law enforcement officers and local organizations enhance community rapport.



## Enforcement

- Ensure that law enforcement activities related to transportation initiatives are cognizant of the most recent industry standards related to socially equitable and just policing and law enforcement training standards.
- Continue collaboration with other public agencies to organize traffic safety details that target high-risk crash contributing factors.
- Continue investigating behaviors correlated with high crash potential; work with law enforcement agencies to encourage safe walking, bicycling, and driving.
- Partner with law enforcement agencies in the development and project delivery of infrastructure options designed to eliminate traffic fatalities.
- Use public resources to investigate historic and present law enforcement activities to ensure equitable distribution of these resources.
- Collaborate with law enforcement community liaisons to investigate partnerships with local bicycle organizations related to developing walking and bicycling programming.
- Prioritize enforcement of existing laws to support bicycling and walking.



## Evaluation

- Institutionalize the plan's recommendations by delegating implementation responsibilities throughout public agencies and community organizations.
- Periodically monitor the plan's implementation and local walking and bicycling levels.
- Continue to update the City's digital files, including GIS features, to accurately monitor existing and proposed walking and bicycling infrastructure.
- Expand residents' abilities to interact with the plan's implementation.



Figure 2. Evaluating walking and bicycling programming helps make a case for these programs' benefits.

# Program Recommendations

The following recommendations have been developed in the areas of Education, Encouragement, Enforcement, and Evaluation. The following three general recommendations should be considered as providing the foundation to support the remaining recommendations in this section. Engineering recommendations are provided in the Infrastructure Recommendations section.

## Maintain the Steering Committee, originally convened during this planning process

This plan was supported by an steering committee. The committee should continue after the plan's adoption to continue interagency cooperation. The steering committee should consider reopening membership after the plan's adoption.

A diverse membership will help implement the plan's recommendations. The committee would continue to provide advice and recommendations to promote walking and bicycling. The recommendations in this section describe potential roles for the steering committee.

## Identify a Pedestrian and Bicycle Coordinator

The City should identify a Pedestrian and Bicycle Coordinator or seek opportunities to support or coordinate with a regional pedestrian and bicycle coordinator. The identification of an individual for this role should help guide the implementation of the bicycle and pedestrian plan recommendations. The Pedestrian and Bicycle Coordinator would be responsible for frequent reporting to City Council, MACOG, and the public.

## Establish a Bike and Walk Ambassador program

Cities across the country have created ambassador programs to conduct bike-related events and interact with the public at neighborhood or citywide events. Ambassadors are individuals hired from their community to educate and encourage their peers to ride their bikes more often and to do so safely.

Typically, one person or team manages several ambassadors at a time. The project manager is responsible for the program's structure, timeline, daily operations, and reporting/evaluation. The ambassadors perform in person outreach to community organizations, schools, and other groups.

Ambassador programs succeed by using three strategies: Creating stand-alone events in the warm months (i.e., light or helmet giveaways, bike rodeos), attending pre-existing community events (i.e., free concerts, festivals), and educating school aged children during the school year (i.e., classroom presentations). Appendix 2 describes the program in greater detail, including a sample program calendar.



## Education

Develop formalized education opportunities for residents of all ages. Plan for seasonal, recurring education events. Leverage existing advocates and supporters to increase education among residents and stakeholders. Program tasks include:

### League Cycling Instructor (LCI) Training

The City of Goshen should offer LCI training to Goshen citizens and City staff, and welcome participation by the Police Department. The number of LCIs in the region should be robust enough to include several people who can serve Goshen, Elkhart, and the surrounding areas. Ideally, the City should offer one (1) class annually.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- Parks and Recreation Department
- Public Works

#### Potential Supporters

- Goshen Police Department
- Goshen Fire Department
- League of American Bicyclists
- Friends of the Pumpkinvine Nature Trail

### Walking and Bicycling Safety Campaign

A public education campaign should make use of online and printed materials to show support for walking and bicycling in Goshen. Materials created should include maps and calendars of popular events that involve walking and bicycling, and should include messages to foster empathy for people who walk and bicycle. Online materials should be shared by government and community organization social media accounts. Distribute materials seasonally to public destinations and leverage the public health and bicycle advocacy groups to assist in sharing this information.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Goshen Mayor's Office
- Goshen Police Department

#### Potential Supporters

- MACOG
- Goshen Community Schools
- Elkhart County Public Health Department
- Friends of the Pumpkinvine Nature Trail
- Goshen Fire Department

### Driver Safety and Awareness Campaign

Develop an advertising and public information campaign for residents in Goshen who drive. Develop materials with the key message of fostering respect, empathy, and the importance of protecting the safety of people who walk and bicycle. Include key messages in city-owned utility bills or notices at least twice annually, supplement with messages from the Mayor's office.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Goshen Mayor's Office

#### Potential Supporters

- MACOG
- Goshen Police Department
- Goshen Fire Department
- Friends of the Pumpkinvine Nature Trail

## Safe Routes to School Program

Programming should include education program development and delivery. Emphasize engineering improvements that will make it easier to walk and bike to school. Provide bike parking at schools and teach students how to securely lock bicycles every fall. The program should be piloted first at schools with higher rates of walking, then duplicated as a model for increasing walking at other schools in the region. School administrators should meet at least one annually to report on progress.

### Potential Leads

- Pedestrian and Bicycle Coordinator
- Goshen Community Schools

### Potential Supporters

- MACOG
- Elkhart County Public Health Department
- Parks and Recreation Department
- Public Works

## Safe Routes for Seniors Program

Launch a program to identify key safety improvements near senior centers or in neighborhoods with senior citizens. Review pedestrian crossings and signal timing for adequacy in accommodating seniors. Program managers should meet annually with each City to make recommendations and coordinate with capital improvements planning.

### Potential Leads

- Pedestrian and Bicycle Coordinator
- Council on Aging of Elkhart County
- REAL Services of Elkhart County

### Potential Supporters

- Public Works
- Greencroft Communities



*Figure 3. Safe Routes for Seniors programs would identify ways to improve older adults' mobility.*





## Encouragement

Create a culture where walking and bicycling are comfortable, desirable, and supported methods of transportation. Engage in seasonal, repeated activities to encourage residents and visitors to walk and bike, and provide incentives. Program tasks include:

### Support and Publicize Recurring Events by Walking and Bicycling Organizations

Help publicize Pedal Power Pride, Chain Reaction Bicycle Project, Bike Elkhart, Friends of the Pumpkinvine, and other walking/bicycling organizations' group rides (e.g. Critical Mass, Kidical Mass, Bike n Dine) initiatives within City communications (i.e., newsletters, literature available at public buildings). Continue First Friday and Maple City Walk programming.

#### Potential Leads

- Bike Elkhart
- Pedal Power Pride
- Greater Elkhart Chamber of Commerce
- Redevelopment Commission
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

#### Potential Supporters

- Mayor's Office
- Neighborhood Associations
- Parks and Recreation Departments
- Health care providers (Beacon Health)
- Elkhart County Convention and Visitors Bureau

### Increase City Presence at Local Events

Grow the number of businesses who participate in Bike to Work Week every May. Stakeholders and steering committee members expressed interest in encouraging participation in regional activities or scaling up local programming.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- Elkhart County Public Health Department

#### Potential Supporters

- Mayor's Office
- Michiana Bike Coalition
- Bike Elkhart
- Pedal Power Pride
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

### Develop Walking and Bicycling Maps to Support Healthy Recreation

Produce walking and bicycling guides that are customized for the region and promote healthy active transportation and access to local businesses. Include local destinations that help residents lead active lifestyles. Examples include grocery stores that offer fresh produce, walking and bicycling trails, the Riverwalk, and more.

#### Potential Leads

- Elkhart County Health Department
- Pedestrian and Bicycle Coordinator
- Health systems (e.g. Beacon Health)

#### Potential Supporters

- Public Works
- MACOG

## Offer Creative Incentives Partnered with Local Bike Share

Doctors and other healthcare professionals can help patients become more active if Goshen creates a “Prescription Bike Share” program once bike share launches in the region. This type of program allows doctors to “prescribe” patients a reduced-price bike share membership to help them incorporate exercise within their daily lives.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- MACOG
- Health systems (e.g. Beacon Health)

## Embrace Bike Share

Bike share systems do well in cities with low-stress bicycle networks that include calm residential streets, paved shoulders or bike lanes, separated bike lanes, and trails. The plan’s infrastructure recommendations are an encouragement tool to help more people feel comfortable bicycling in Goshen.

Work with City departments to involve bicycle share in City programming and special events. A citywide Bicycle Ambassador’s program could help promote a future bike share system. The bike share system could supply bicycles for free or reduced-cost learn to ride events, in conjunction with area League Cycling Instructors (LCI). The bike share system could also make bicycles available during the Ambassadors’ community bike rides.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- MACOG
- Elkhart County Convention and Visitors Bureau

## Update Development Policies to Make Walking and Bicycling Easier, More Supported

Include sidewalks for all new, infill, and redevelopment. Sidewalks should be a minimum of five feet wide scaling up to eight or ten feet in high pedestrian use areas and along major arterial roadways and provide appropriate buffering from traffic. Review and revise zoning and subdivision regulations to provide for:

- Fine-grained mix of land uses
- Short-to medium-length blocks
- Street-oriented buildings
- Parking requirements that reduce the space committed to auto parking and require bicycle parking
- Require street design connectivity that supports walking, bicycling and transit
- Work to create transit routes that provide access to all residents every half mile or closer
- Provide for safe street crossing at locations where pedestrians need to cross, such as bus stops, schools, parks, and other major destinations
- Incorporate bicycle facilities into street and building design to provide for access and parking that is convenient and accessible.

### Potential Leads

- Goshen Planning Commission
- Public Works

### Potential Supporters

- MACOG



## Evaluation

Develop a recurring, systematic approach to tracking progress at the City level. Review progress on an annual basis, at a minimum, and prepare an outward-facing report. Consider an annual presentation to City Council. Program and policy tasks include:

### **Institutionalize Bicycle and Pedestrian Accommodations through the Establishment of a Standing Bicycle and Pedestrian Committee**

This plan was supported by a steering committee. The steering committee should continue after the plan’s publication to continue interagency cooperation. Committee should include local government leaders, metropolitan planning department, chamber of commerce members, local visitors bureau staff, public safety representatives, bike-related business owners, and other walking and bicycling enthusiasts. The standing committee can continue working toward plan goals before the Pedestrian and Bicycle Coordinator is appointed.

#### **Potential Leads**

- Pedestrian and Bicycle Coordinator

#### **Potential Supporters**

- MACOG
- City of Goshen Planning & Public Works

### **Project Review for Bicycle and Pedestrian Accommodation**

Establish a review committee for infrastructure projects, and check for consistency with bicycle and pedestrian infrastructure recommendations. Where none are present, review projects for general accommodation and establish a policy that new infrastructure projects should not degrade the walking and bicycling environment. Prepare written project reviews as part of project recommendations before City Council.

#### **Potential Leads**

- Pedestrian and Bicycle Coordinator
- Public Works

#### **Potential Supporters**

- Chain Reaction Bike Shop
- Bike Elkhart
- Elkhart County Public Health Department
- Friends of the Pumpkinvine Nature Trail

### **Collect Bicycle and Pedestrian Count Data on Rolling Basis**

Install counters at various locations to collect data over the course of an entire year. Maintain a database for count data by location. Invest in continuous counters for high-profile locations. Prepare a counts data report as part of annual project reports or as a standalone memorandum.

#### **Potential Leads**

- Pedestrian and Bicycle Coordinator

#### **Potential Supporters**

- Public Works
- MACOG
- Elkhart County Convention and Visitors Bureau

### **Bicycle and Pedestrian Infrastructure Mapping**

When projects are completed, they should be added to each city’s GIS database. Review database at least once annually.

#### **Potential Leads**

- Pedestrian and Bicycle Coordinator

#### **Potential Supporters**

- Parks and Recreation Department
- Public Works
- Elkhart County Highway Department
- INDOT

## Annual Report Card on Walking and Bicycling

Create an annual report card for new or modified bicycle and pedestrian infrastructure. Prepare quarterly reports for City staff in each city. Include bicycle and pedestrian count data where collected, and share year-over-year changes.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- Public Works
- MACOG

## Increase Dialogue Opportunities between City and Residents for Walking and Bicycling

Expand the current 311 system to include codes related to sidewalk, bike lane, and trail maintenance requests. Prepare at least one (1) report annually on ticket levels and response times.

### Potential Leads

- Public Works

### Potential Supporters

- Pedestrian and Bicycle Coordinator
- Goshen Police Department

## Achieve Consistent Opening and Closing Times of Trail Facilities

Keep trail open and close times consistent so commuters know can travel after sunset in the winter months.

### Potential Leads

- Parks and Recreation Department
- Public Works Department

### Potential Supporters

- Goshen Police Department

## Recommendations for Plan Adoption

This plan illustrates potential infrastructure and programming tools to create a series of recommended actions for becoming more walk and bicycle friendly. They show potential tools to accomplish the plan's goals. Although this plan provides recommendations for potential infrastructure and programming options, cities are not limited to the facility types and streets included in this plan.

Recommendations are designed to be flexible and support multiple methods for implementation. One possible method involves creating an annual fund for pedestrian and bicycle improvements. The annual obligation would help diversify and enhance the respective pedestrian and bicycle networks.

### Potential Leads

- Public Works
- Engineering
- Planning
- Pedestrian and Bicycle Coordinator

### Potential Supporters

- Bike Elkhart and other advocacy groups





## Enforcement

Create a culture that embraces bicycling and walking and emphasizes safe, predictable, and desirable behaviors by people walking, bicycling, and driving. Increase visibility of law enforcement on foot and by bicycle. Program tasks include:

### Periodic Updates to Bicycle and Pedestrian Safety Best Practices for Public Safety Officers

Incorporate bicycle and pedestrian educational program into training of local law enforcement. This training could be integrated into officers’ Roll Call meetings, formatted as an annual training with in classroom and on-bike components, or incorporated in Police Academy training.

Training materials, such as informational flyers, should be available if the City updates policies related to the rights and responsibilities of people walking and bicycling. Offer at least one (1) training update annually.

#### Potential Leads

- Goshen Police Department

#### Potential Supporters

- Pedestrian and Bicycle Coordinator

### Adopt a Vision Zero Policy

Adopt a Vision Zero (VZ) policy that seeks to eliminate all traffic crashes. Vision Zero strategies seek to, “eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.”<sup>1</sup>

<sup>1</sup> <http://visionzeronetwork.org/about/what-is-vision-zero/>

Street redesigns, policy changes, education or encouragement programs, and equitable law enforcement come together under the VZ umbrella. The Vision Zero Network is a campaign that brings cities together across the country to work towards these goals. The Cities should take advantage of the network’s resources and online materials, such as case studies.

#### Potential Leads

- Pedestrian and Bicycle Coordinator

#### Potential Supporters

- Parks and Recreation
- Public Works
- Elkhart County Highway Department
- INDOT
- MACOG
- Engineering
- Planning

### Conduct Regular Public Safety Reporting to City Officials

Public safety officers should provide regular reports on traffic crashes involving bicyclists and pedestrians to City officials. Findings could be incorporated in the annual evaluation report proposed in this plan. Reports can establish trends and discuss contributing factors as well as potential solutions.

#### Potential Leads

- Goshen Police Department

#### Potential Supporters

- Pedestrian and Bicycle Coordinator

# Infrastructure Recommendations

**This section presents network, intersection, and programmatic recommendations for the City of Goshen. Facility recommendations included in this plan represent the preferred. Each facility recommendation is grouped into three categories: mixed traffic, visually separated, and physically separated.**

The plan is designed to be flexible in case the City decides one type of facility should be implemented instead of the facility type originally proposed in this plan. As such, these categories represent the fact that multiple facility types may be possible along a given corridor.

Recommendation development was an iterative and collaborative process. Active transportation networks must establish seamless, connected routes that link people to their destinations.

Recommended improvements should consider the existing environment, as well as the planned or expected future context. The needs of all roadway users, including the safety and comfort of people walking, bicycling, and accessing transit, must be balanced with roadway characteristics and corridor constraints. The outcome of this collective process represents a practical approach to improving the region's transportation options.

Recommendations for improving walking and bicycling illustrate preferred alternatives that were selected based on a variety of potential infrastructure investments. This plan presents guidance towards facility selection, but realizes that other infrastructure tools may be chosen in the future.

The plan's goals support the aim of advancing to higher certification levels in the Bicycle Friendly Community (BFC) and Walk Friendly Community (WFC) recognition programs.

To obtain higher certification levels, among other factors, cities must demonstrate well-connected walking and bicycling networks. The network recommendations help achieve these goals over time. Additional coordination and study will be needed to implement these facilities in the future.

Recommendations are subject to change and refinement as site conditions and development patterns change, and as other adjacent or intersecting projects are implemented. Additionally, some projects may require feasibility studies to verify routing or applicability.

## Recommended Facility Guidance

The facility descriptions on the following pages provide guidance for facility selection based on criteria including roadway posted speed, traffic volume (average daily traffic), and land use factors. Grouped into categories based on guidance from the Federal Highway Administration *Small Town and Rural Multimodal Networks Guide*, recommended facility guidance draws guidance from this document as well as other national guidelines, including:

- National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide*
- American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*
- Institute for Transportation Engineers (ITE) *Protected Bikeways Practitioners Guide*

## Mixed Traffic Facilities



### Yield Roadway

A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow speed travel area. Yield roadways serve bidirectional motor vehicle traffic without lane markings in the roadway travel area.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
0 - 20	0 - 500	■					■	



### Neighborhood Greenway

A neighborhood greenway is a low-stress shared roadway bicycle facility, designed to offer priority for bicyclists operating within a roadway shared with motor vehicle traffic.

**NOTE: Speed and volume management may be necessary for streets with higher speed limits and traffic volumes.**

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
0 - 20	0 - 1,500	■					■	



### Advisory Shoulder

Advisory shoulders create usable shoulders for bicyclists on roadways that are otherwise too narrow. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic. Note: In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the MUTCD.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
0 - 25	0 - 3,000		■		■	■	■	

## Visually Separated



### Paved Shoulder

Paved shoulders on the edge of roadways can be enhanced to serve as a functional space for bicyclists and pedestrians to travel in the absence of other facilities with more separation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
25 - 55	1,000 - 12,000+		■	■	■		■



### Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and optional signs. A bike lane is located directly adjacent to motor vehicle travel lanes and follows the same direction as motor vehicle traffic.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
0 - 40	0 - 9,000	■	■			■	■



### Pedestrian Lane

A pedestrian lane is an interim or temporary pedestrian facility that may be appropriate on roads with low to moderate speeds and volumes. A pedestrian lane is a designated space on the roadway for exclusive use of pedestrians. The lane may be on one or both sides of the roadway and can fill gaps between important destinations in a community. Note: This guidance features expanded content and minor differences from that in the FHWA Small Town and Rural Multimodal Networks document. Please refer to the guide for the formal presentation of this facility type.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
0 - 20	0 - 2,000	■	■				■

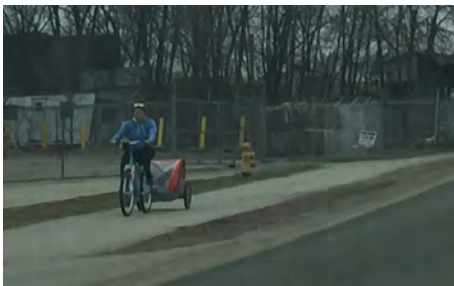
## Physically Separated



### Shared Use Path

A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Shared use paths can provide a low-stress experience for a variety of users using the network for transportation or recreation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
-	-				■		■



### Sidepath

A sidepath is a bidirectional shared use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to on-roadway facilities in heavy traffic environments, allow for reduced roadway crossing distances, and maintain rural and small town community character.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■	■			■



### Sidewalk

Sidewalks provide dedicated space intended for use by pedestrians that is safe, comfortable, and accessible to all. Sidewalks are physically separated from the roadway by a curb or unpaved buffer space.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Separated Bike Lane Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 50	0 - 12,000+	■	■				■





A separated bike lane is a facility for exclusive use by bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic with a vertical element. Examples of vertical elements include flexible bollards, concrete curb, planters, parked cars, or other options.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■				■

## Transit Amenities



### Signed Bus Stop

Signed bus stops mark locations where buses stop to pick up or drop off passengers. Signed bus stops should be used in places with awnings or other features where pedestrians can wait in inclement weather. Signed bus stops should follow ADA regulations for sidewalk to bus stop connections.



### Bus Shelter

Bus shelters provide a place for transit riders to wait before boarding a bus. Bus shelter dimensions should be such that wheelchair users and people with strollers have space within the shelter.



### Bike Locker at Transit Stop

Bike lockers at transit stops provide short or long term bicycle storage. Bike lockers should be routinely checked to ensure they function correctly. If a secure parking area is built around the lockers, the structure should be well-lit and inviting to users.

# Cost Estimates by Type of Infrastructure

Infrastructure funding can be structured as a specific allowance set aside per year. Funding and implementation can also occur opportunistically as part of routine street resurfacing activities and other annual projects.






Cost estimates are an essential planning tool used for programming improvements and drafting applications for external funding sources. Cost estimates were developed based on initial planning-level examples of similar constructed projects and industry averages. Facility designs and associated cost estimates proposed in this plan are conceptual in nature and should be refined during engineering design and review in order to arrive at detailed project costs.

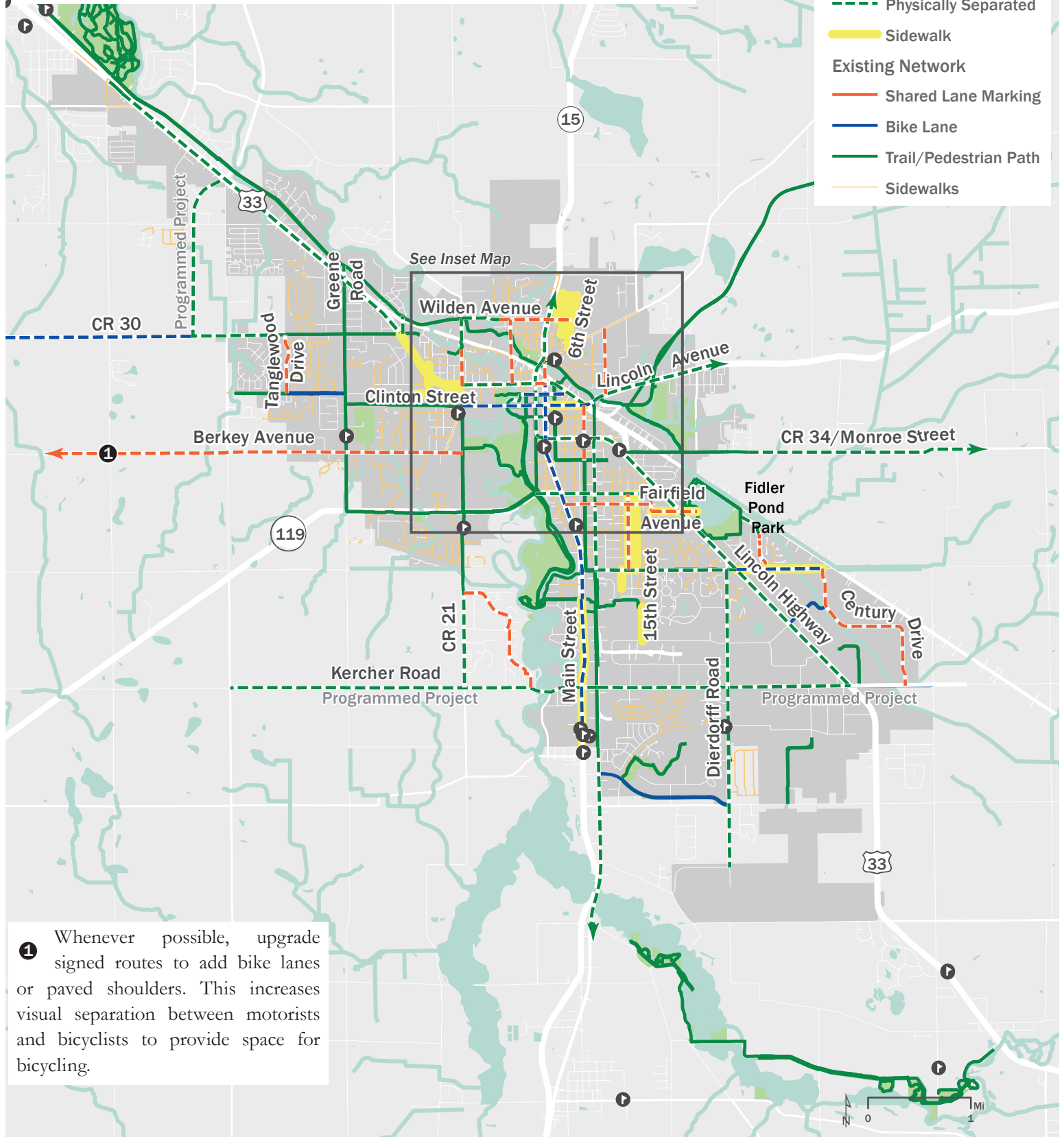
These costs do not include costs for right-of-way acquisition or project design, which can include planning, public process, facility design, and other background work required to implement the project. These additional costs can generally be estimated at 25% of the facility construction cost.

**Table 1. Infrastructure Improvement Cost Estimates**

Facility Type	Per Mile Cost Estimate (Lower Limit)	Per Mile Cost Estimate (Upper Limit)
Signed Route	\$9,000	\$15,000
Shared Lane Marking	\$12,000	\$20,000
Advisory Shoulder	\$15,000	\$20,000
Neighborhood Greenway	\$70,000	\$130,000
Traffic Calming (bumpouts, median island, raised crossing)	\$115,000	\$175,000
Stripe Existing Parking Lane	\$6,000	\$12,000
Bike Lanes (no buffer)	\$40,000	\$75,000
Buffered Bike Lanes	\$60,000	\$120,000
Physically Separated Bike Lane	Cost varies depending on separation treatment and configuration	
Sidewalk (estimate for both sides of street)	\$225,000	\$350,000
Sidepath	\$350,000	\$1,500,000
Trail	\$400,000	\$1,800,000
New Pedestrian and Bicycle Bridge	\$11,000,000	\$18,000,000

Corridor improvements aim to create low stress walking and bicycling routes throughout Elkhart and Goshen. Over time, corridor improvements should also connect to neighboring communities. Network recommendations were developed to connect to major destinations, address high crash corridors, and codify comments received from members of the public.

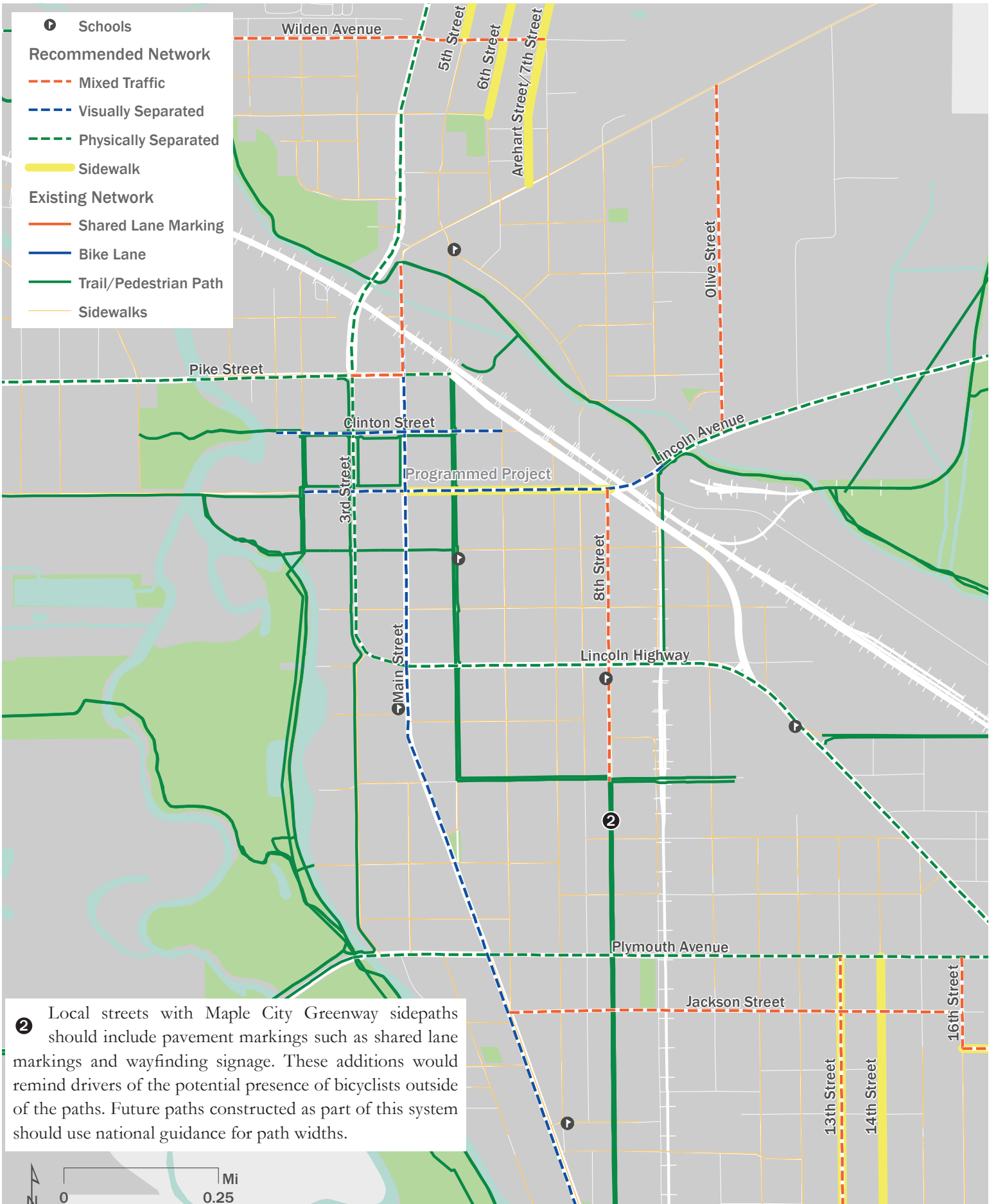
-  Schools
- Recommended Network**
-  Mixed Traffic
-  Visually Separated
-  Physically Separated
-  Sidewalk
- Existing Network**
-  Shared Lane Marking
-  Bike Lane
-  Trail/Pedestrian Path
-  Sidewalks



① Whenever possible, upgrade signed routes to add bike lanes or paved shoulders. This increases visual separation between motorists and bicyclists to provide space for bicycling.

## Goshen Pedestrian and Bicycle Network Recommendations





# Goshen Pedestrian and Bicycle Network Recommendations Inset Map

# Infrastructure Implementation

**The recommendations presented in this plan offer guidance and potential tools for creating more walk- and bicycle-friendly cities. Evaluating projects helps each city allocate resources that align with the plan’s vision and goals.**

This section shows plan recommendations evaluated by different factors. Each row represents a pedestrian or bicycle infrastructure project. A “project” is defined as one or more proposed recommendations along a single corridor or along proximate corridors. This means that the project list is shorter than the overall list of recommended projects found earlier in this plan. Multiple facility types may be included with each distinct project. Projects were scored based on their relationship to connectivity, safety, project readiness, local support, and accessibility based on the following queries:

## Connectivity

- A. Does the project close a key gap in the network?
- B. Does the project connect both municipalities?

## Safety

- C. Does the project address a safety concern (e.g., crashes/ intersection improvement)

## Project Readiness

- D. Can the project be constructed without grant assistance (i.e., relatively simple projects that would make more sense to use local funds rather than use staff time to apply for a grant)?
- E. Is the project a roadway retrofit that could be accomplished with restriping?
- F. Is there available pavement width or right-of-way to easily implement the project?

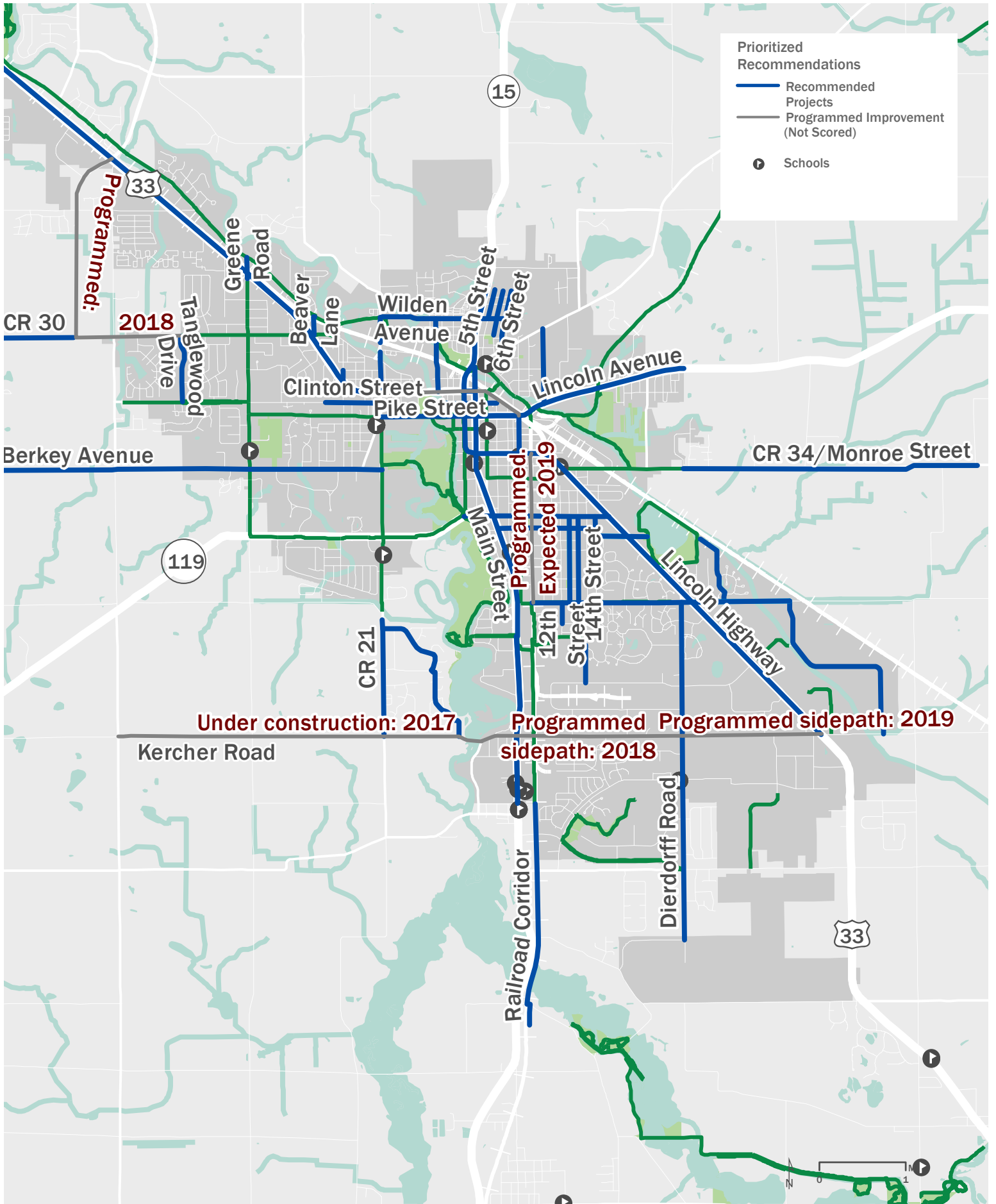
## Use & Local Support

- G. Was there evidence of community support on maps or in comments from members of the public or steering committee members?
- H. Is this project in a high pedestrian use area?

## Accessibility

- I. Does this project increase connectivity related to bicycle infrastructure and walkability?
- J. Does this project improve safety and connectivity to parks, schools, and other public facilities?
- K. Does this project modify a previous completely non-accessible route with a fully accessible pedestrian route?

The tables on the following pages identify when a project meets the corresponding factors for evaluation using colored boxes.



**Prioritized Recommendations**

- Recommended Projects
- Programmed Improvement (Not Scored)
- Schools

**Table 2. Goshen Recommended Projects**

Street Name	Recommended Facility	Criteria										
		A	B	C	D	E	F	G	H	I	J	K
8th Street from Lincoln to Central City Trail	Neighborhood Greenway											
Main Street from Mapleheart Trail to Woodlawn Drive	Bike Lane and Signed Route											
Lincoln Highway from Main Street to Kercher Road	Sidepath, Sidewalk											
Main Street (from Middlebury Street to southern municipal boundary) and 3rd Street (from Mapleheart Trail to Lincoln Highway)	Sidepath and Separated Bike Lane											
Main Street from Westwood Road to Kercher Road	Bike Lane and Sidewalk											
Riverside Boulevard from Division Street to Pike Street	Sidewalk											
Clinton Street from Rogers Park to 6th Street	Bike Lane											
Lincoln Avenue from Pumpkinvine Trail to 29th Street	Bike Lane, Sidewalk, and Sidepath											
CR 36/College Avenue from Programmed north-south trail at railroad tracks to Century Drive	Sidepath, Sidewalk, and Paved Shoulder											
CR 21 from CR 36 to Kercher Road*	Sidepath											
Path from southeast side of Fidler Pond to Spring Brooke Drive	Trail, Signed Route											
Greene Road from Mapleheart Trail to Greene Road Trail	Sidepath											
Beaver Lane from Mapleheart Trail to Bashor Road Trail	Sidepath											
1st Street from Wilden Avenue to Pike Street	Signed Route											
New Trail from Rogers Park Connector to Lincoln Avenue	Trail											
CR 34/Monroe Street from Hillcrest Drive to CR 131*	Sidepath											
Plymouth Avenue from Millrace Canal Trail to Lincoln Highway	Sidepath											
Jackson Street, Fairfield Avenue, and 16th Street from Main Street to Fidler Pond Park	Neighborhood Greenway, Sidewalk, and Signed Routes											
Meadow Ridge Drive and Orchard Drive from CR 21 to Kercher Road*	Neighborhood Greenway											
Wilden Avenue from Indiana Avenue to 7th Street	Neighborhood Greenway and Sidepath											

**Criteria Key:**

A. Closes gaps

B. Connects both municipalities

C. Addresses safety

D. Local funding

E. Restriping

F. Adequate right-of-way exists

G. Community support

H. High pedestrian use

I. Bicycle infrastructure and walkability

J. Schools and other public facilities

K. Pedestrian accessibility

\* Denotes a project located outside of Goshen: would be implemented by other stakeholders

Street Name	Recommended Facility	Criteria													
		A	B	C	D	E	F	G	H	I	J	K			
Tanglewood Drive from Bashor Road to Clinton Street	Signed Route														
CR 21/Indiana Avenue from Wilden Avenue to Pike Street	Sidewalk and Traffic Calming														
13th Street and 14th Street from Plymouth Avenue to College Avenue	Sidewalk and Neighborhood Greenway														
15th Street (from College Avenue to Mervin Street) and 12th Street (from Winona Interurban Trail to Eisenhower Drive)	Sidewalk														
Century Drive from College Avenue to Kercher Avenue	Signed Route														
Railroad Corridor from southern municipal boundary to Baintertown Hydro Loop*	Trail														
Archart Street/7th Street, 6th Street, and 5th Street	Sidewalk														
Olive Street from Middlbury Street to Lincoln Avenue	Advisory Shoulder														
Clinton Street from Riverside Boulevard to Indiana Avenue	Sidewalk														
Dierdorff Road from College Road to Country Road 27	Sidewalk														
Berkey Avenue from CR 15 to Indiana Avenue	Advisory Shoulder														
CR 20/CR 100/CR 3 from Ash Road to CR 30*	Paved Shoulder														
CR 30 from CR 3 to Bashor Road	Paved Shoulder														

**Criteria Key:**

A. Closes gaps

B. Connects both municipalities

C. Addresses safety

D. Local funding

E. Restriping

F. Adequate right-of-way exists

G. Community support

H. High pedestrian use

I. Bicycle infrastructure and walkability

J. Schools and other public facilities

K. Pedestrian accessibility

\* Denotes a project located outside of Goshen: would be implemented by other stakeholders





**Bicycle and Pedestrian Master Plan**  
**Elkhart and Goshen, Indiana**  
**Summer 2017**

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Photos by Alta Planning + Design, unless otherwise noted.

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**Photo Credit: John Yoder**



## Section 1

# Plan Vision, Goals, and Objectives

**The Michiana Area Council of Governments (MACOG), in partnership with the Cities of Elkhart and Goshen, received a grant from the Indiana State Department of Health Division of Nutrition and Physical Activity to develop a bicycle and pedestrian master plan for both Elkhart and Goshen. This document outlines existing bicycle and pedestrian facilities in the cities and provides recommendations to improve conditions to ultimately increase bicycling and walking in the area.**

MACOG retained a consultant team, Alta Planning + Design, Inc., and Taylor Siefker Williams Design Group, to guide the process. The process began with a review of existing conditions in each city. The consultant team inventoried existing bicycle and pedestrian facilities in the area, conducted field visits to verify conditions in person, and evaluated related existing plans, policies, and programs in the area. Existing data was assessed, including of bicycle level of traffic stress analysis, crash data, and demand analysis.

An steering committee of local stakeholders met at key points in the process and provided perspective on past achievements in the area, helped identify priority improvement areas, and provided commentary on recommendations.

Additionally, the public provided commentary on existing conditions and recommendations through an online survey, web-based comment map, and three public meetings.

The consultant team developed recommendations for infrastructure improvements and supporting programs and policies based on the data and the public feedback. These recommendations were then prioritized based on criteria developed with the steering committee.

This chapter outlines the plan's vision, goals, and long-term objectives to achieve more bicycling and walking in both Elkhart and Goshen.

## Vision

Plan recommendations envision communities in which walking and bicycling are safe, attractive, and convenient for people of all ages and abilities.

## Mission Statement

The plan presents solutions to:

- Build and maintain transportation networks that follow Complete Street philosophies, are welcoming, and connect people to the places they want to go.
- Create networks that are useful at all times of day and throughout the year.
- Educate and promote predictable behaviors to ensure that people who walk, bike, and drive can travel to and around Goshen and Elkhart safely and comfortably.

## Goals

### City of Elkhart

The City of Elkhart will implement the plan's infrastructure and programming recommendations to become a Walk Friendly Community (WFC) and a Bicycle Friendly Community (BFC), as recognized by the UNC Highway Safety Research Center and the League of American Bicyclists (LAB), respectively.

### City of Goshen

The City of Goshen will implement the plan's infrastructure and programming recommendations to continue its path through BFC recognition by the League of American Bicyclists. The plan's implementation will result in recognition as a WFC, as organized by the UNC Highway Safety Research Center.



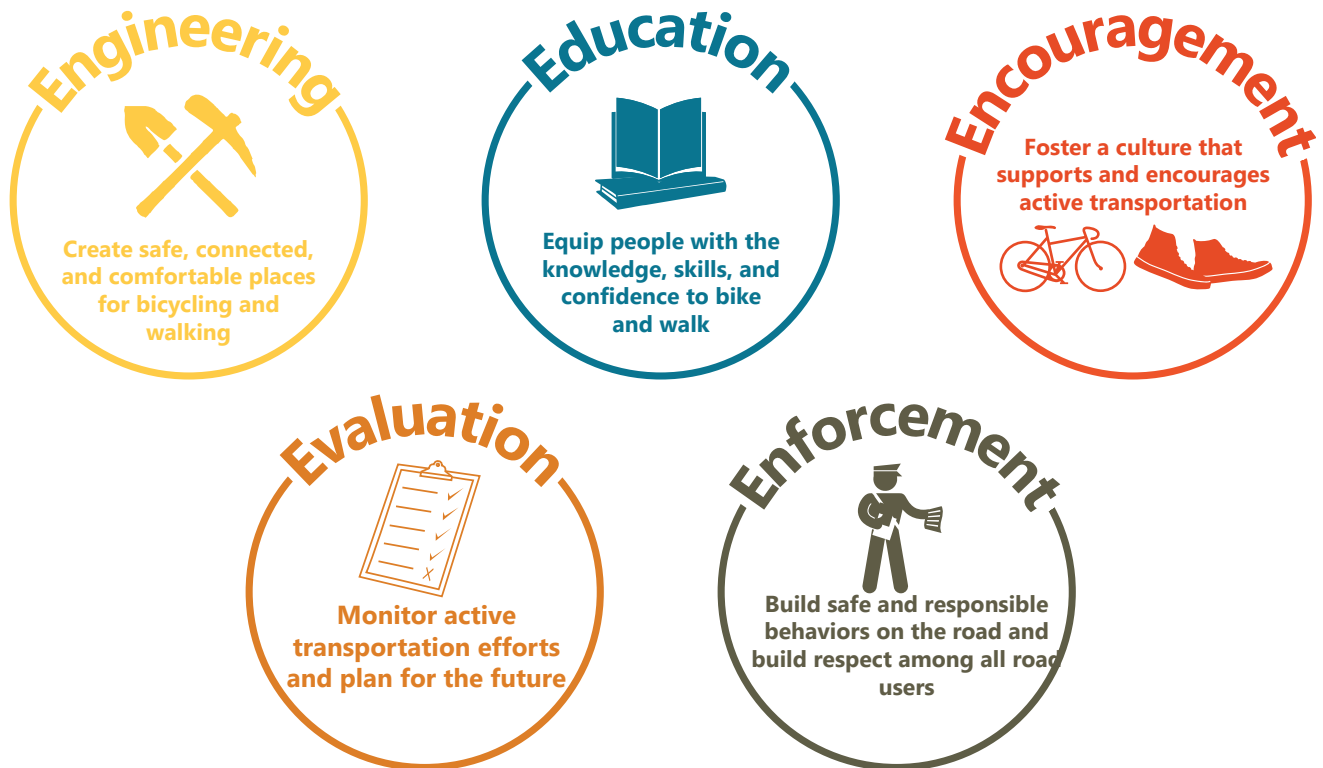
The cities of Elkhart and Goshen coordinate on a variety of projects, and many of the staff involved in the development of this plan have strong working relationships that facilitate the cities working together to improve projects. Walking and bicycling advocates, either as residents or employees in both cities, share a common interest in improving walking and bicycling in Elkhart and Goshen.

The objectives in the five Es presented below should be driven by a pedestrian and bicycle coordinator, supported by staff involved in planning, engineering, public works, public safety, health, and education sectors. The establishment of a pedestrian and bicycle coordinator, either as a part or full-time appointment at the city or regional level, is the first step toward advancing these objectives.

## Objectives

The plan's objectives correspond with the five Es of bicycle and pedestrian planning: engineering, education, encouragement, enforcement, and evaluation. A sixth E, equity, underlies each of the Five Es. Objectives were formed based on the plan's existing conditions analysis and public input process. The plan will use these objectives to develop infrastructure and programmatic recommendations. Bulleted lists under each objective represent potential recommendations that will assist in reaching that objective.

## The Five Es of Bicycle and Pedestrian Planning





## Engineering

### Both Cities

- Use best practice design guidelines to reduce crashes on roadways, particularly to protect people walking and bicycling.
- Overcome gaps and barriers to safe walking and bicycling through infrastructure delivery that focuses on Complete Streets principles. Use creative suggestions to improve stressful roadways.
- Create a system of low stress facilities that do not rely on arterial and collector roadways.
- Coordinate restriping and resurfacing projects to include street redesigns that accommodate people walking and bicycling.
- Create a method for residents to participate in operations and maintenance discussions and delivery.
- Improve coordination with other agencies to deliver continuous walking and bicycling network coverage across jurisdictional boundaries. Provide a coordinated method for improved maintenance across all seasons.
- Keep active transportation networks in good repair.
- Work with the future MACOG wayfinding working group to implement a uniform, regional wayfinding system.
- Provide bicycle and pedestrian supportive facilities in high profile areas.



## Education

### Both Cities

- Creatively make use of city resources to broadcast public amenities and improve education opportunities.
- Formalize education opportunities so residents of all ages are knowledgeable about safe driving, bicycling, walking, and transit use.
- Coordinate educational program development and delivery with MACOG and other local, regional, and state-level stakeholders.
- Provide City staff, across all departments, with training related to best practice pedestrian and bicycle planning and design.



## Encouragement

### Both Cities

- Organize public events and other opportunities for residents to experience existing and proposed walking and bicycling amenities.
- Monitor the number of residents, employers, community organizations, and other stakeholders engaged in walking and bicycling programming.
- Promote ways for health providers and the public health community to become involved in furthering the plan's vision and mission statement.
- Use public information channels to promote opportunities for businesses to collaborate with walking and bicycling promotional initiatives.
- Now that bike share has launched in South Bend, create supportive infrastructure and policies that help bring a successful bike share model to Elkhart and Goshen.
- Grow the number of City staff whose work involves walking and bicycling issues.



Figure 1. Partnerships between law enforcement officers and local organizations enhance community rapport.



## Enforcement

### Both Cities

- Ensure that law enforcement activities related to transportation initiatives are cognizant of the most recent industry standards related to socially equitable and just policing and law enforcement training standards.
- Continue collaboration with other public agencies to organize traffic safety details that target high-risk crash contributing factors.
- Continue investigating behaviors correlated with high crash potential; work with law enforcement agencies to encourage safe walking, bicycling, and driving.
- Partner with law enforcement agencies in the development and project delivery of infrastructure options designed to eliminate traffic fatalities.
- Use public resources to investigate historic and present law enforcement activities to ensure equitable distribution of these resources.
- Collaborate with law enforcement community liaisons to investigate partnerships with local bicycle organizations related to developing walking and bicycling programming.
- Prioritize enforcement of existing laws, including the City of Elkhart's 3-foot passing law.



## Evaluation

### Both Cities

- Institutionalize the plan's recommendations by delegating implementation responsibilities throughout public agencies and community organizations.
- Periodically monitor the plan's implementation and local walking and bicycling levels.
- Continue to update the City's digital files, including GIS features, to accurately monitor existing and proposed walking and bicycling infrastructure.
- Expand residents' abilities to interact with the plan's implementation.



Figure 2. Evaluating walking and bicycling programming helps make a case for these programs' benefits.







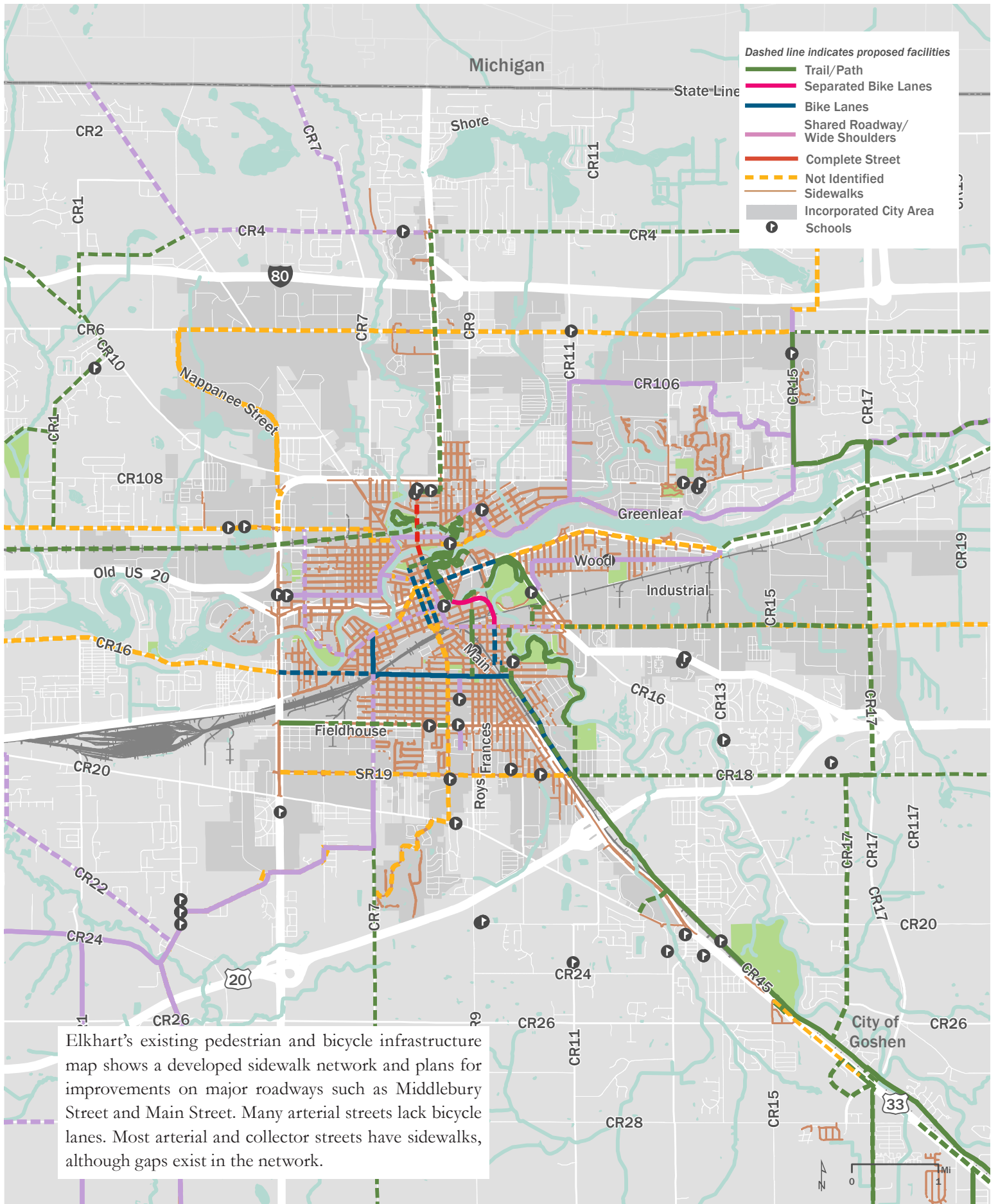
## Section 2

# Existing Conditions Analysis

**The Existing Conditions Analysis chapter reviews the City of Elkhart and the City of Goshen’s previously planned and existing pedestrian and bicycle infrastructure. Although the cities have made strides in recent years to increase the number of people traveling by walking and by bicycling, challenges remain.**

- Most reported crashes involving people walking or bicycling result in injury. The majority of crashes occur at intersections. The remaining crashes are fairly distributed between midblock locations and private property. Roadways classified as collectors and above were prominently featured in the crash frequency analysis.
- Previous plans primarily recommended signed bicycle routes, trails, and sidewalks. The cities have begun to implement recommendations from these plans, including a trail parallel to US 33 and a separated bike lane on Waterfall Drive. This plan’s recommendations section will identify innovative facility designs based on federal and state design guides to support connected bicycle and pedestrian networks, especially in high demand or high crash areas.
- Previous plans emphasized the need to connect parks to walking and bicycling facilities
- Previous recommendations showed proposed improvements on roadways under a variety of jurisdictions. This highlights a need for interagency cooperation, planning, and implementation.
- Bicycle and Walk Friendly Community scorecards indicate that Elkhart and Goshen offer some educational and encouraging programming. The region is also home to passionate bicycle advocacy groups.
- The Live, Work, Play, Learn Demand Analysis created for the MACOG Active Transportation Plan 2040 shows “hot spots” where new or improved infrastructure connecting to the cities’ centers could increase the number of people traveling by active transportation. Downtown areas showed the highest number of trip generators. However, the recommendations chapter will discuss how to equitably provide bicycle and pedestrian infrastructure across Elkhart and Goshen.
- Bicycle counts conducted in Goshen show high number of users on the Millrace Trail. The recommendations chapter will investigate opportunities to use the cities’ existing trails and paths as “spines” to which improved walking and bicycling facilities can connect.

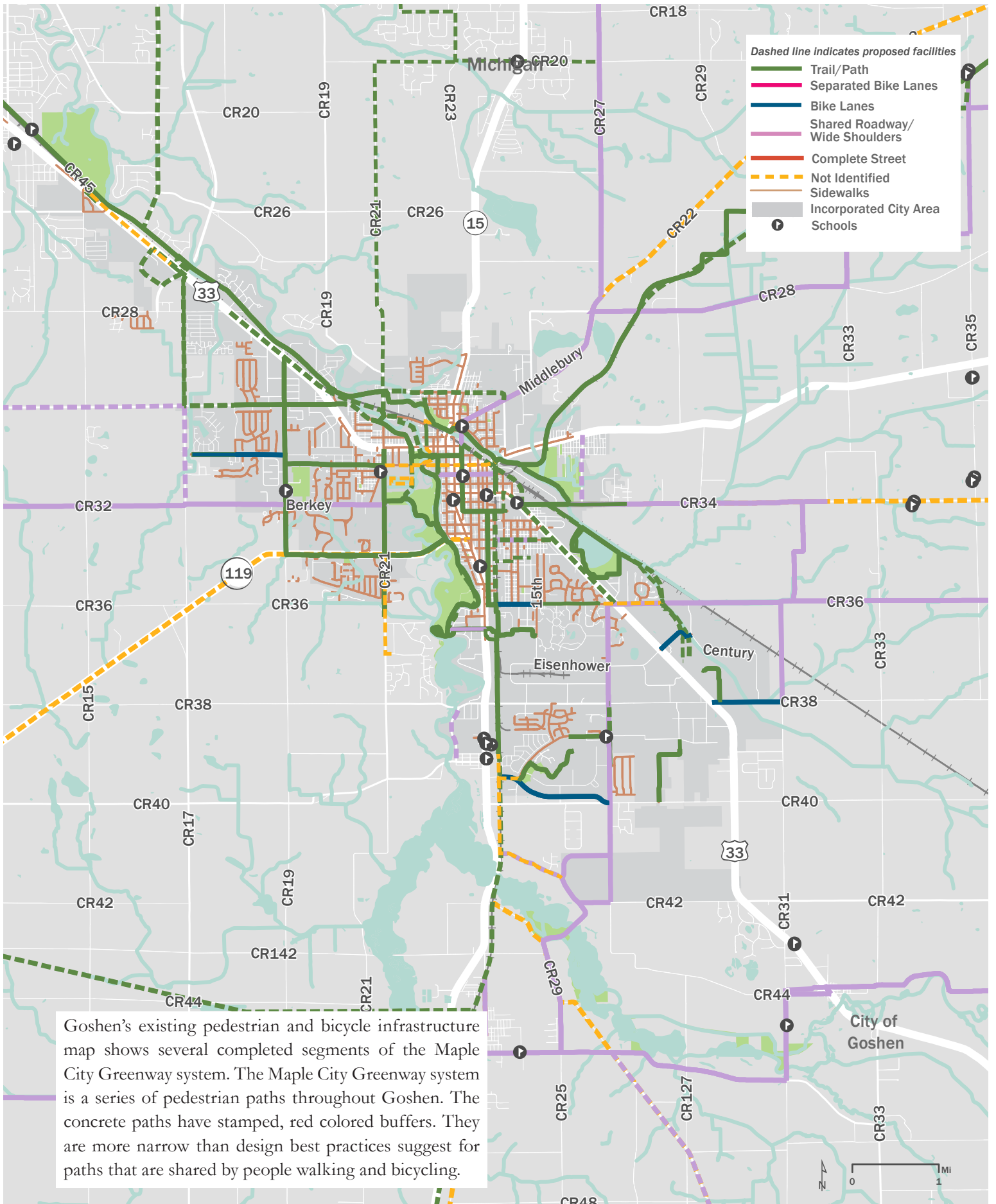




- Dashed line indicates proposed facilities*
- Trail/Path
  - Separated Bike Lanes
  - Bike Lanes
  - Shared Roadway/Wide Shoulders
  - Complete Street
  - - - Not Identified Sidewalks
  - Incorporated City Area Schools
  - Schools

Elkhart's existing pedestrian and bicycle infrastructure map shows a developed sidewalk network and plans for improvements on major roadways such as Middlebury Street and Main Street. Many arterial streets lack bicycle lanes. Most arterial and collector streets have sidewalks, although gaps exist in the network.

## Elkhart Existing and Proposed Pedestrian and Bicycle Network



## Goshen Existing and Proposed Pedestrian and Bicycle Network

## Existing Plans

Recent existing planning efforts within the study area are shown in Table 1. Existing plans reviewed for recommended bicycle and pedestrian infrastructure, policies, and programs.

**Table 1. Existing Plans**

Plan	Agency	Year
Michiana Regional Greenways and Trails Visioning Charrette (MRGTVC)	Ten counties in IN and MI; variety of private and public supporters	2005
City of Elkhart Pedal Panel Recommendations <sup>1</sup>	City of Elkhart	2010
Park and Recreation Department 2014-2018 Master Plan	City of Goshen	2014
Elkhart Comprehensive Plan Update: Mobility Chapter	City of Elkhart	2015
Active Transportation Plan	MACOG	2016
Uncommonly Great Goshen: Comprehensive Plan and Community Vision 2025	City of Goshen	2016

### Michiana Regional Greenways and Trails Visioning Charrette (MRGTVC)

The MRGTVC was an exercise in fostering inter-county and inter-state trail development coordination. Ten counties participated, as did a number of private and public sector stakeholders. The charrette resulted in a Regional Conceptual Vision for regional trails that cross city, county, and state borders. Neighboring counties and other counties within the area were encouraged to work together to implement the following opportunities.

#### Recommendations

General recommendations include:

- Identify ways to build and enhance communication and partnerships between stakeholders of possible connecting routes (i.e., utilities, railroads).
- Explore the use of greenways as tourism routes and destinations.

Specific corridors identified for trail connections include:

- South side of the St. Joseph River
- County Road 18
- County Road 7
- County Road 20
- County Road 21
- County Road 34

### Park and Recreation Department 2014-2018 Master Plan

Goshen’s Park and Recreation Master Plan guides the Department’s program, facility, and open space development over a five-year period. The team created a five-year action plan based on issues and concerns identified through public input and a review of existing conditions. The action plan’s top priorities are supported by a five year projected budget.

Goshen’s existing trail system is termed the Maple City Greenway. This plan uses the term when discussing trail and bikeway implementation recommendations.

#### Recommendations

The plan contains the following recommendations related to walking and bicycling:

- Continue efforts to implement the Maple City Greenway
- Continue searching for funding related to bicycling and walking projects
- Develop a trail connecting to Fidler Pond Park. Members of the public suggested this connection during the public input session.
- Develop a trail connection from Rieth Interpretive Center through the Larry L. Beachy Classified Forest
- Complete the Maple City Greenway Master Plan update and annually review progress related to its implementation

---

<sup>1</sup> Reviewed following the infrastructure and program recommendation development phase to verify concurrence with Pedal Panel report findings.



## Elkhart Comprehensive Plan Update: Mobility Chapter

The Elkhart Comprehensive Plan Update contains a mobility chapter that, among other transportation modes, discusses walking and bicycling.

Although most of the chapter focuses on bicycling, the chapter discusses sidewalks within the city. These facilities are maintained by the Street Department. Private property owners are responsible for maintaining any sidewalks not in the public right-of-way. The Street Department’s curb and sidewalk program helps offset the costs of repairing, maintaining, and replacing sidewalks. The plan states that the City has established the Elkhart Pedal Panel to study bicycling conditions. The panel is chaired by the Greater Elkhart Chamber of Commerce and is supported by leadership from the City of Elkhart, MACOG, area hospitals, local businesses, and Bike Elkhart. The panel created the proposed signed routes contained in the mobility chapter.

## Recommendations

The plan contains the following recommendations for signed bicycle routes, which are also shown on the planned projects map:

- Wood Street to American Park
- Greenleaf Boulevard
- Riverside Drive and Strong Avenue
- Franklin Street and McNaughton Park

## MACOG Active Transportation Plan

The MACOG Active Transportation Plan serves as the bicycle and pedestrian component of the Michiana on the Move: 2040 Transportation Plan. The MACOG Active Transportation Plan intends to, “identify the needs, resources, and strategies to encourage and enhance bicycle, pedestrian, and transit travel within the Michiana region.” The guide was created for local jurisdictions to take advantage of identified recommendations and seek implementation next steps.



Figure 3. The Elkhart Comprehensive Plan Update proposed signed routes along California Road, Cassopolis Road, Jackson Boulevard, Middlebury Street, and Hively Avenue.

## Recommendations

High priority recommendations in Elkhart County include the following:

- Mapleheart Connector (Princeton Blvd.) shared use path
- E & W Rail Trail
- Sycamore Street walking path
- Cassopolis Street walking path
- Waterfall Drive cycle track
- Mapleheart Connector bike lane
- Main Street bike lane
- Middlebury Street signed route
- Sherman Street signed route
- Franklin Street signed route
- Arcade Avenue signed route
- West Boulevard signed route (Arcade Avenue to Lexington Avenue; Lexington Avenue to Mishawaka Road)
- Oakland Avenue signed route



Figure 4. The 14-mile Mill Race Canal Area in Goshen includes the Shanklin Millrace Tunnel

## Uncommonly Great Goshen: Comprehensive Plan and Community Vision 2025

Goshen's comprehensive plan includes a transportation section that focuses on creating complete streets through infrastructure and through supporting policies. The plan's implementation and land use chapters also contain recommendations related to ensuring the City's transportation system works for residents of all ages and abilities.

### Recommendations

Pedestrian and bicycle projects are included within the Priority Implementation Plan:

- Require sidewalks in all new subdivisions
- US 33 shared use path
- Trail connection from the Monroe Street Trail to Fidler Pond Park
- 9th Street trail from College Avenue to Purl Street
- Blackport Drive trail from Monroe Street to Lincoln Avenue
- Downtown and Maple City Greenway network wayfinding signage
- Include pedestrian and bicycle improvements in new developments
- Connect existing and proposed bicycle paths
- Install bicycle racks in public places and businesses
- Implement a wayfinding system to improve connections to neighboring jurisdictions
- Evaluate grade-separated railroad crossings and ensure pedestrian safety at all existing crossings
- Work with railroad companies to coordinate projects and improve crossing safety

The plan's transportation section includes the recommendation, "Provide safe and attractive sidewalks" (40, T-3). These recommendations include:

- Continue the city's sidewalk inventory
- Encourage participation in the sidewalk maintenance program
- Work with neighborhood associations to identify critical areas for new sidewalks and repair existing sidewalks
- Meet ADA requirements at intersections
- Include sidewalks when constructing or modifying roadways



- Amend the Subdivision Ordinance to require sidewalks in new subdivisions
- Install countdown stoplights, bulbouts, landscaping, delineated crossings, and traffic calming measures

Non-infrastructure recommendations:

- Citywide Complete Streets policy
- Reapply for continued recognition as a Bicycle-Friendly Community through the League of American Bicyclists
- Continue working with the Goshen School Corporation on Safe Routes to School (SRTS) and other programming
- Regularly update the City’s bicycle transportation plan
- Provide route maps online and in print
- Continue educating children about safety at railroad crossings

## Existing Policies

This section provides an overview of general policy categories that are commonly found in communities’ codes of ordinances. The section then discusses existing policies in Elkhart and Goshen.

### Policy Overview: Definitions

Policy definitions set the tone for their respective sections. For instance, motor vehicle-oriented definitions leave the rights and responsibilities of people traveling on foot and by bicycle undefined or poorly defined. The traditional definition of “traffic” includes motor vehicles only. All modes of travel should be considered “traffic”, as reflected in terminology and policy language.

#### Existing Policy: City of Elkhart

The Code of Ordinances defines “bicycle” as, “any foot-propelled vehicle, irrespective of the number of wheels in contact with the ground. (B) Operators of bicycles, when on a public highway or street, shall conform to the rules established for the operation of motor vehicles, including the directions and the instructions of official traffic-control signals and devices applicable to vehicles, unless otherwise directed by a police officer.”

### Policy Overview: Street Elements and Configuration

Pedestrian travel is accommodated and enhanced by walkways, traffic signals, crosswalks, and curb ramps. Requiring or offering incentives to build nonmotorized facilities in new or redevelopments can aid in creating continuous walking and bicycling networks. Building and site design standards also impact bicycling and walking circulation.

#### Existing Policy: City of Elkhart

Sidewalks, including a five-foot planted buffer, and pedestrian connections are required in new construction (§ 151.231 Off-street Parking and Loading). During reconstruction projects, “public sidewalk shall be installed if at least 40% of the properties on both sides of the street in the same block have public sidewalks.” (§ 151.231 Off-street Parking and Loading).

Bicycle facilities are encouraged in a Development Plan Overlay District’s Development Plan (§151.160 Purpose). Car parking may be substituted for bicycle parking, according to the parking lot’s size, “In off-street parking areas with greater than 25 automobile parking spaces, bicycle parking spaces may be substituted for automobile parking spaces at the rate of 10 bicycle spaces per 1 off-street parking space, up to 4% of the total number of required automobile parking spaces with a maximum of 10 automobile spaces replaced with bicycle parking” (§ 151.231 Off-street Parking and Loading).

### Policy Overview: Pedestrian and Bicycle Rights and Responsibilities

Codes of Ordinances describe the rights and responsibilities of people traveling in motor vehicles, on foot, and on bicycles. Walk- and bicycle-friendly communities have ordinances that protect vulnerable users.

#### Existing Policy: City of Elkhart: Walking

The Code of Ordinances outlines drivers’ responsibility to use due care near pedestrians as well as pedestrians’ obedience to traffic control signs. The latter reads, “Every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian upon any roadway” (§ 72.08 Drivers to Exercise Due Care).

Pedestrians must use sidewalks when available (§ 72.07 Pedestrians Walking Along Roadways). Drivers must yield to people crossing in a crosswalk, but pedestrians should not dart from the curb (§ 72.02 Pedestrians' Right-of-Way in Crosswalk). The ordinance also specifies that drivers behind a vehicle stopped to yield at a marked or unmarked crosswalk shall not overtake the stopped vehicle. Pedestrians must yield when, "crossing a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk at an intersection shall yield the right-of-way to all vehicles upon the roadway" (§72.05 When Pedestrians Shall Yield). This ordinance also specifies that pedestrians within unmarked crosswalks (i.e., a route at right angles to the curb, per § 72.04 Crossing at Right Angles) shall be given the right-of-way. However, crossing outside of a crosswalk is prohibited when between adjacent intersections with traffic signals (§ 72.06 Prohibited Crossing).

#### **Existing Policy: City of Elkhart: Bicycling**

Unless otherwise stated, people bicycling, "shall conform to the rules established for the operation of motor vehicles" (§ 73.01 Operators to Conform to Motor Vehicle Rules). Bicycle bells are required (§ 73.08 Bell or Warning Device). A white front light and a rear red reflector must be used when riding in the dark (§ 73.07 Lights and Reflector).

The City's safe passing distance ordinance is intended to prevent side swipe collisions, "the Police Department shall enforce a required minimum passing distance of three feet between their vehicle and a bicyclist. The motorist must wait to pass in situations where they cannot safely pass with three feet of passing distance." (§ 73.06 Required Passing Distance).

The Code of Ordinances contains an ordinance that discusses lane placement and the number of bicyclists who may ride abreast. The ordinance states, "Bicycles shall be operated as close to the right-hand edge of the highway or street as is possible" (§ 73.03 Operation of Bicycles). No specific guidance is given regarding cases of debris or narrow lanes (where bicyclists may choose to ride closer to the centerline to deter cars from passing too closely). However, the language, "as is possible", leaves these situations up for debate. Bicyclists may ride up to two abreast. They must ride in single file when "passing other vehicles, parked or moving, or any other considerable object in the highway." Sidewalk riding is allowed except where signed and in a specific zone within the downtown area (§ 73.05 Riding of Bicycles and Skateboards Prohibited on Certain Streets).

According to the Code of Ordinance, bicycle licenses are required for riding a bicycle in Elkhart, unless the rider lives outside of the city limits (§ 73.13 Licensing Required; Exceptions; Licensing Rules). Bicycle license plates must be attached to the bicycle. Permanent bicycle titles and licenses are available at locations designated by the City Controller and forms are provided by the Police Department. The resident must bring the bicycle to these locations and pay a \$0.50 licensing fee. The Police Department shall keep one copy of this registration receipt. The ordinance states that no person should remove the license plate unless the bicycle is disassembled or not to be ridden in Elkhart. Every person buying or selling new or used bicycles shall report to the Police Department within seven days of the sale. They should give the name and address of the people involved in the transaction, a description of the bicycle, the frame number, and the number of any existing license plate.

## Community Assessments

The Walk Friendly Community (WFC) program is a national initiative, led by the Pedestrian and Bicycle Information Center (PBIC), intended to encourage communities to improve their local walking environments (walkfriendly.org). Similarly, the Bicycle Friendly Community (BFC) program, led by the League of American Bicyclists is intended to help communities make bicycling a viable transportation and recreational option for leisure or to meet daily needs of users, regardless of age (bikeleague.org).

Both programs address the Five Es: engineering, education, evaluation, enforcement, and encouragement. The engineering category refers to infrastructure-related elements (e.g., bike lanes, sidewalks, ADA accommodations, etc.), while the other four Es refer to non-infrastructure efforts (such as safety campaigns, planning efforts, etc.).

### Walk Friendly Community Assessment

The WFC Assessment Tool, available for free online helps communities audit their level of walk friendliness

([http://www.walkfriendly.org/WFC\\_Assessment\\_Tool\\_Sept2012.pdf](http://www.walkfriendly.org/WFC_Assessment_Tool_Sept2012.pdf)).

The Walk Friendly Community Assessment helps a city identify how pedestrian friendly they are in a variety of categories. As part of analyzing existing conditions, abridged forms of this assessment were completed for the City of Elkhart and the City of Goshen and can be found in Appendix A. Both cities scored six out of seventeen possible points. Table 2 shows a summary of the WFC assessment.

**Table 2. Walk Friendly Community Assessment**

Category	Total Possible Points	Elkhart	Goshen
Community Profile	2	0	0
Planning and Evaluation	6	2	2
Education and Encouragement	4	1	3
Engineering	3	3	1
Enforcement and Evaluation	2	0	0
<b>Total</b>	<b>17</b>	<b>6</b>	<b>6</b>

### Bicycle Friendly Community Scorecard

The League of American Bicyclists (LAB) produces a Community Scorecard and corresponding Bicycle Friendly America (BFA) Booklet. Both resources are freely available through the LAB's website (<http://www.bikeleague.org/bfa/toolkit>). The scorecard lets communities where they stand in terms of bicycle friendliness and whether communities have characteristics that would lead to a BFC designation. Scorecards were completed for Elkhart and Goshen. Both can be found in the Appendix. While the scorecard can guide the application process; each city must submit a more detailed application when applying for BFC recognition. Table 3 shows a summary of the BFC assessment.

**Table 3. Bicycle Friendly Community Assessment**

Category	Total Possible Points	Elkhart	Goshen
Engineering	3	1	1
Education	3	1	2
Encouragement	4	4	3
Enforcement	3	1	1
Evaluation and Planning	4	1	2
<b>Total</b>	<b>17</b>	<b>8</b>	<b>9</b>

# Opportunities

## Walking and Bicycling

### Both Cities

- Use existing infrastructure as a “spine” for proposed infrastructure.
- Previous plans address recommendations pertaining to walking and bicycling.
- The MACOG Active Transportation Plan found that high demand areas are most prevalent in the cities’ respective centers.
- Active transportation blogs and advocacy organizations exist for both cities.

### Elkhart

- Interurban Trolley routes reach much of Elkhart.

### Goshen

- The signage and branding of the Maple City Greenway is comprehensive across existing segments. The pedestrian path’s width appears to be 5-foot wide, with a 2-foot stamped buffer. The path’s width is below standards for a path shared between people walking and people bicycling. Although opportunities exist to use the Greenway’s signage in other parts of Goshen, Federal Highway Administration (FHWA) design guidance specifies that sidepaths be 8 to 12 feet wide.

## Walking

### Both Cities

- Most sidewalks appear to feature warning strips and curb ramps. Both cities have authored ADA Transition Plans. Downtown and historic areas are comfortable places to walk.

### Elkhart

- Main Street features curb bumpouts. There are opportunities to install similar treatments elsewhere.
- The Riverwalk provides a comfortable place to walk.



Figure 5. A bumpout in Elkhart (photo credit: Idris Busari, Youtube). Note: stamped asphalt crosswalks are uncomfortable for pedestrians using wheelchairs, using walkers, or pushing strollers.

### Goshen

- Some downtown streets feature curb bumpouts. There are opportunities to install more curb extensions and pedestrian refuges.



Figure 6. A decorative crosswalk and curb bumpout in Goshen.



## Bicycling

### Both Cities

- The Mapleheart Trail connects both communities. The trail provides an alternative connection to US 33, which would otherwise be an unsafe roadway for bicycling.
- Wide streets with low levels of average annual daily traffic (AADT) are good candidates for adding bicycling infrastructure. There may be opportunities to add buffers to existing standard bike lanes.

### Elkhart

- The Quaker Trace is well signed. The bi-directional bike lane on Waterfall Drive is the city's first separated facility. This facility has flexible bollards for physical separation, but does not use a painted buffer to give distance between people driving and people bicycling. Facilities and design guidelines recommended in this plan will reflect national guidelines for recommended buffer widths.



Figure 7. The Quaker Trace has directional wayfinding signs throughout Elkhart.

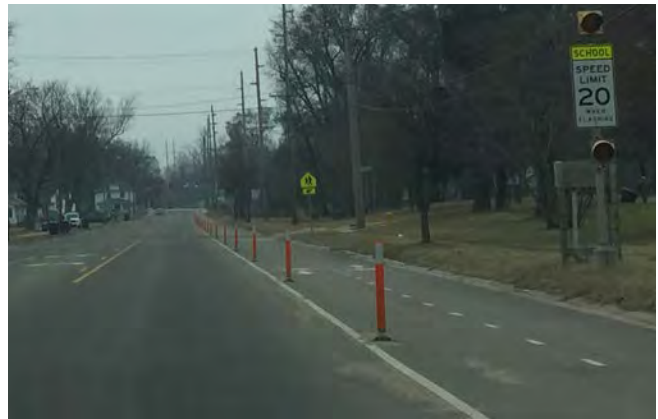


Figure 9. Waterfall Drive in Elkhart has separated bike lane. Note: The bike lane currently lacks a painted buffer between bikes and motorized traffic..

### Goshen

- Goshen is a League of American Bicyclists Bronze Level Bicycle Friendly Community.
- Goshen College received an Honorable Mention from the Bicycle Friendly University (BFU) program.

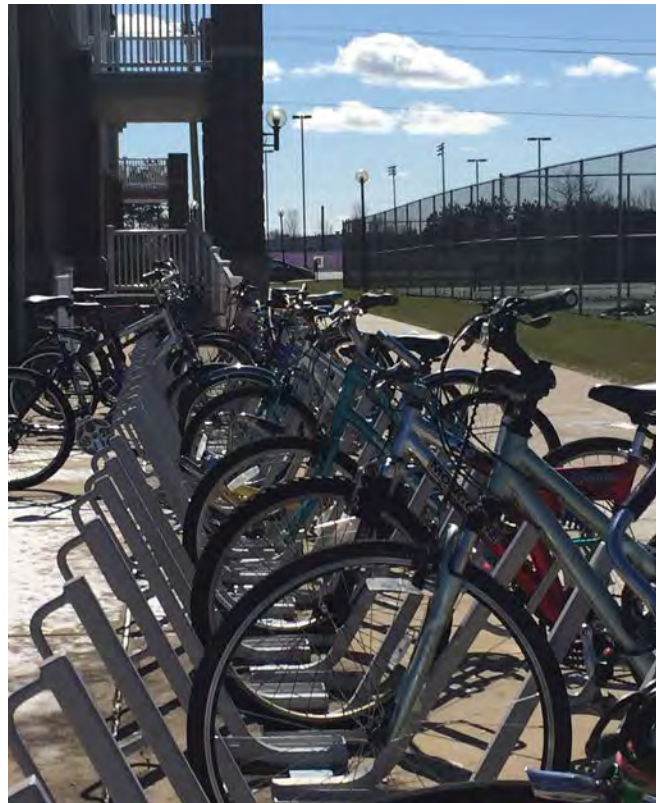


Figure 8. Ample bike parking is available at Goshen College.



# Constraints

## Walking and Bicycling

### Both Cities

- Most reported crashes occur in the cities' central business areas. Note: crashes may illustrate where people tend to walk and ride more often. Crash result findings are better understood in the presence of citywide user counts.
- Most reported crashes occur on arterial or collector roadways.
- Several transit routes are not connected by existing or previously proposed walking and bicycling corridor improvements.



Figure 10. Collector or arterial roadways that cross local streets in Goshen often increase the overall stress level of the smaller residential street.

### Elkhart

- County roadways outside of the cities' central areas frequently lack sidewalks, high visibility crosswalks, and bicycle facilities. Some Goshen roadways exist with similar features.
- Residents have reported speeding concerns in some residential neighborhoods.

### Goshen

- Main Street/US 33 divides both communities, particularly Goshen.
- The Interurban Trolley travels through the length of the city. However, first and last mile connections may be difficult from some residents' homes, due to lack of sidewalks or distance to the trolley route.

## Walking

### Both Cities

- Some bus stops lack pedestrian accommodation and/or bus shelters.
- Some crossings near land uses that encourage walking currently use standard style crosswalks, instead of higher visibility styles that would alert motorists to the presence of pedestrians. Crosswalks with two transverse lines are appropriate at signalized intersections.
- Some curb ramp transitions to the street are narrow and occur at sharp angles, which may be unsafe or uncomfortable for pedestrians with limited mobility or who use assistive mobility devices.

### Elkhart

- Although there is a shared use path proposed on Middlebury Street, there are no current pedestrian facilities in the eastern segment of the city between the river and US 20.



Figure 11. Some roadways in low-density areas in Elkhart lack sidewalks and marked crossings.

## Goshen

- Some slight elevation changes in Goshen mean that people walking must sometimes traverse short sets of stairs to reach the sidewalk
- The Maple City Greenway system uses 5-foot wide paths with a decorative stamped asphalt buffer next to the sidewalk. This provides a constrained cross section when people walking or bicycling pass each other. The system's existing width does not conform to national standards.

## Bicycling

### Both Cities

- Some neighborhood streets use cobblestones. This may lead to bicyclists choosing to use parallel streets.
- Most streets in the downtown area share space between people bicycling and people driving. They do not have visually or physically separated bicycle infrastructure.
- Existing bike lanes end abruptly.

### Elkhart

- Bicycles are not allowed on all parts of the western side of the River Walk.



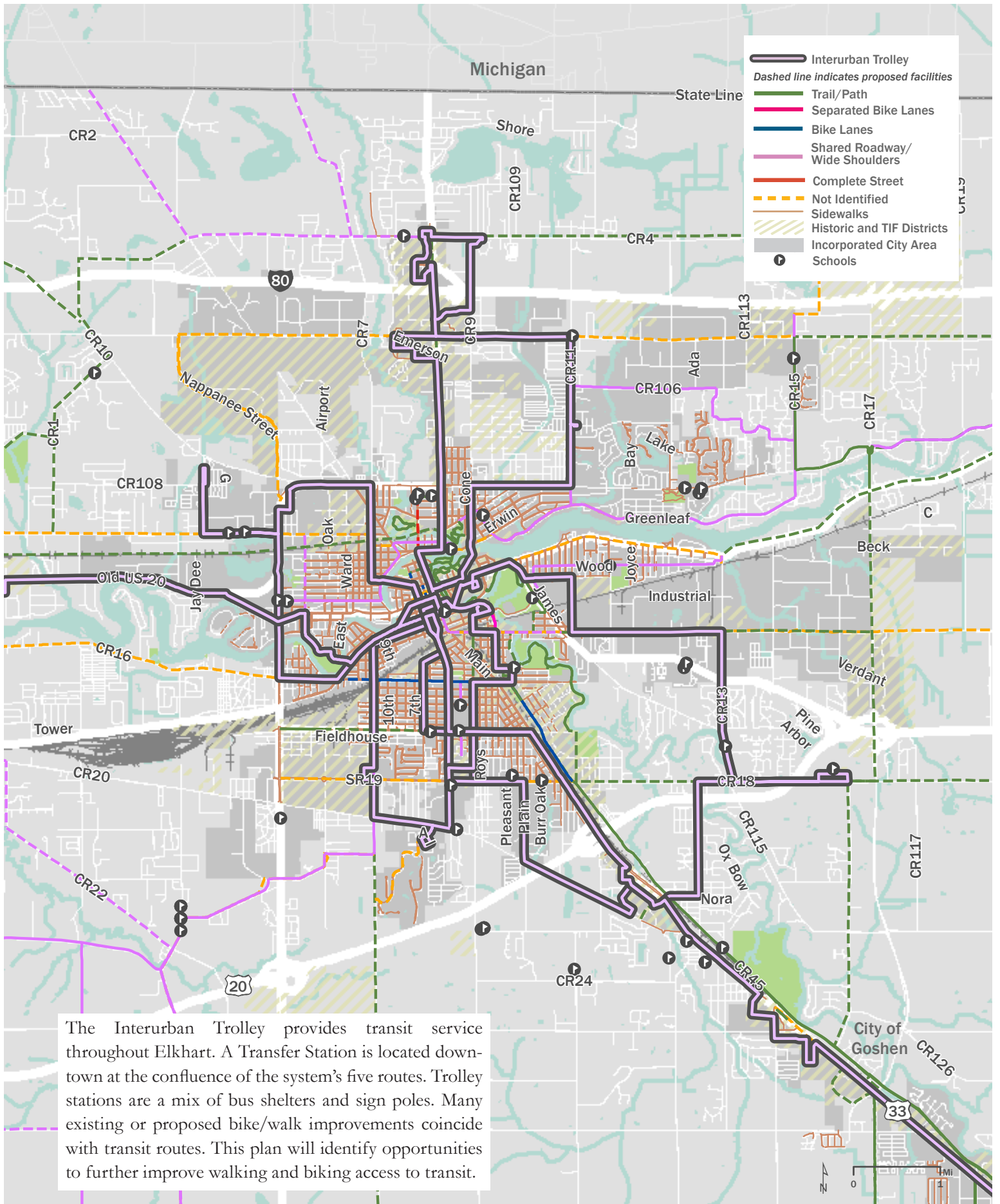
Figure 12. Existing bike lanes terminate unexpectedly in Elkhart. The bicycle lane in this photo terminated just west of this location.

## Goshen

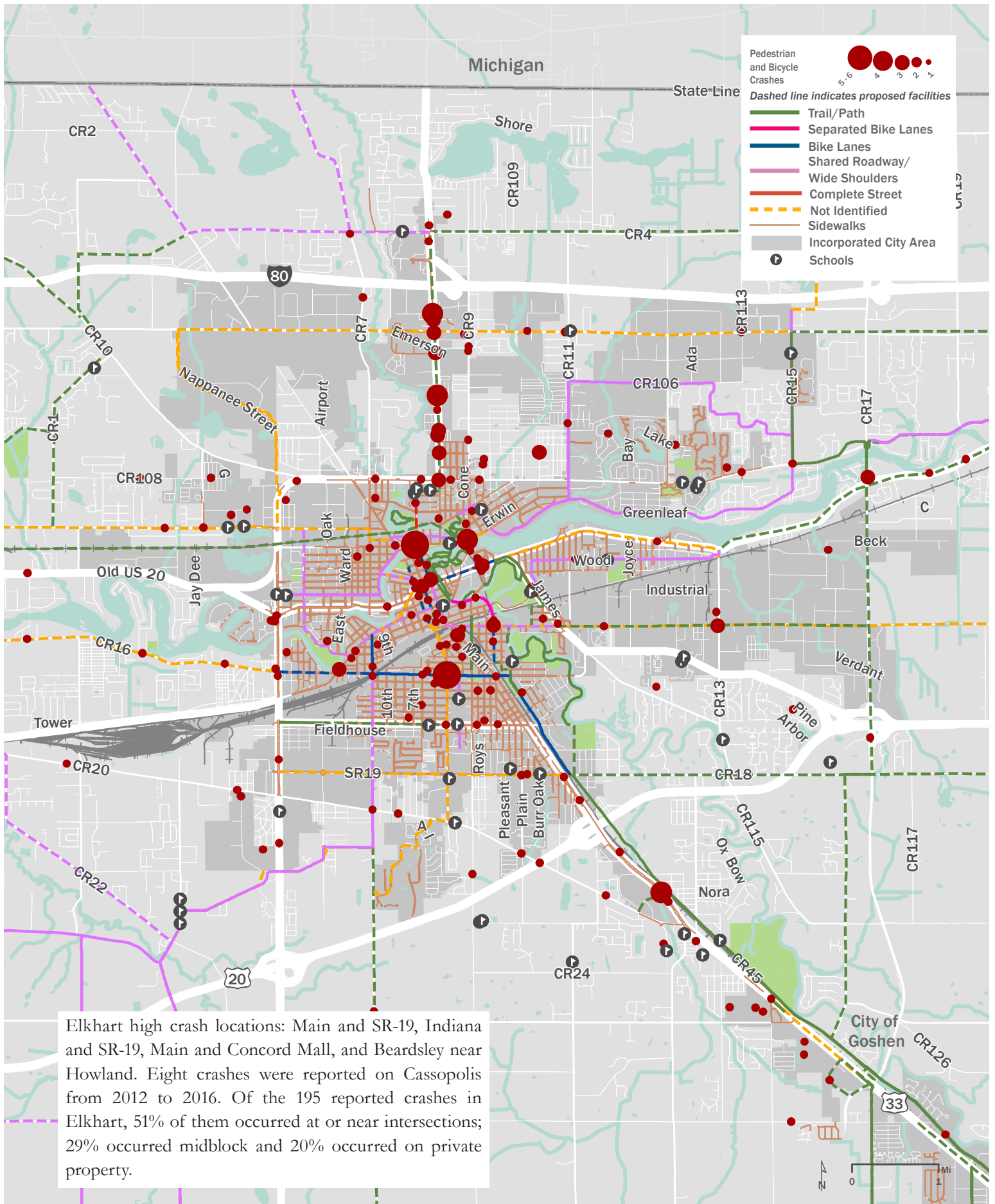
- Joints in concrete shared use paths may bother people bicycling. Bicycle wheels that frequently encounter the grooves create a bumpy ride.
- Bicycle lanes would benefit from more frequent bike lane symbols to further alert motorists to the presence of bicycles. The Manual on Uniform Traffic Control Devices (MUTCD) guidance states these markings, “should be placed at the beginning of a bicycle lane and at periodic intervals along the bicycle lane based on engineering judgement” (9C.04).



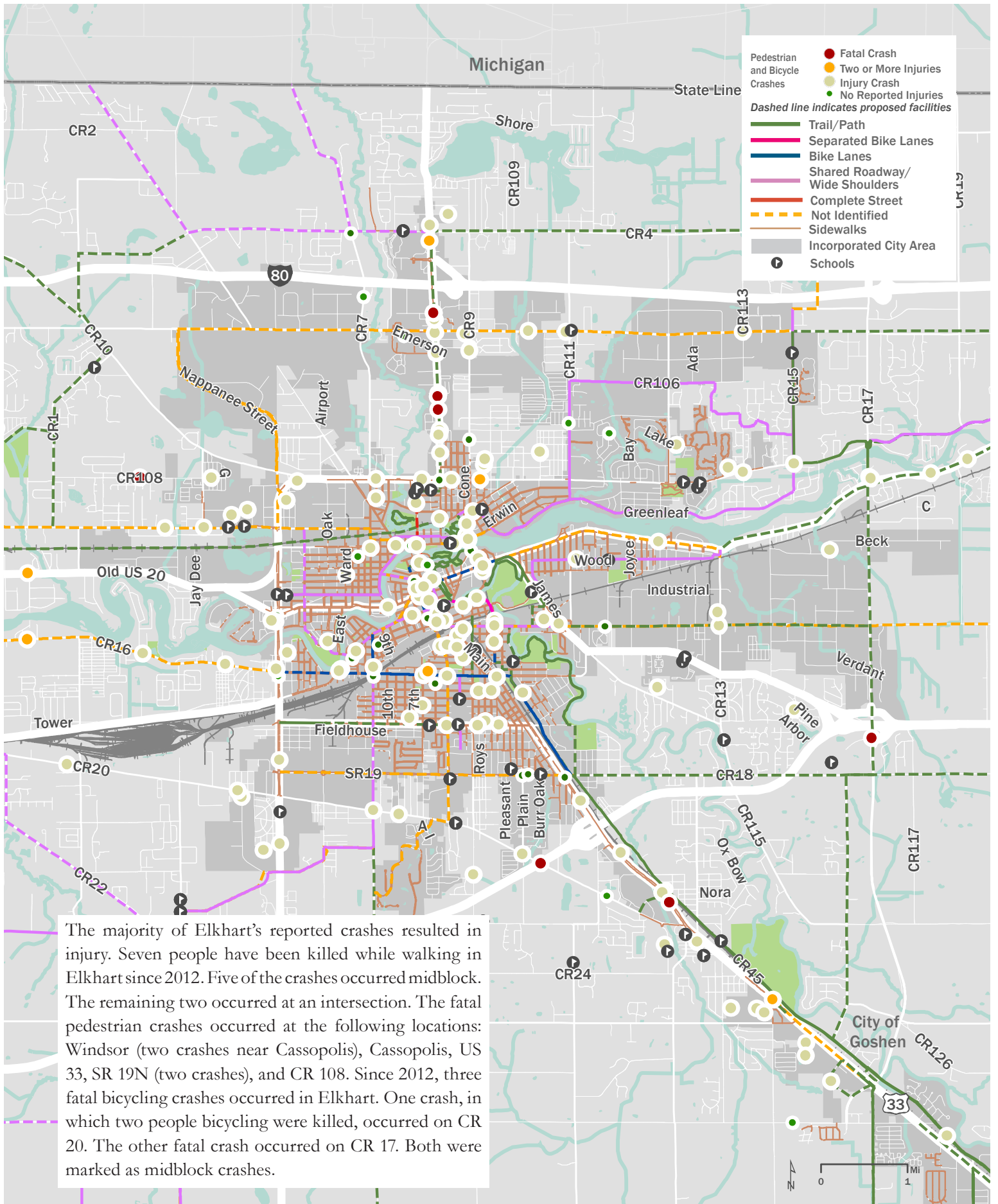
Figure 13. Bike lanes in Goshen would benefit from more frequent bike lane symbols.



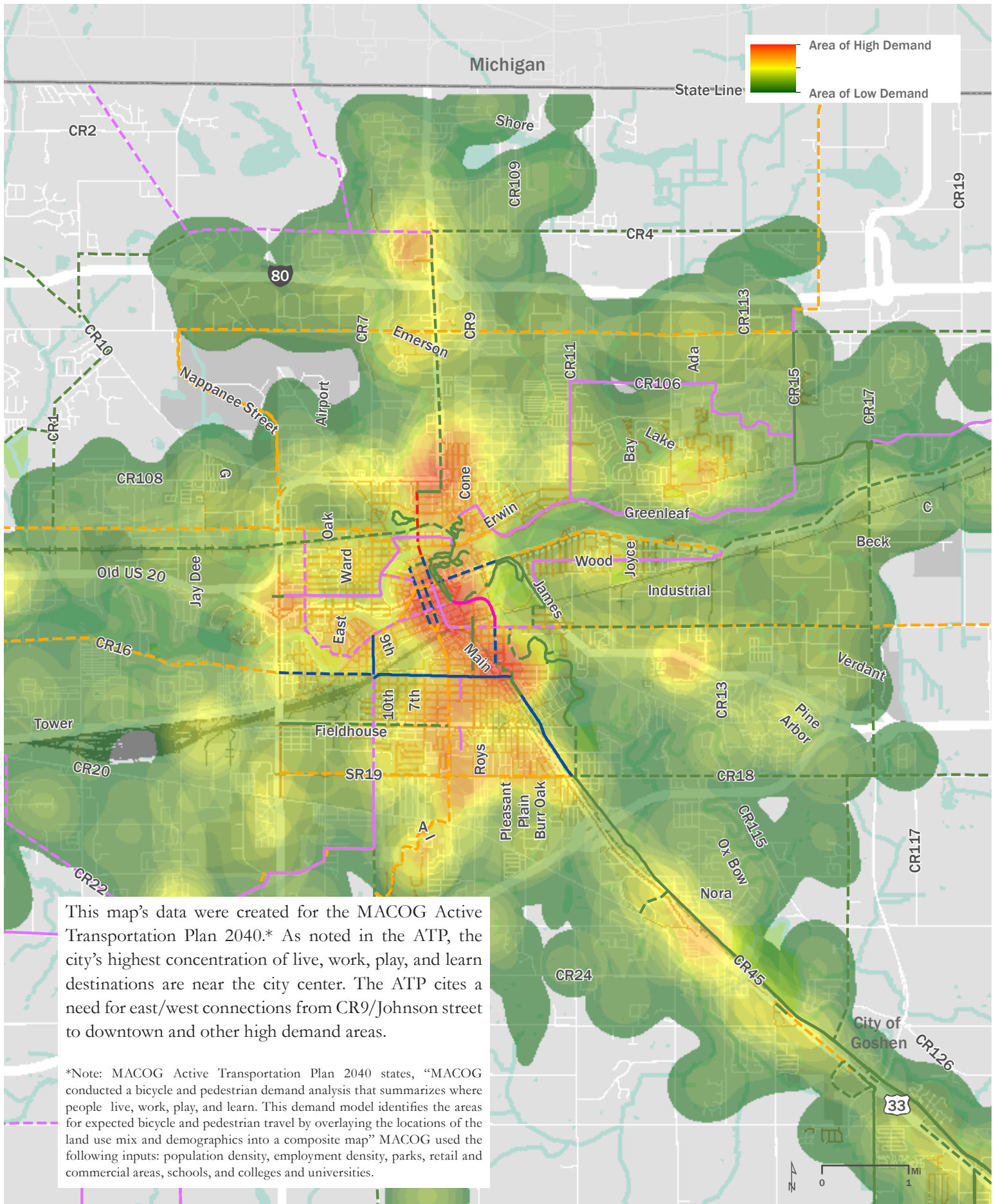




# Elkhart Crash Summary

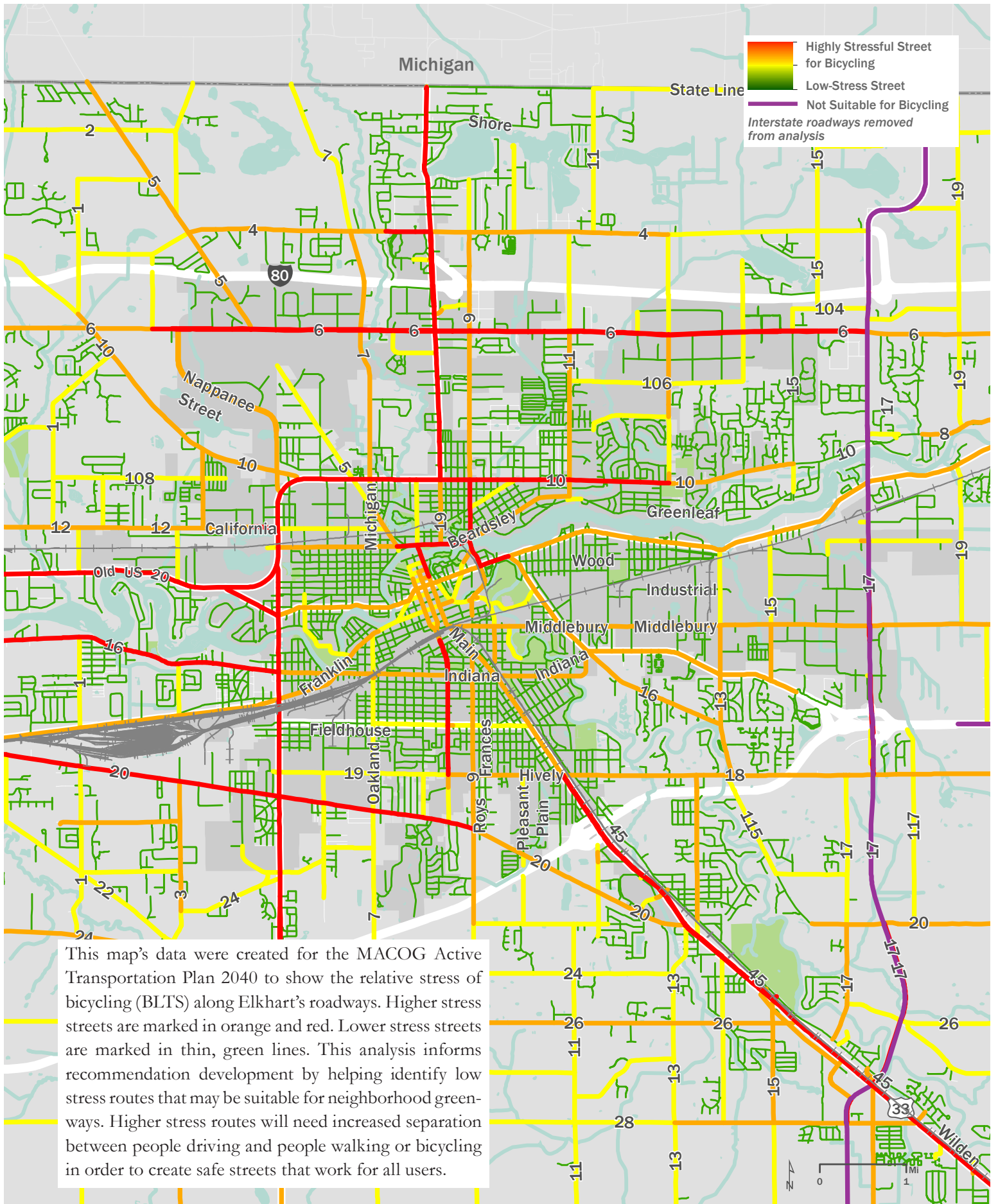




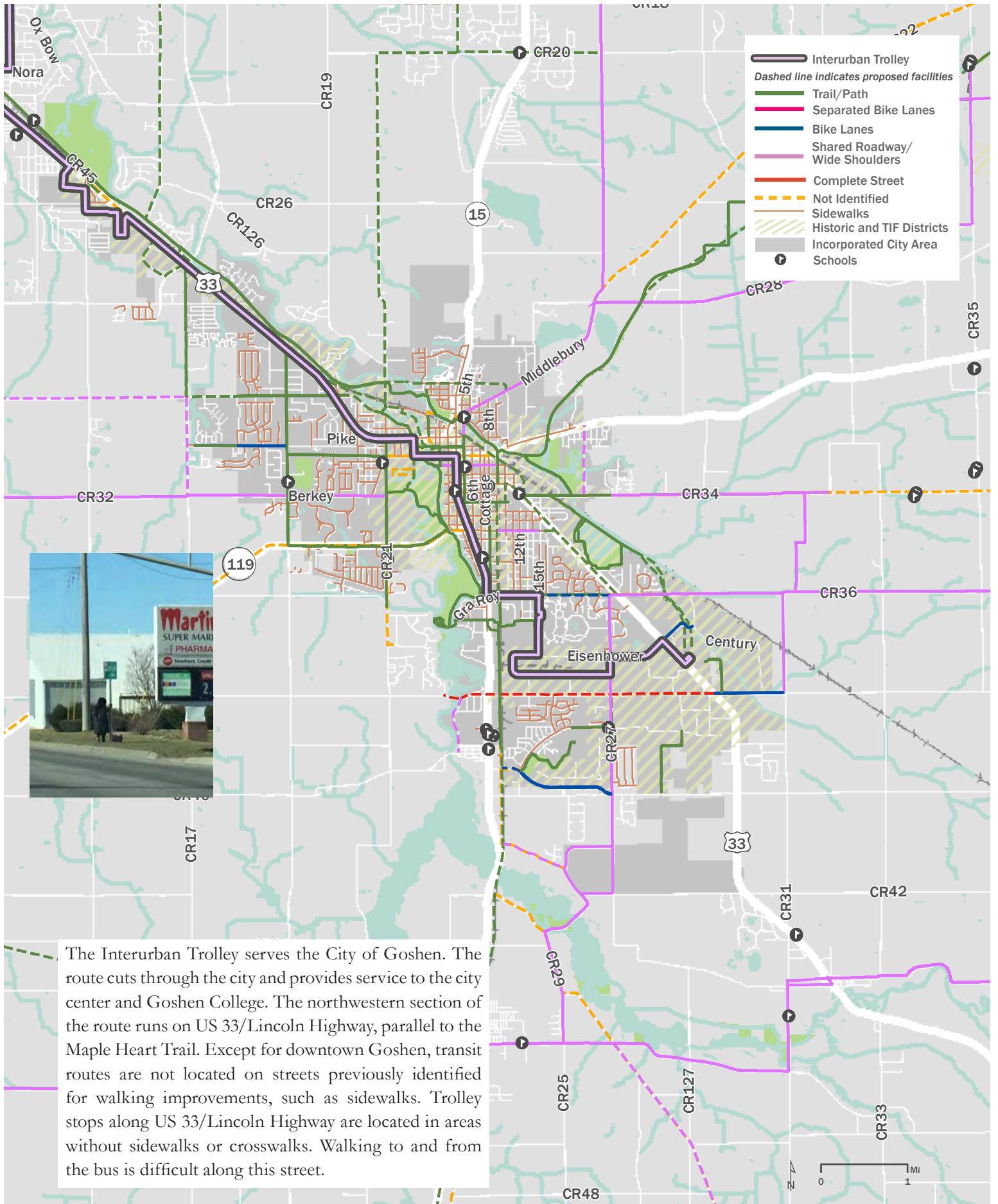


This map's data were created for the MACOG Active Transportation Plan 2040.\* As noted in the ATP, the city's highest concentration of live, work, play, and learn destinations are near the city center. The ATP cites a need for east/west connections from CR9/Johnson street to downtown and other high demand areas.

\*Note: MACOG Active Transportation Plan 2040 states, "MACOG conducted a bicycle and pedestrian demand analysis that summarizes where people live, work, play, and learn. This demand model identifies the areas for expected bicycle and pedestrian travel by overlaying the locations of the land use mix and demographics into a composite map" MACOG used the following inputs: population density, employment density, parks, retail and commercial areas, schools, and colleges and universities.

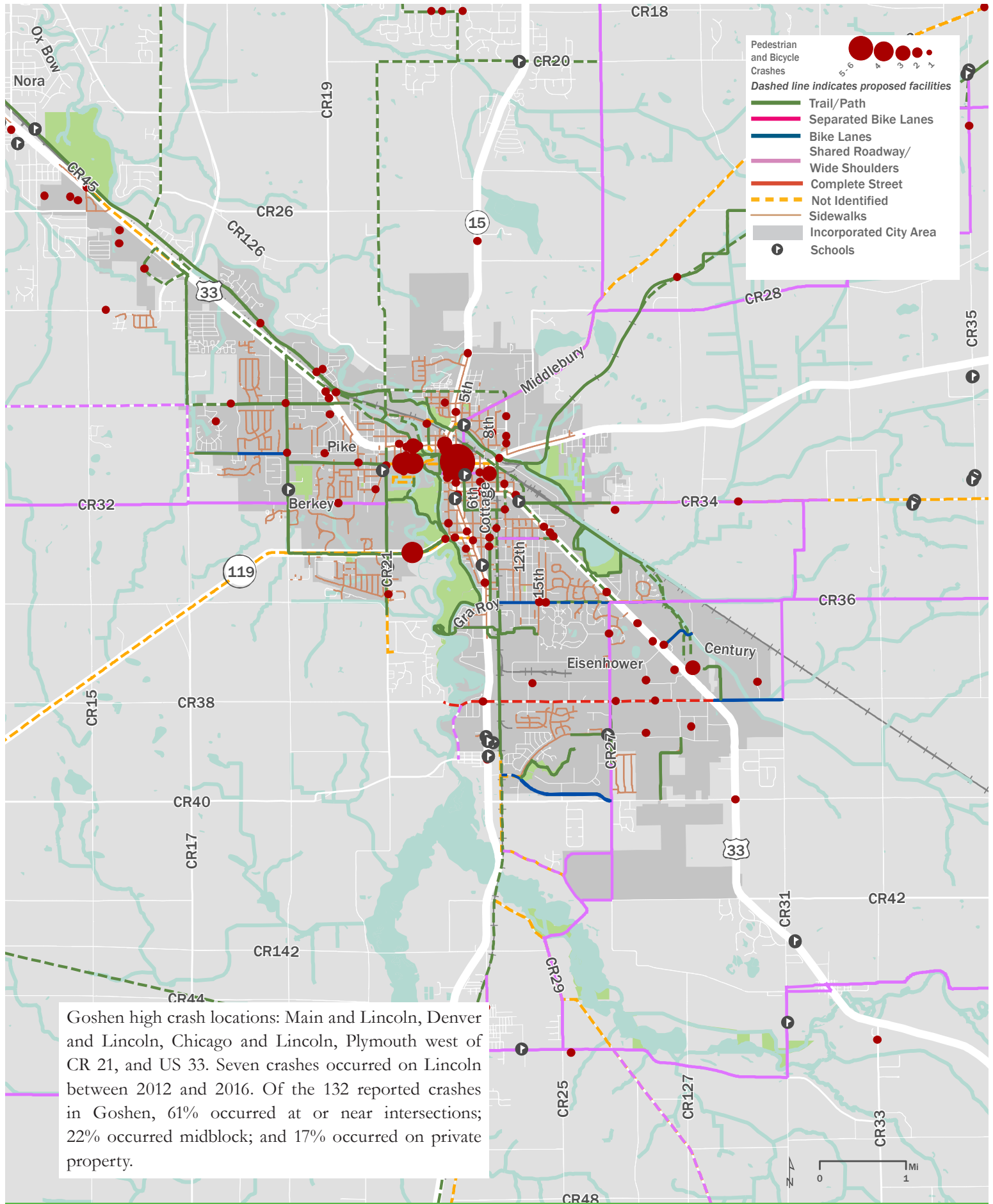


This map's data were created for the MACOG Active Transportation Plan 2040 to show the relative stress of bicycling (BLTS) along Elkhart's roadways. Higher stress streets are marked in orange and red. Lower stress streets are marked in thin, green lines. This analysis informs recommendation development by helping identify low stress routes that may be suitable for neighborhood greenways. Higher stress routes will need increased separation between people driving and people walking or bicycling in order to create safe streets that work for all users.



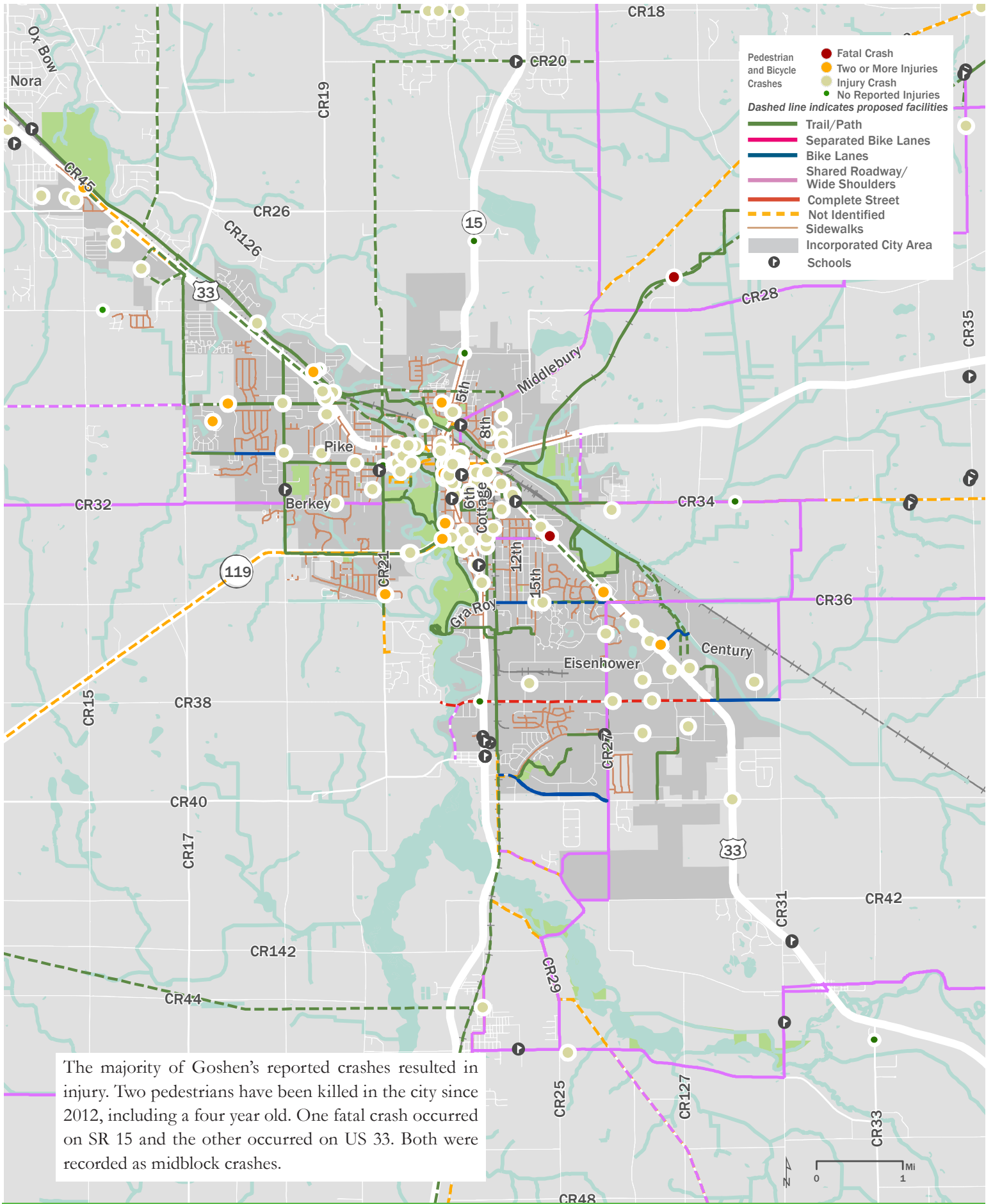
The Interurban Trolley serves the City of Goshen. The route cuts through the city and provides service to the city center and Goshen College. The northwestern section of the route runs on US 33/Lincoln Highway, parallel to the Maple Heart Trail. Except for downtown Goshen, transit routes are not located on streets previously identified for walking improvements, such as sidewalks. Trolley stops along US 33/Lincoln Highway are located in areas without sidewalks or crosswalks. Walking to and from the bus is difficult along this street.





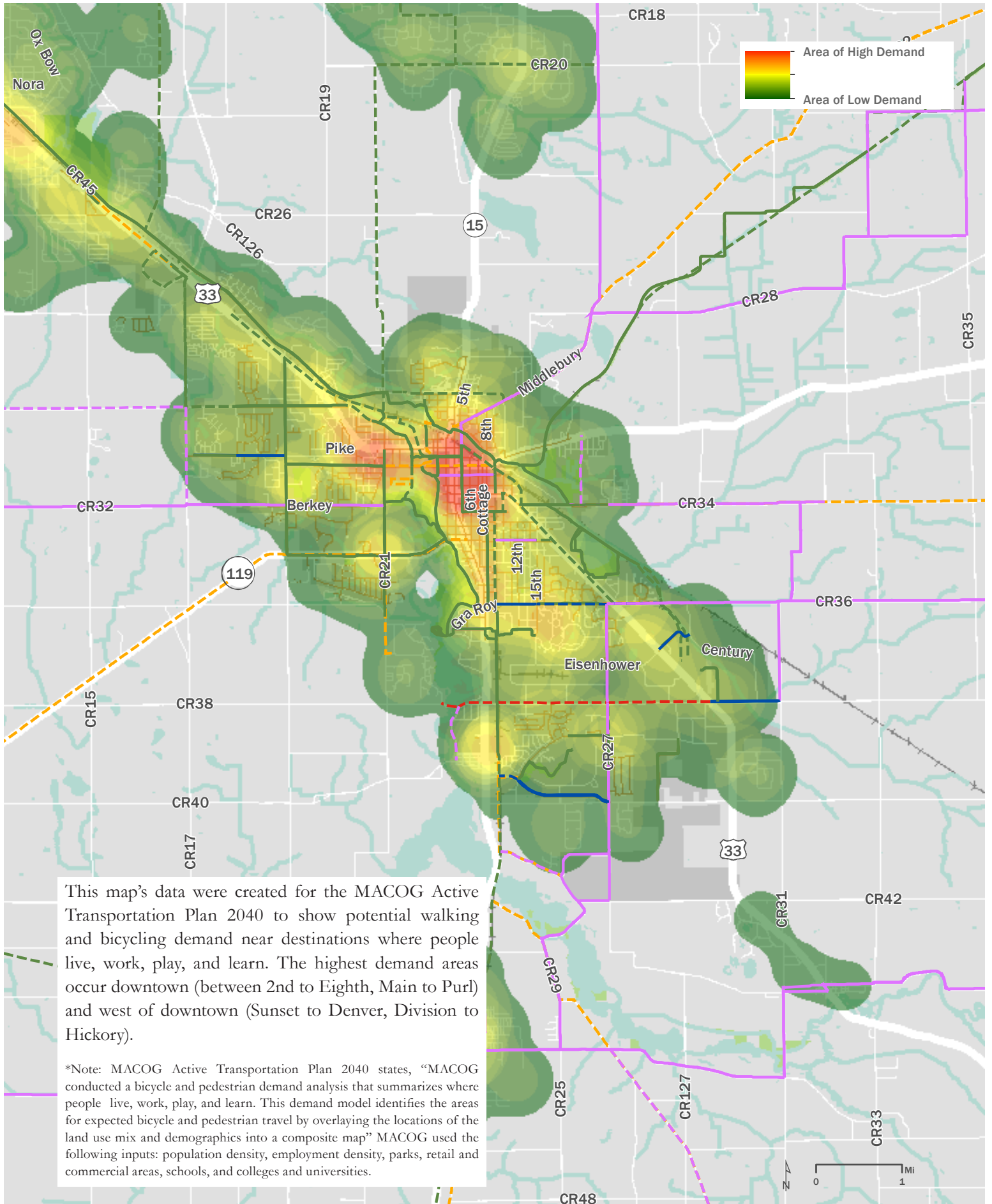
Goshen high crash locations: Main and Lincoln, Denver and Lincoln, Chicago and Lincoln, Plymouth west of CR 21, and US 33. Seven crashes occurred on Lincoln between 2012 and 2016. Of the 132 reported crashes in Goshen, 61% occurred at or near intersections; 22% occurred midblock; and 17% occurred on private property.





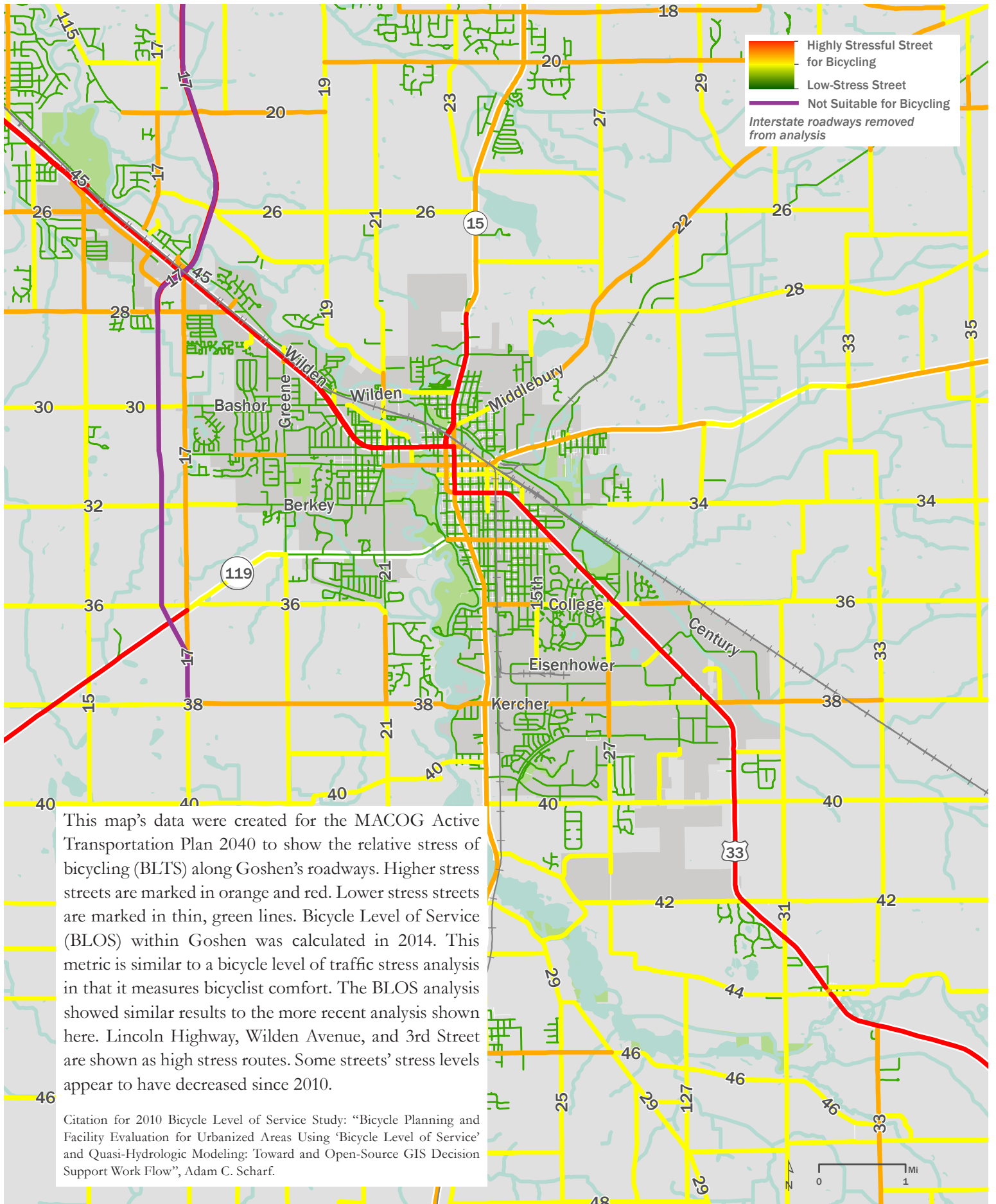
The majority of Goshen's reported crashes resulted in injury. Two pedestrians have been killed in the city since 2012, including a four year old. One fatal crash occurred on SR 15 and the other occurred on US 33. Both were recorded as midblock crashes.

## Goshen Crash Summary: Crashes by Severity



This map's data were created for the MACOG Active Transportation Plan 2040 to show potential walking and bicycling demand near destinations where people live, work, play, and learn. The highest demand areas occur downtown (between 2nd to Eighth, Main to Purl) and west of downtown (Sunset to Denver, Division to Hickory).

\*Note: MACOG Active Transportation Plan 2040 states, "MACOG conducted a bicycle and pedestrian demand analysis that summarizes where people live, work, play, and learn. This demand model identifies the areas for expected bicycle and pedestrian travel by overlaying the locations of the land use mix and demographics into a composite map" MACOG used the following inputs: population density, employment density, parks, retail and commercial areas, schools, and colleges and universities.



This map's data were created for the MACOG Active Transportation Plan 2040 to show the relative stress of bicycling (BLTS) along Goshen's roadways. Higher stress streets are marked in orange and red. Lower stress streets are marked in thin, green lines. Bicycle Level of Service (BLOS) within Goshen was calculated in 2014. This metric is similar to a bicycle level of traffic stress analysis in that it measures bicyclist comfort. The BLOS analysis showed similar results to the more recent analysis shown here. Lincoln Highway, Wilden Avenue, and 3rd Street are shown as high stress routes. Some streets' stress levels appear to have decreased since 2010.

Citation for 2010 Bicycle Level of Service Study: "Bicycle Planning and Facility Evaluation for Urbanized Areas Using 'Bicycle Level of Service' and Quasi-Hydrologic Modeling: Toward and Open-Source GIS Decision Support Work Flow", Adam C. Scharf.

## Elkhart County Trail Counts

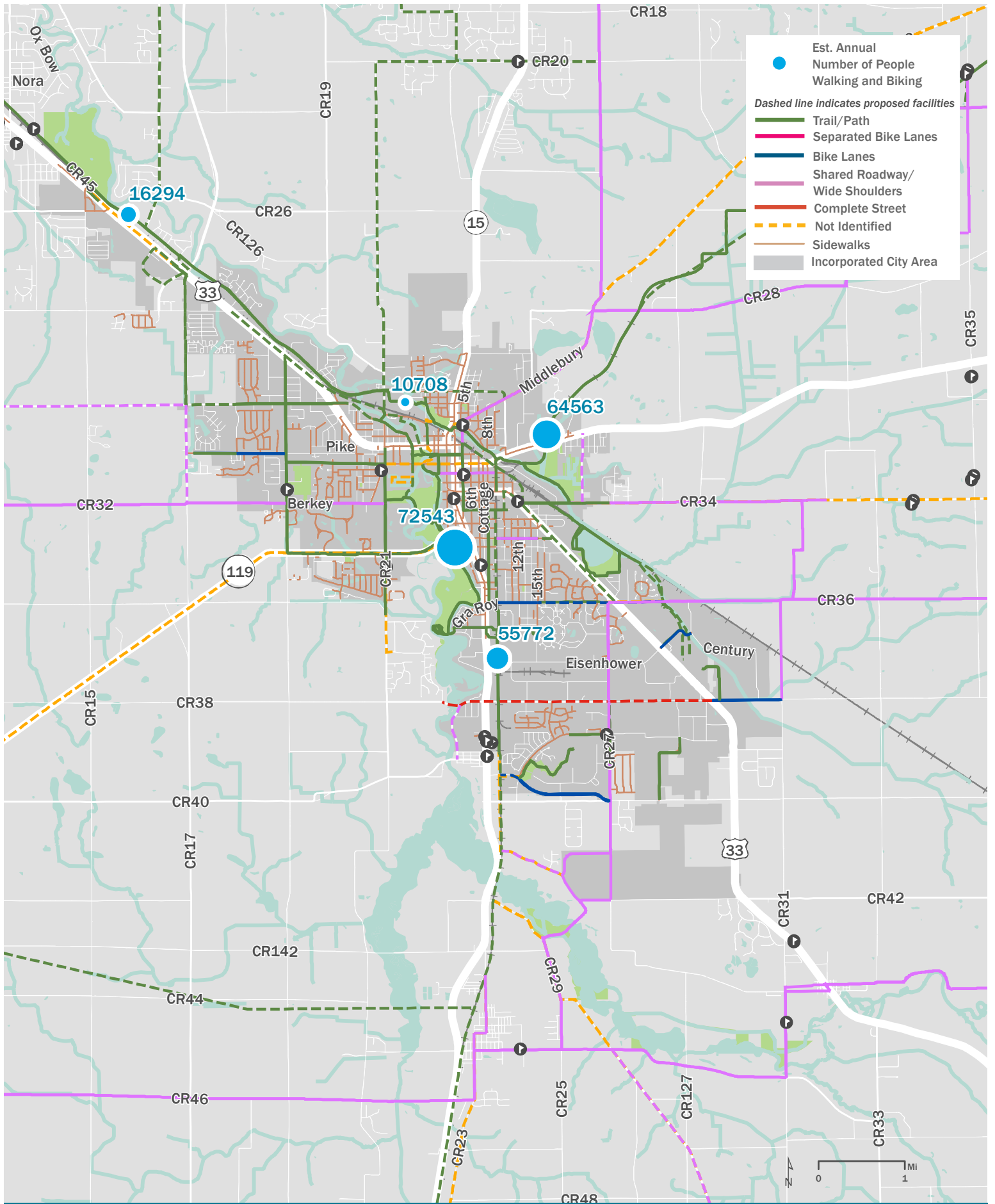
Table 4 summarizes findings from the Elkhart County 2013 Trail Traffic Study. The accompanying map displays the data spatially. Automated infrared counters counted each person who passed in front of the sensor. People walking, jogging, and bicycling were included in the study. This type of counter does not differentiate between people walking or bicycling. The infrared counting devices were left in the field for 90 days, between July 30 and October 28, 2013. The Rails-to-Trails Conservancy (RTC) estimated annual trail traffic volumes for each segment.

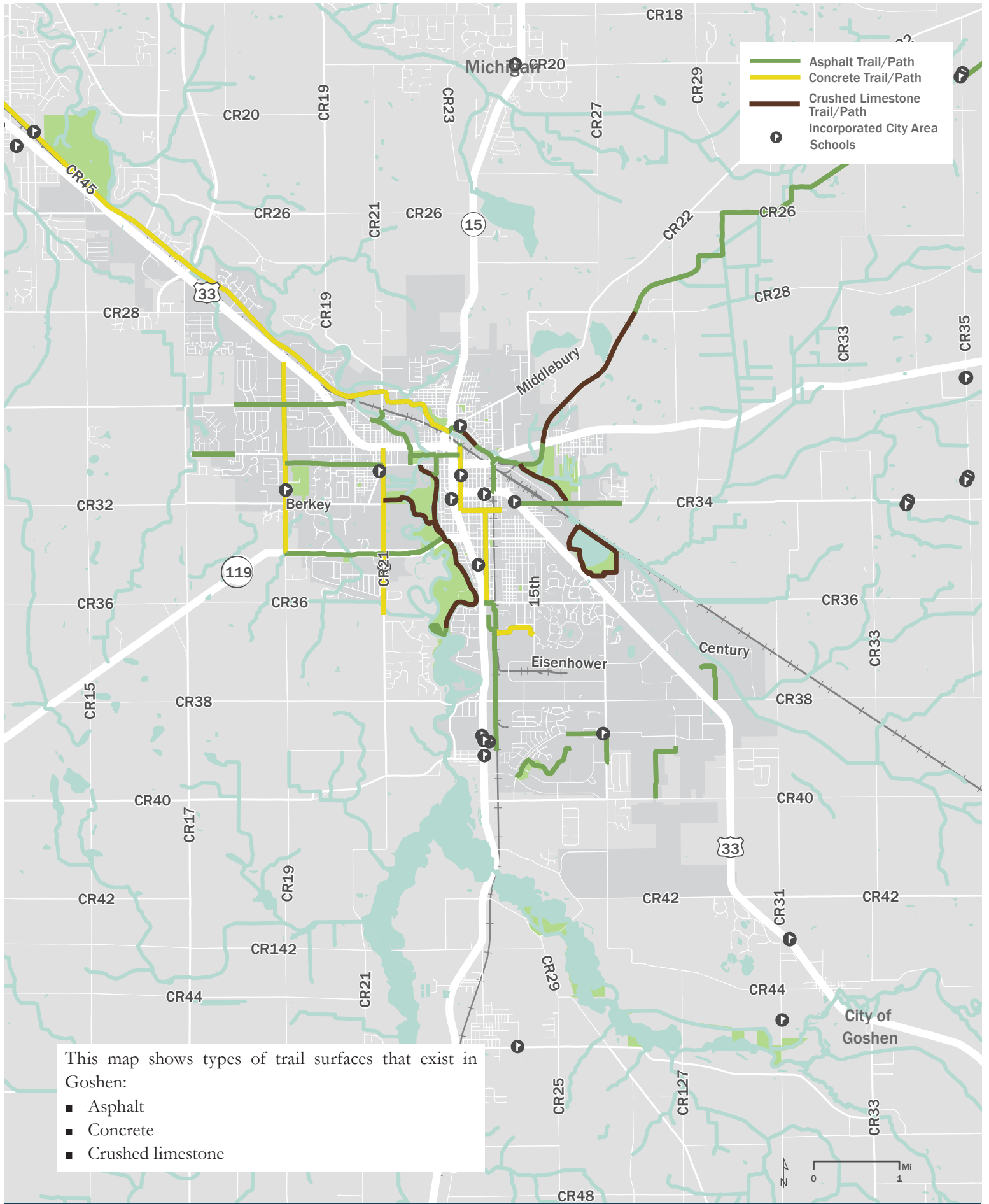
The most users were counted on Mill Race Trail in Goshen. The study specifically counted users on off-street trails. No facilities in the City of Elkhart were included in the study, with the exception of the Mapleheart trail, which is situated between Elkhart and Goshen.

**Table 4. Trail Count Summary**

Trail	Combined Bike/Ped Counts		Behavior Patterns	Notes
Mill Race	Estimated Annual Count:	72,543	<ul style="list-style-type: none"> <li>Counts were distributed fairly equally across the days of the week.</li> <li>Counts spiked during the evening hours.</li> </ul>	<ul style="list-style-type: none"> <li>The count location was just south of Shanklin Park.</li> <li>The trail passes some of Goshen's most densely populated neighborhoods.</li> </ul>
	Average Daily Count:	257		
	Total People Counted (July 30 - October 28, 2013):	23,388		
Abshire	Estimated Annual Count:	64,563	<ul style="list-style-type: none"> <li>Fridays and Saturdays had the highest percentage of overall counts.</li> </ul>	<ul style="list-style-type: none"> <li>The count location was just north of Abshire Park.</li> </ul>
	Average Daily Count:	220		
	Total People Counted (July 30 - October 28, 2013):	20,040		
Winona	Estimated Annual Count:	55,772	<ul style="list-style-type: none"> <li>Counts were fairly evenly distributed among the days of the week and daytime hours (7:00am – 7:00pm)</li> <li>Few spikes in counts, but Labor Day was an exception.</li> </ul>	<ul style="list-style-type: none"> <li>The trail connects Goshen College, Bethany Christian Schools, Waterford Elementary School, and Greencroft. The latter is the city's largest retirement community.</li> </ul>
	Average Daily Count:	189		
	Total People Counted (July 30 - October 28, 2013):	17,194		
MapleHeart Trail	Estimated Annual Count:	16,294	<ul style="list-style-type: none"> <li>High counts on weekday mornings and evenings suggest use by commuters.</li> </ul>	<ul style="list-style-type: none"> <li>The count location was just east of OxBow Park.</li> </ul>
	Average Daily Count:	56		
	Total People Counted (July 30 - October 28, 2013):	5,134		
Oakridge	Estimated Annual Count:	10,708	<ul style="list-style-type: none"> <li>Some of the highest numbers of users were counted on weekday afternoons between 1:00pm – 2:00pm.</li> <li>Slightly more trail users counted on weekend days than weekends.</li> </ul>	<ul style="list-style-type: none"> <li>The first day of school was one of the highest count days. The device counted 70 people by 7:00am – 10:00am.</li> </ul>
	Average Daily Count:	37		
	Total People Counted (July 30 - October 28, 2013):	3,332		







- Asphalt Trail/Path
- Concrete Trail/Path
- Crushed Limestone Trail/Path
- Incorporated City Area Schools

This map shows types of trail surfaces that exist in Goshen:

- Asphalt
- Concrete
- Crushed limestone

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## Section 3

# Public Engagement

**Members of the public provided input through in-person events, an interactive online survey, and an interactive online map. Residents were engaged at several points during the planning process. Comments collected throughout the process informed existing conditions findings and infrastructure and program recommendations. The findings below summarize frequently heard comments from both communities.**

- Ease of walking was rated as “good/fair” in each community. Bicycling received fairly equal parts “good” and “poor” ratings in Elkhart and fairly equal parts “good” and “fair” ratings in Goshen.
- Members of the public noted they would walk more if new sidewalks and intersection improvements were added to the walking network. Seventy six percent of respondents chose, “sidewalks not connecting to destinations”, followed by “travel time” (58%) as reasons why they do not walk more often.
- Generally, respondents indicated that they would bike more with the construction of new off-street paths and bike lanes. Lack of bicycle facilities hamper residents’ ability to bicycle in the study area. Eighty-two percent of respondents chose this answer, followed by lack of bike lanes or trails connecting to desired destinations (64%), and aggressive drivers (52%). Infrastructure recommendations, presented in Section 4, highlight opportunities to use bike lanes, paths, and other tools to build enhanced walking and bicycling networks.
- Public comments frequently mentioned College Avenue sidewalks, the need for a walking and bicycling connection to Fidler Pond, and expanded connections to off-street trails from residential and commercial areas.
- Public comments frequently mentioned the need for improvements along and across streets under County, State, and Federal jurisdiction. The infrastructure recommendations presented in Section 4 show potential solutions to improving streets under local jurisdictions. The proposed network improvements also pose mid- and long-term recommendations that address County, State, and Federal roadways. Non-infrastructure recommendations discuss opportunities for inter-agency cooperation.
- Online map comments and discussions at public meetings highlighted potential regional routes to connect neighboring municipalities. This finding relates to the plan’s objective to provide connections within Elkhart and Goshen as well as opportunities to connect to facilities across the region.

## Approach

Residents provided input about walking and bicycling through a community survey, in-person public meetings, and an online interactive community map. Public comments were valuable during each phase of the plan to ensure that the process reflected the communities' desires.

## Steering Committee

A project steering committee provided input, feedback, guidance, and a review of materials at several stages during the planning process. Representatives from various city and county governments, public agencies, advocates for bicycle and pedestrian transportation, and other interested residents participated.



Figure 14. Residents discuss locations and routes where they would like to walk and bike.



Figure 15. Residents discuss locations and routes where they would like to walk and bike.

The steering committee provided valuable input and local context at several key points in the planning process:

- At the beginning of the planning process to provide initial thoughts on where people like to walk and bicycle and challenges or barriers that limit walking and bicycling.
- After the preparation of the Existing Conditions report to reflect on the data, maps, analyses, and findings. Members helped identify priority and programmed projects for each city.
- At the release of infrastructure and non-infrastructure recommendations. Steering committee members also refined the cities' preferred types of non-infrastructure recommendations (e.g., improved data collection, continued support for bicyclist safety education).

The plan recommends that the project steering committee continue after the plan's adoption. The committee would then exist to help implement the plan's recommendations.

## Public Meetings

The project team and members of the steering committee met with members of the public at three public engagement events. One round of events occurred during the project’s existing conditions analysis, prior to identifying network and intersection recommendations. By timing the events thusly, the team was able to hear from the public and let these findings inform the plan’s next steps. Staffed booths at the Goshen Farmers Market and the Elkhart Arbor Day Celebration invited residents to learn more about the plan. Residents were also encouraged to complete the community survey and leave comments on the public input maps.

Public comments from these meetings were saved within a spreadsheet and codified according to their contents. Ideas were then incorporated into the team’s recommendation development process. The second round of input occurred after the plan’s initial recommendations were developed.



Figure 16. Residents review potential facility improvements at the public meeting.



Figure 17. A resident discusses existing conditions at the Goshen Farmer's Market.

This meeting presented residents with the plan’s draft recommendations and other findings. Residents were invited to participate in small group discussions to describe their reactions to the plan. Comments from the meeting were codified and incorporated into the final plan’s programmatic and infrastructure recommendations.

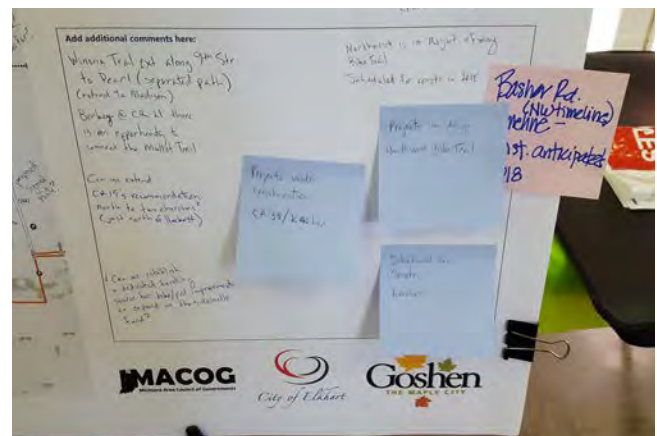


Figure 18. Resident comments



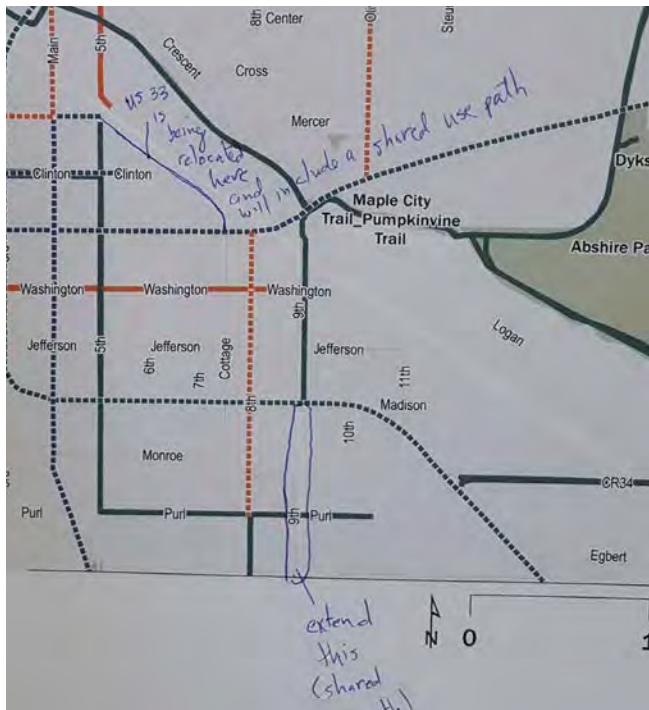


Figure 19. Residents commented directly on maps showing recommended improvements during the final public meeting.

The plan’s recommendations were shown on maps and in poster displays in an open-house style meeting. Meeting attendees were invited to provide feedback through the use of map and poster exercises to express their support for various infrastructure projects, policies, and programs. Infrastructure recommendations were accompanied by a “menu” of options showing the different ways in which bicycle and pedestrian facilities can be provided. This helped illustrate the plan’s flexibility as roadway improvements are made and user preferences change over time. Recommendations also were provided in meeting handouts that allowed participants to provide free response comments by e-mail after the meeting, which also enabled those who could not attend the meeting to provide feedback, as well.

## Community Survey

A community survey gathered public input throughout the existing conditions analysis and recommendations development portions of the planning process.

Survey respondents indicated many connections to Elkhart and Goshen. Survey respondents live, work, own businesses or other property, shop, visit areas of cultural interest, and use recreational facilities within one or both municipalities.

Respondents were asked to select one of the following values, excellent, good, fair, or poor, to describe current walking and bicycling conditions. Current walking conditions in Elkhart are perceived as “good” or “fair.” Respondents rated walking conditions in Goshen as “good.” Bicycling conditions in Elkhart and Goshen are both characterized as “good.”

Respondents indicated that a lack of sidewalks, bicycle lanes, and trails, prevent them from walking and bicycling more often. Furthermore, respondents indicated that sidewalks, off-street paths, physically separated bike lanes, and intersection improvements would increase their likelihood of walking and bicycling more often.

## Online Input Map

An online interactive map enabled residents to identify suggested walking and bicycling routes for safety and comfort improvements. Residents were also able to suggest intersections for improvements. Findings from this exercise are identified in this section.

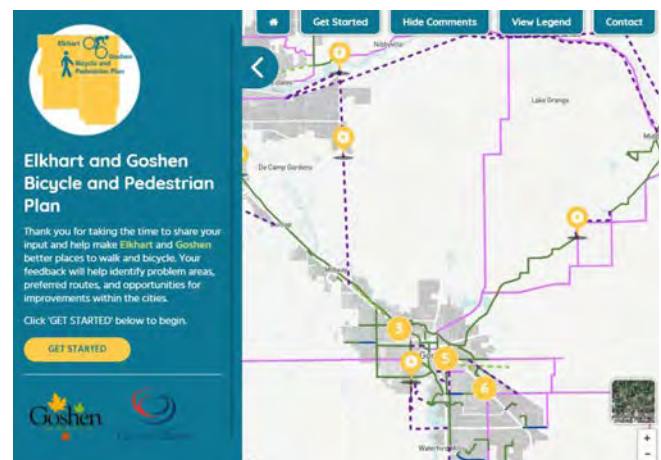
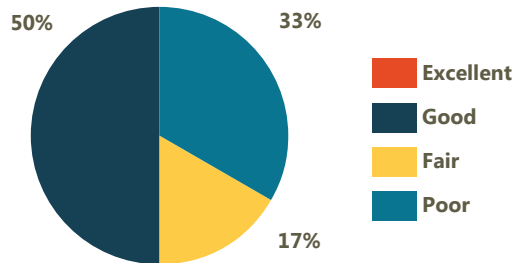


Figure 20. Residents comments were able to identify desired routes and destinations using an online map commenting tool.

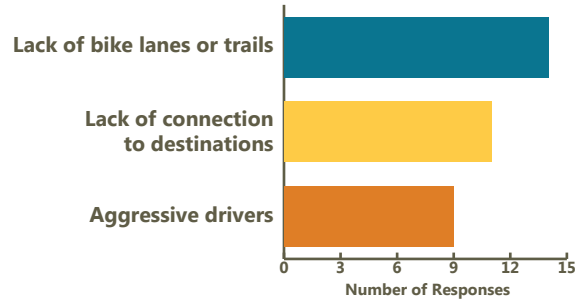


# Survey Responses

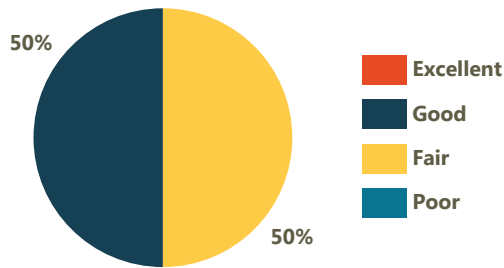
## Opinion of Current Biking Conditions in Elkhart



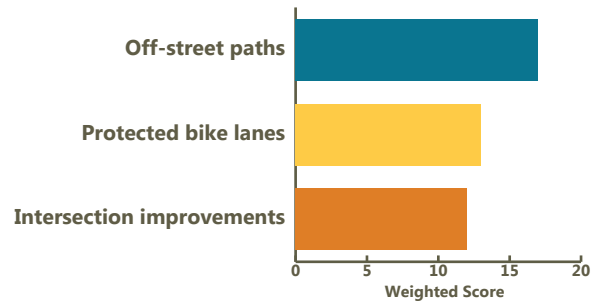
## Obstacles to Bicycling



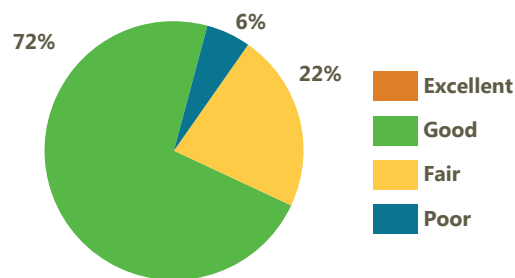
## Opinion of Current Walking Conditions in Elkhart



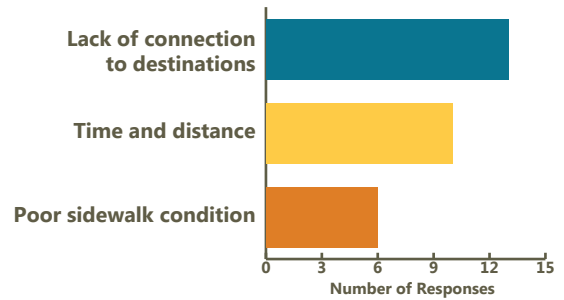
## Encouraging Bike Facilities



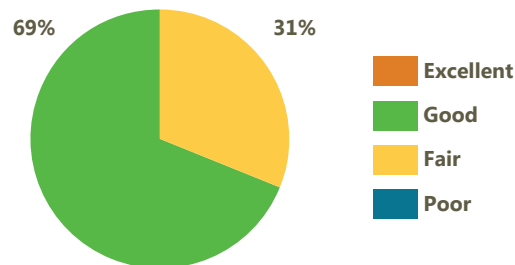
## Opinion of Current Biking Conditions in Goshen



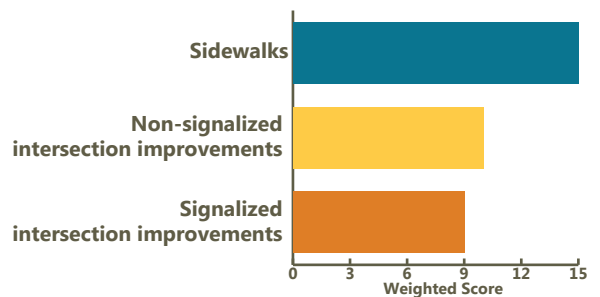
## Obstacles to Walking

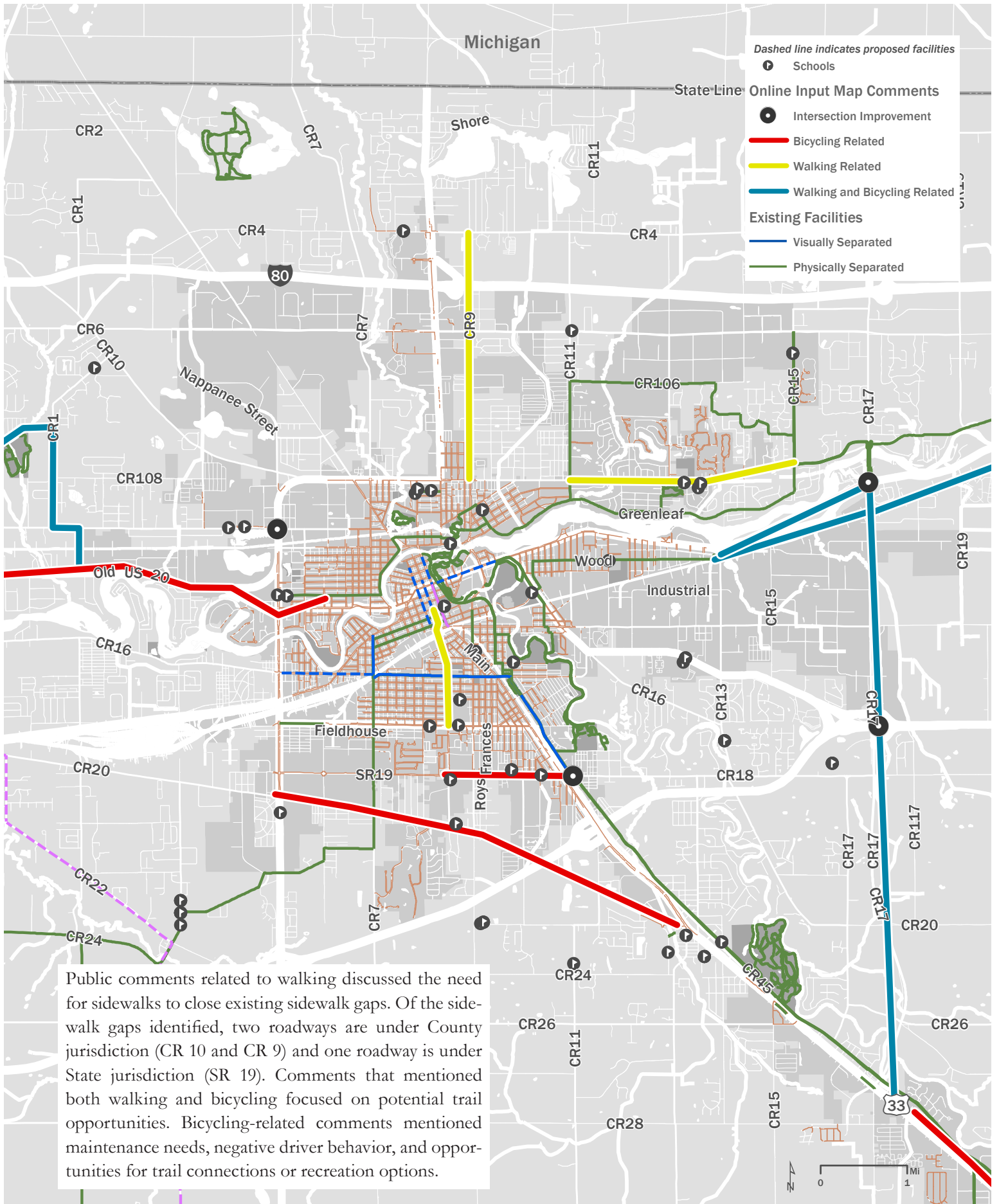


## Opinion of Current Walking Conditions in Goshen



## Encouraging Walking Facilities





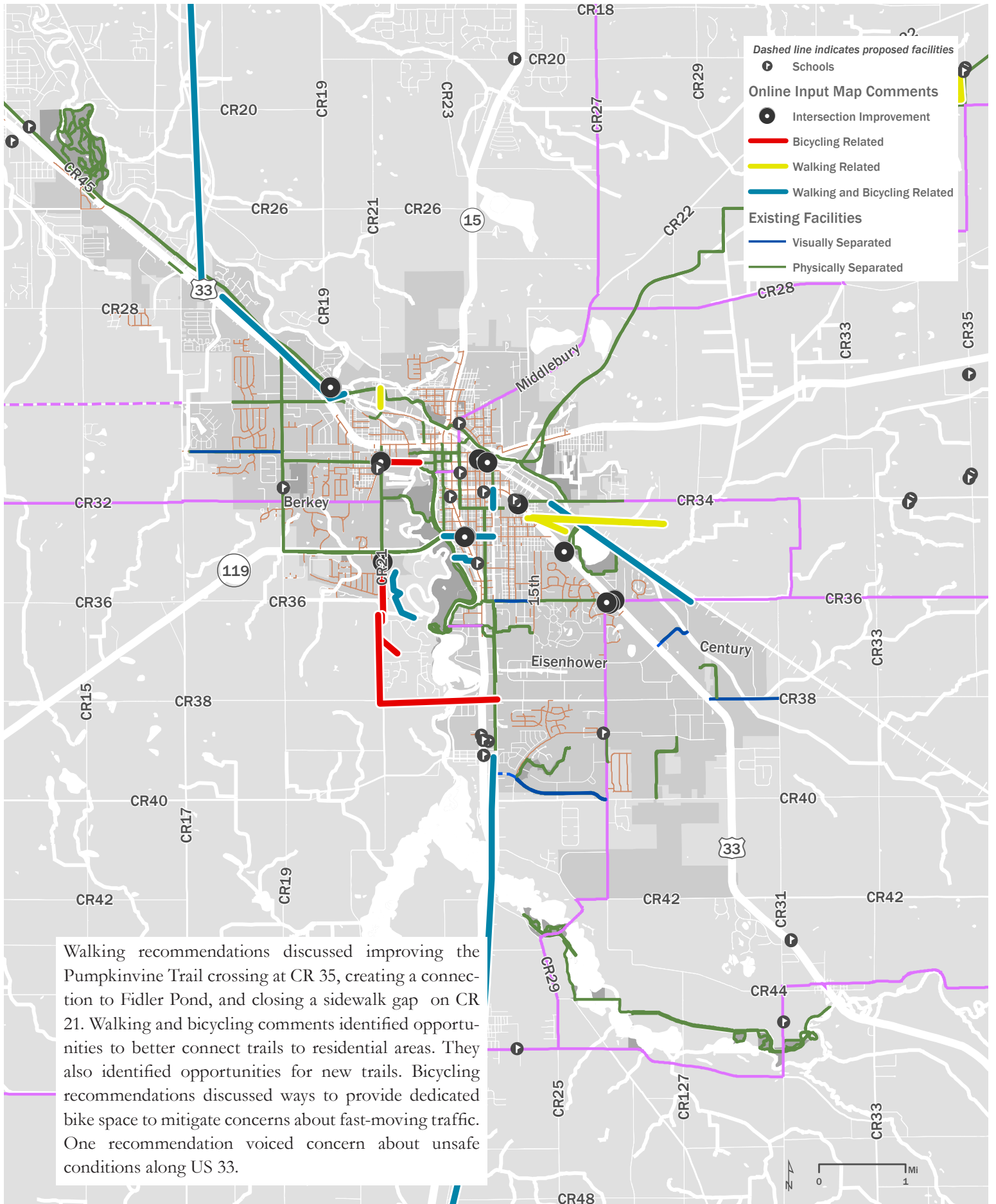






Photo Credit: John Yoder



# Infrastructure Recommendations

**This chapter presents network, intersection, and programmatic recommendations for the City of Elkhart and the City of Goshen. Facility recommendations included in this plan are examples of potential treatments. Each facility recommendation is grouped into three categories: mixed traffic, visually separated, and physically separated. The plan is designed to be flexible in case a City decides one type of facility should be implemented instead of the facility type originally proposed in this plan. As such, these categories represent the fact that multiple facility types may be possible along a given corridor. Recommended facilities begin on page 52.**

Recommendation development was an iterative and collaborative process. Active transportation networks must establish seamless, connected routes that link people to their destinations.

Recommended improvements must consider the existing environment, as well as the planned or expected future context. The needs of all roadway users, including the safety and comfort of people walking, bicycling, and accessing transit, must be balanced with roadway characteristics and corridor constraints. The outcome of this collective process represents a practical approach to improving the region's transportation options.

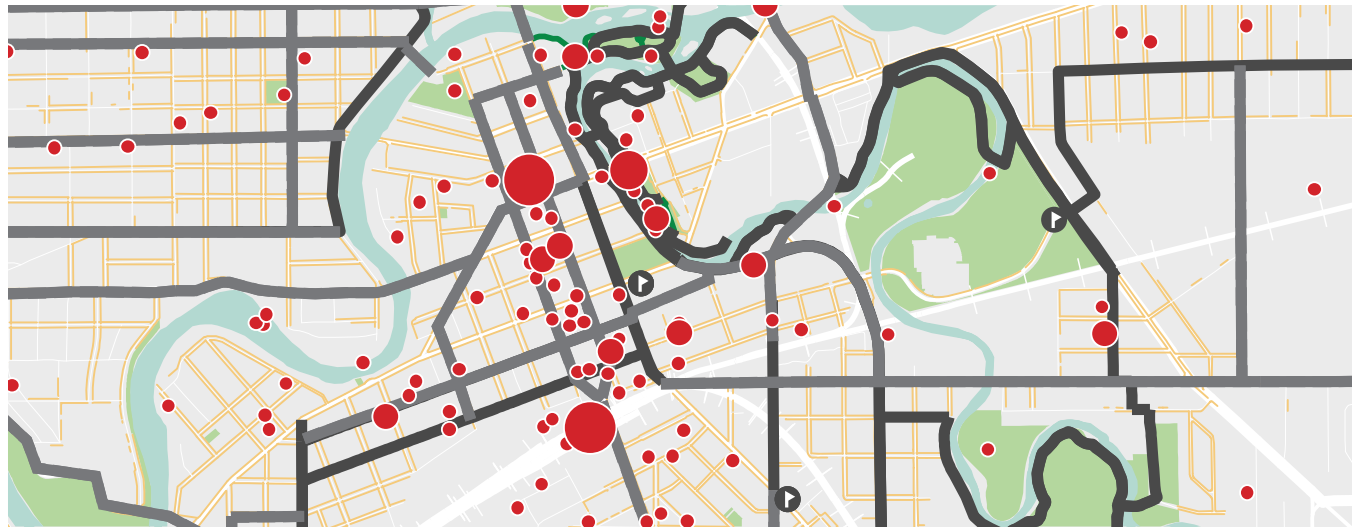
Recommendations for improving walking and bicycling illustrate preferred alternatives that were selected based on a variety of potential infrastructure investments. This plan presents guidance towards facility selection, but realizes that other infrastructure tools may be chosen in the future.

The plan's goals indicate that Elkhart and Goshen intend to obtain higher certification levels in the Bicycle Friendly Community (BFC) and Walk Friendly Community (WFC) recognition programs.

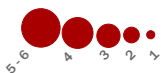
To obtain higher certification levels, among other factors, cities must demonstrate well-connected walking and bicycling networks. The network recommendations help achieve these goals over time. The plan identifies "low-hanging fruit", or street redesigns that are possible more immediately than other infrastructure changes. Other recommendations are more conceptual and aspirational. Additional coordination and study will be needed to implement these facilities in the future. These recommendations are identified as long-term recommendations, due to their more complex nature.

All recommendations are subject to change and refinement as site conditions and development patterns change, and as other adjacent or intersecting projects are implemented. Additionally, some projects may require feasibility studies to verify routing or applicability.

Network recommendations were developed by analyzing existing roadway characteristics, crash patterns, bicycle level of traffic stress, pedestrian and bicycle demand, and steering committee and public input. Initial corridors of interest were identified based on these inputs and were then refined based on conversations with City staff, the steering committee, and members of the public. Network recommendations can be implemented based on yearly budget amounts, through coordination with resurfacing projects, and through grant funding, to name a few potential funding sources.



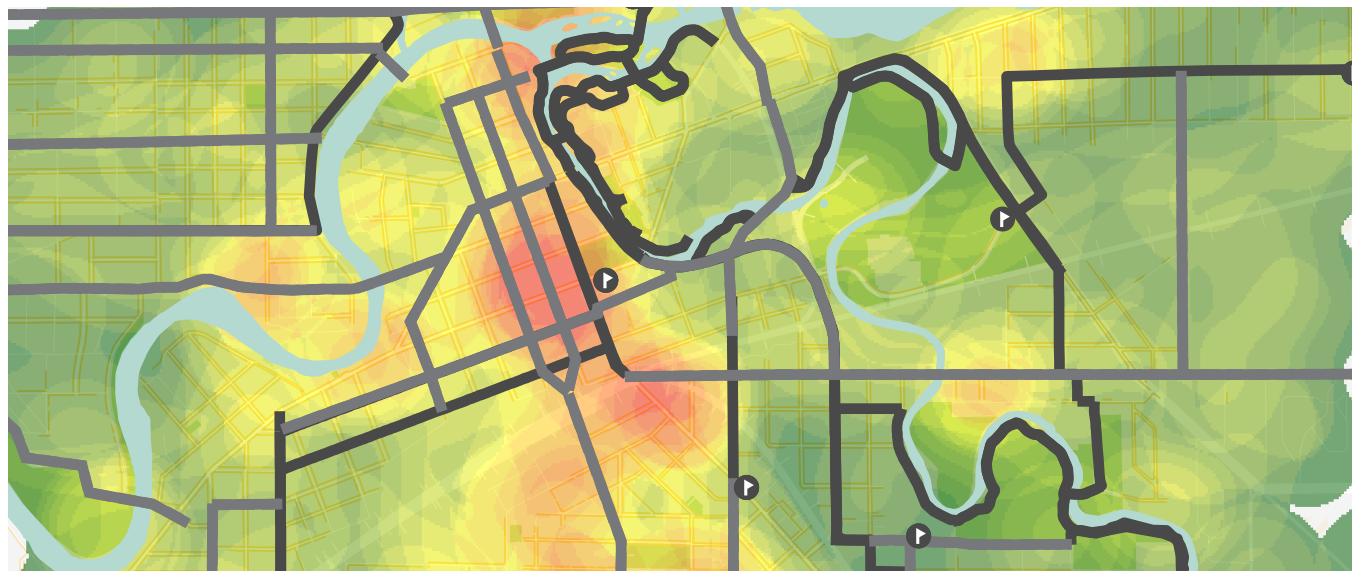
Pedestrian and Bicyclist Crashes



Proposed Bicycle/Pedestrian Improvements  
Existing Bicycle/Pedestrian Facilities



## Crash Frequency

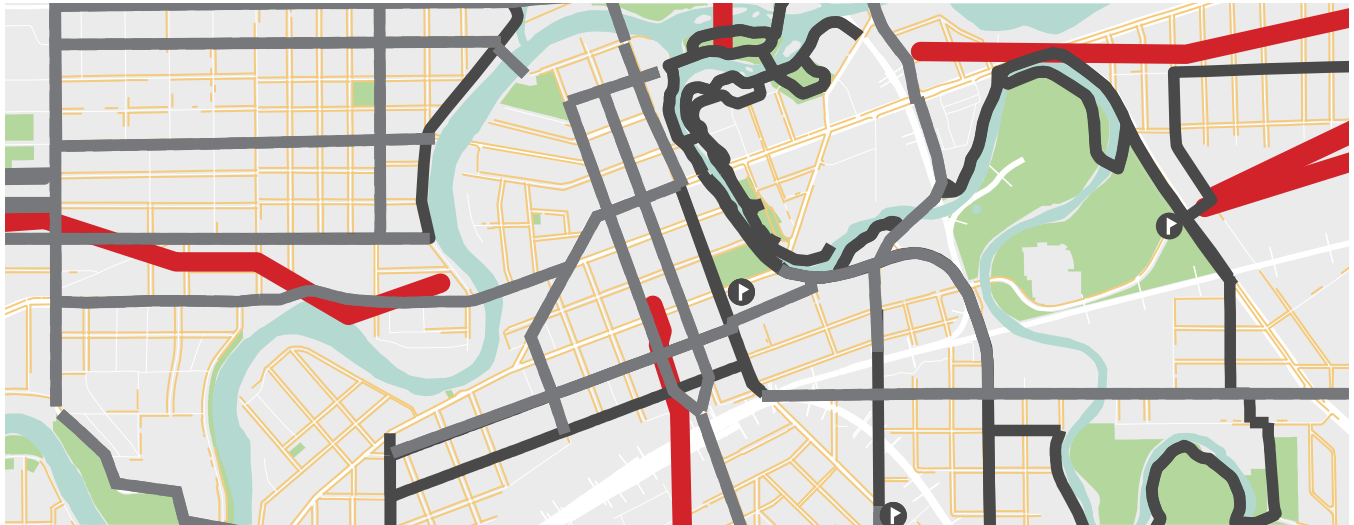





Higher Demand  
Lower Demand

Proposed Bicycle/Pedestrian Improvements  
Existing Bicycle/Pedestrian Facilities

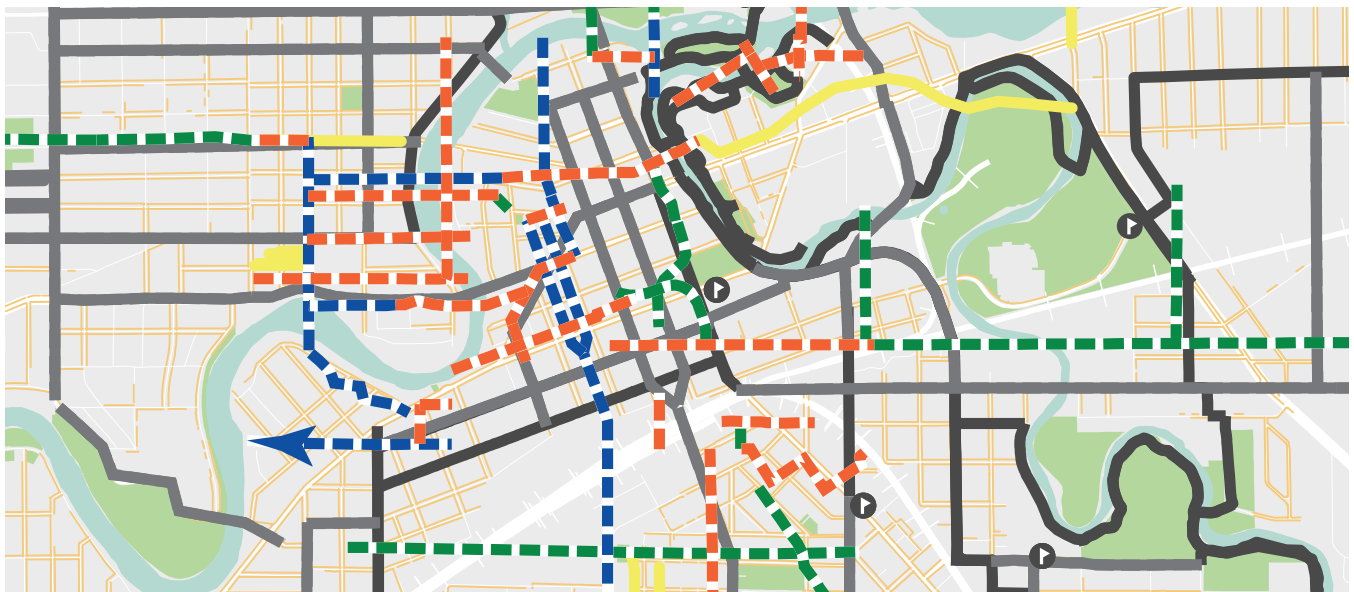


## Demand Analysis



Public Comments  Proposed Bicycle/Pedestrian Improvements   
 Existing Bicycle/Pedestrian Facilities 

## Public Input

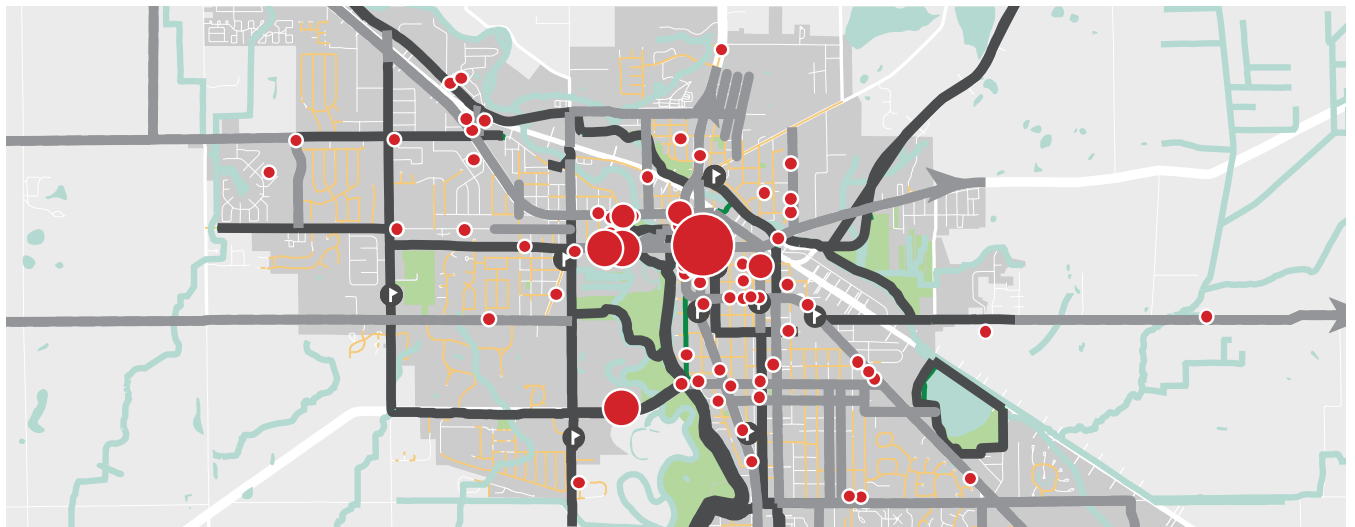


*This map shows the recommendations according to facility type. See Recommendation Map for further detail (pg. 58).*

## Recommendations



Network recommendations were developed by analyzing existing roadway characteristics, crash patterns, bicycle level of traffic stress, pedestrian and bicycle demand, and steering committee and public input. Initial corridors of interest were identified based on these inputs and were then refined based on conversations with City staff, the steering committee, and members of the public. Network recommendations can be implemented based on yearly budget amounts, through coordination with resurfacing projects, and through grant funding, to name a few potential funding sources.



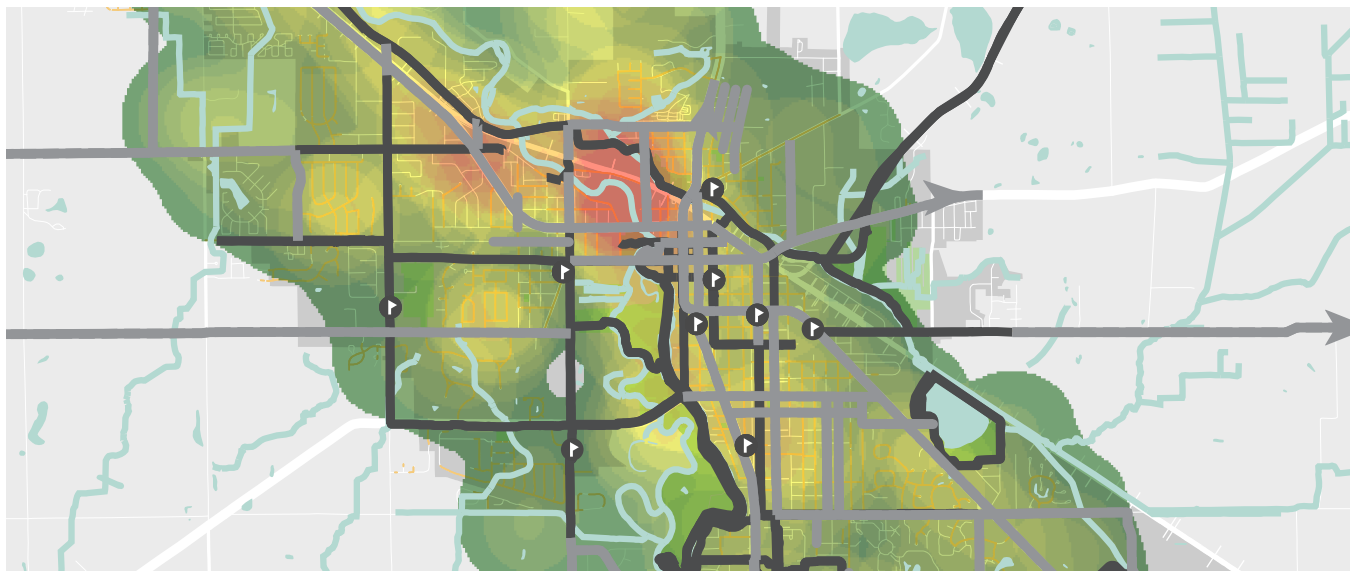
Pedestrian and Bicyclist Crashes



Proposed Bicycle/Pedestrian Improvements  
Existing Bicycle/Pedestrian Facilities



## Crash Frequency

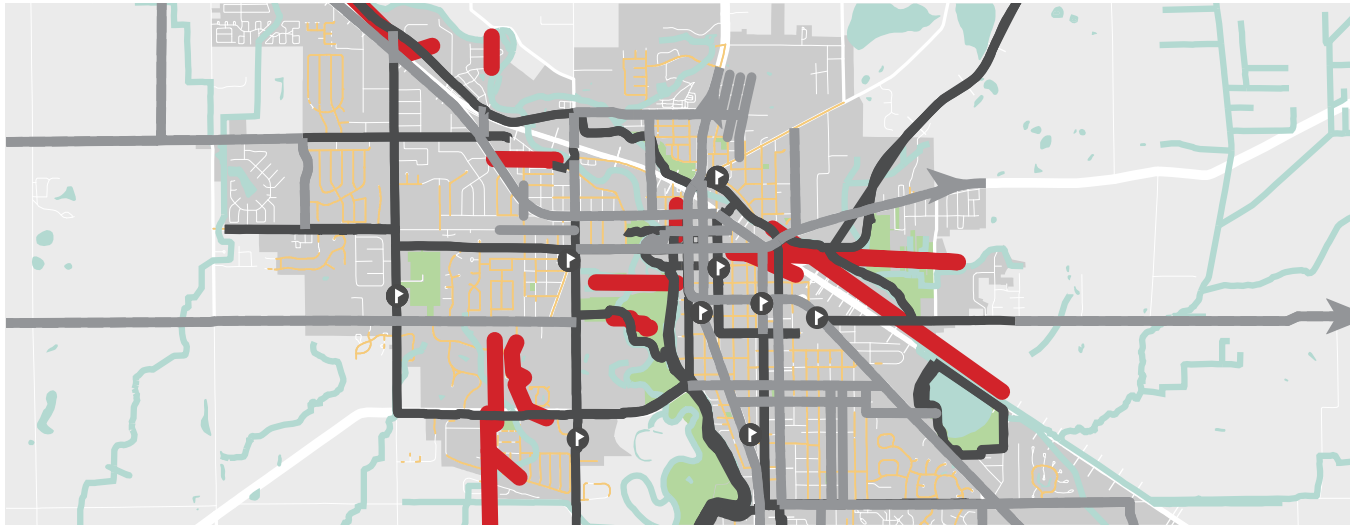


Higher Demand  
Lower Demand

Proposed Bicycle/Pedestrian Improvements  
Existing Bicycle/Pedestrian Facilities



## Demand Analysis

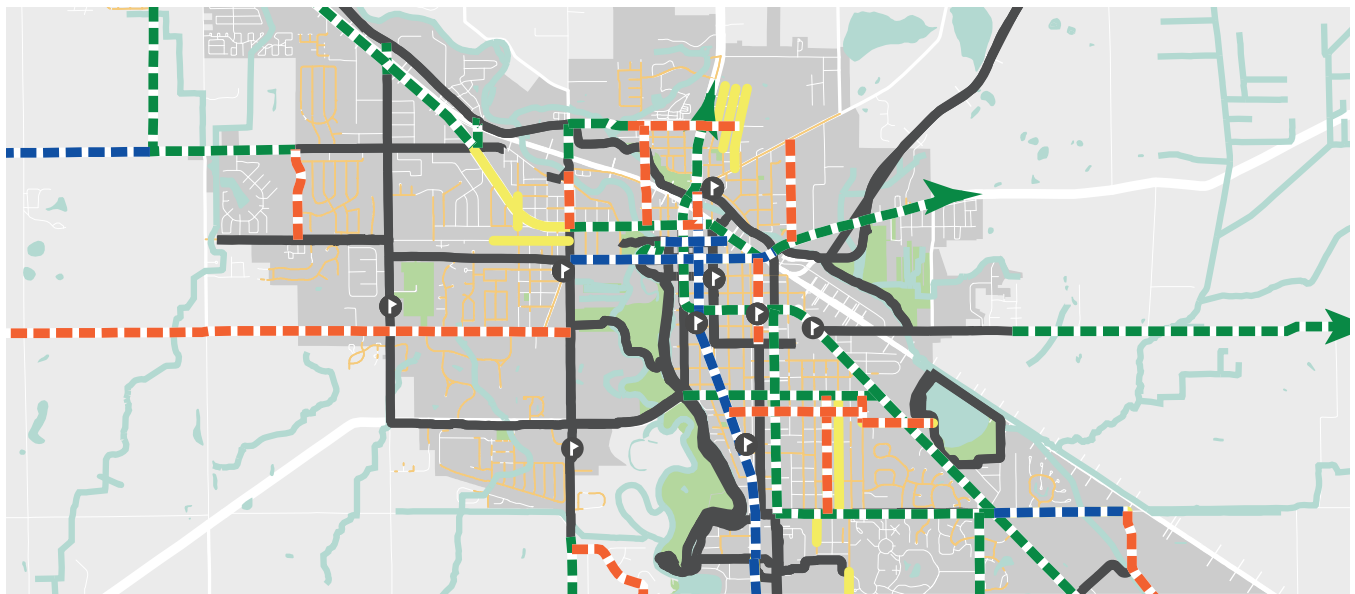


Public Comments

Proposed Bicycle/Pedestrian Improvements

Existing Bicycle/Pedestrian Facilities

## Public Input



*This map shows the recommendations according to facility type. See Recommendation Map for further detail (pg. 60).*

## Recommendations

## Recommended Facilities

The *Small Town and Rural Multimodal Networks* guide is a design resource and idea book to help small towns and rural communities support safe, accessible, comfortable, and active travel for people of all ages and abilities. (Note: \*Recommendation range shown; refer to the STAR guide for correlated speed and volume recommendations.)

### Mixed Traffic Facilities



#### Yield Roadway

A yield roadway is designed to serve pedestrians, bicyclists, and motor vehicle traffic in the same slow speed travel area. Yield roadways serve bidirectional motor vehicle traffic without lane markings in the roadway travel area.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
0 - 20	0 - 500	■					■



#### Neighborhood Greenway

A neighborhood greenway is a low-stress shared roadway bicycle facility, designed to offer priority for bicyclists operating within a roadway shared with motor vehicle traffic.

**NOTE: Speed and volume management may be necessary for streets with higher speed limits and traffic volumes.**

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
0 - 20	0 - 1,500	■					■



#### Advisory Shoulder

Advisory shoulders create usable shoulders for bicyclists on roadways that are otherwise too narrow. The shoulder is delineated by pavement marking and optional pavement color. Motorists may only enter the shoulder when no bicyclists are present and must overtake these users with caution due to potential oncoming traffic. Note: In order to install advisory shoulders, an approved Request to Experiment is required as detailed in Section 1A.10 of the MUTCD.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
0 - 25	0 - 3,000		■		■	■	■



## Visually Separated



### Paved Shoulder

Paved shoulders on the edge of roadways can be enhanced to serve as a functional space for bicyclists and pedestrians to travel in the absence of other facilities with more separation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
25 - 55	1,000 - 12,000+		■	■	■		■	



### Bike Lane

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and optional signs. A bike lane is located directly adjacent to motor vehicle travel lanes and follows the same direction as motor vehicle traffic.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
0 - 40	0 - 9,000	■	■			■	■	



### Pedestrian Lane

A pedestrian lane is an interim or temporary pedestrian facility that may be appropriate on roads with low to moderate speeds and volumes. A pedestrian lane is a designated space on the roadway for exclusive use of pedestrians. The lane may be on one or both sides of the roadway and can fill gaps between important destinations in a community. Note: This guidance features expanded content and minor differences from that in the FHWA Small Town and Rural Multimodal Networks document. Please refer to the guide for the formal presentation of this facility type.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network			Land Use		
			Collector	Highway	Outside of built-up areas	Between built-up areas	Within built-up areas	
0 - 20	0 - 2,000	■	■				■	

## Physically Separated



### Shared Use Path

A shared use path provides a travel area separate from motorized traffic for bicyclists, pedestrians, skaters, wheelchair users, joggers, and other users. Shared use paths can provide a low-stress experience for a variety of users using the network for transportation or recreation.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
-	-				■		■



### Sidepath

A sidepath is a bidirectional shared use path located immediately adjacent and parallel to a roadway. Sidepaths can offer a high-quality experience for users of all ages and abilities as compared to on-roadway facilities in heavy traffic environments, allow for reduced roadway crossing distances, and maintain rural and small town community character.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■	■			■



### Sidewalk

Sidewalks provide dedicated space intended for use by pedestrians that is safe, comfortable, and accessible to all. Sidewalks are physically separated from the roadway by a curb or unpaved buffer space.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 50	0 - 12,000+	■	■				■

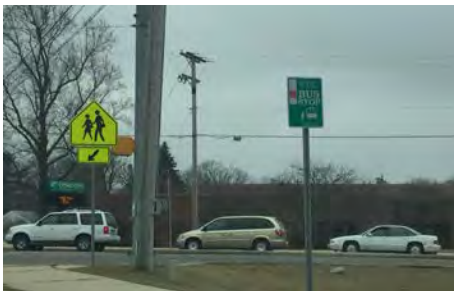


### Separated Bike Lane

A separated bike lane is a facility for exclusive use by bicyclists that is located within or directly adjacent to the roadway and is physically separated from motor vehicle traffic with a vertical element. Examples of vertical elements include flexible bollards, concrete curb, planters, parked cars, or other options.

Speed (Preferred mph)*	Volume (Preferred ADT)*	Local	Network		Outside of built-up areas	Land Use	
			Collector	Highway		Between built-up areas	Within built-up areas
10 - 55	0 - 12,000+		■				■

## Transit Amenities



### Signed Bus Stop

Signed bus stops mark locations where buses stop to pick up or drop off passengers. Signed bus stops should be used in places with awnings or other features where pedestrians can wait in inclement weather. Signed bus stops should follow ADA regulations for sidewalk to bus stop connections.



### Bus Shelter

Bus shelters provide a place for transit riders to wait before boarding a bus. Bus shelter dimensions should be such that wheelchair users and people with strollers have space within the shelter.



### Bike Locker at Transit Stop

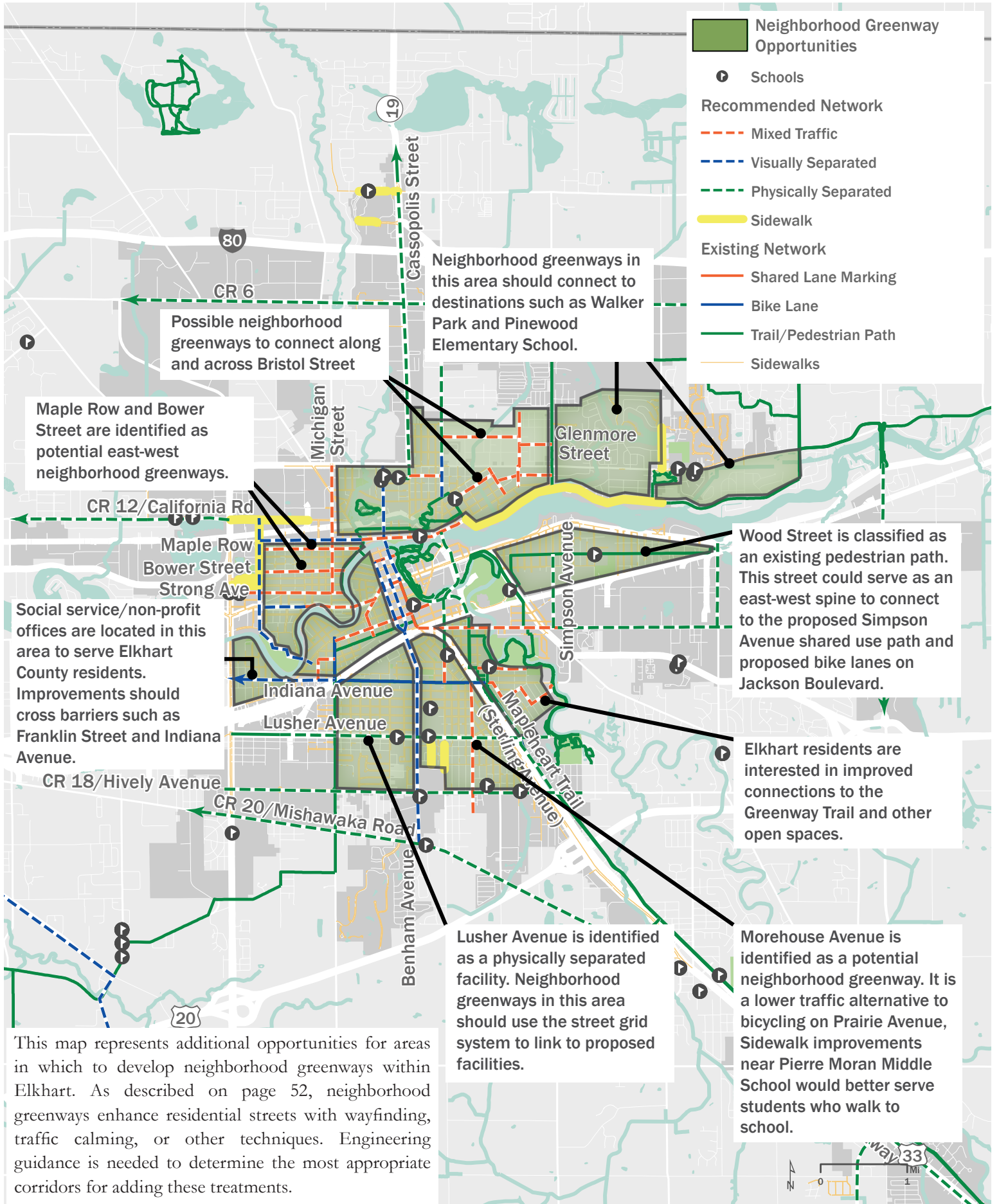
Bike lockers at transit stops provide short or long term bicycle storage. Bike lockers should be routinely checked to ensure they function correctly. If a secure parking area is built around the lockers, the structure should be well-lit and inviting to users.

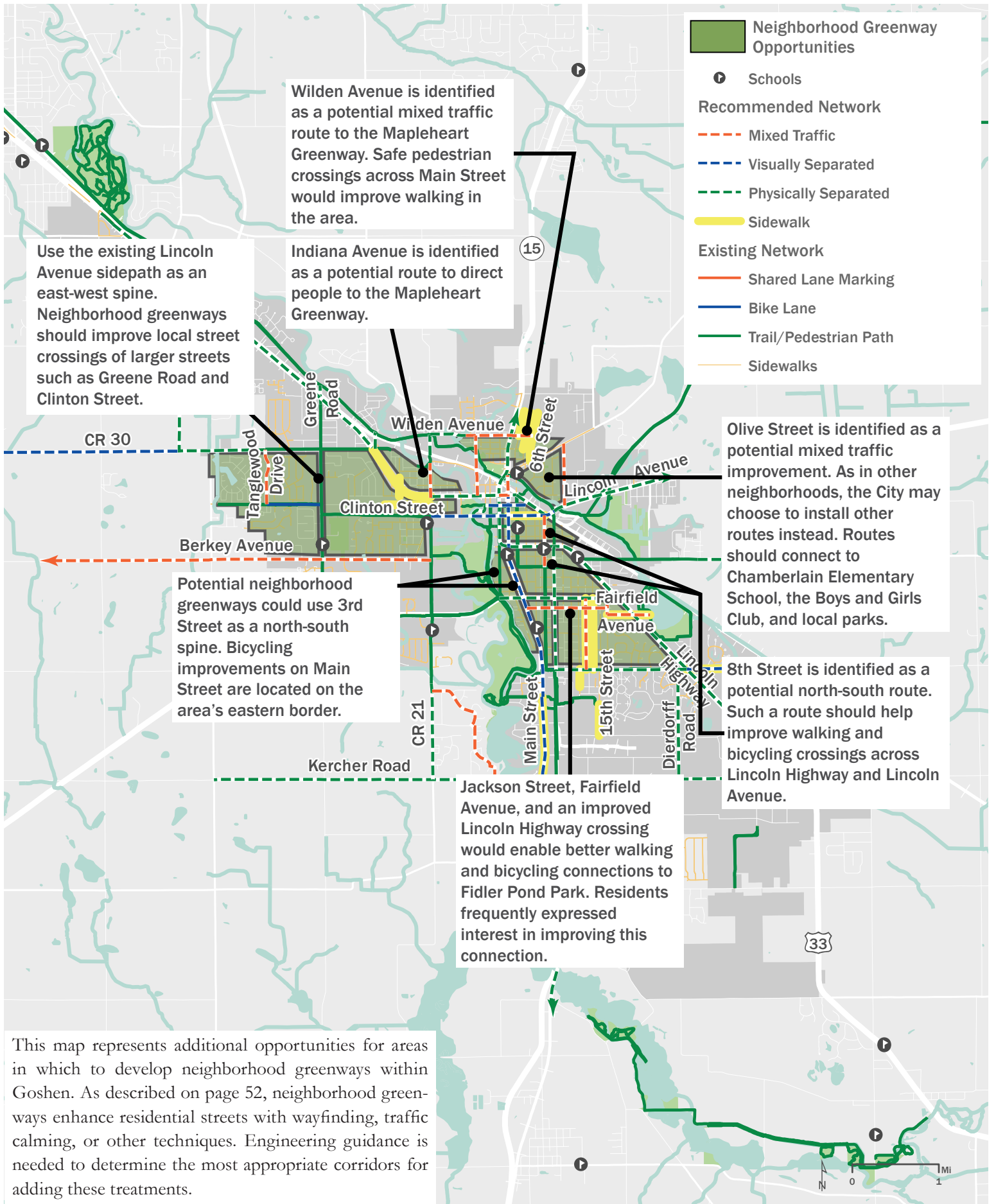
## Additional Resources

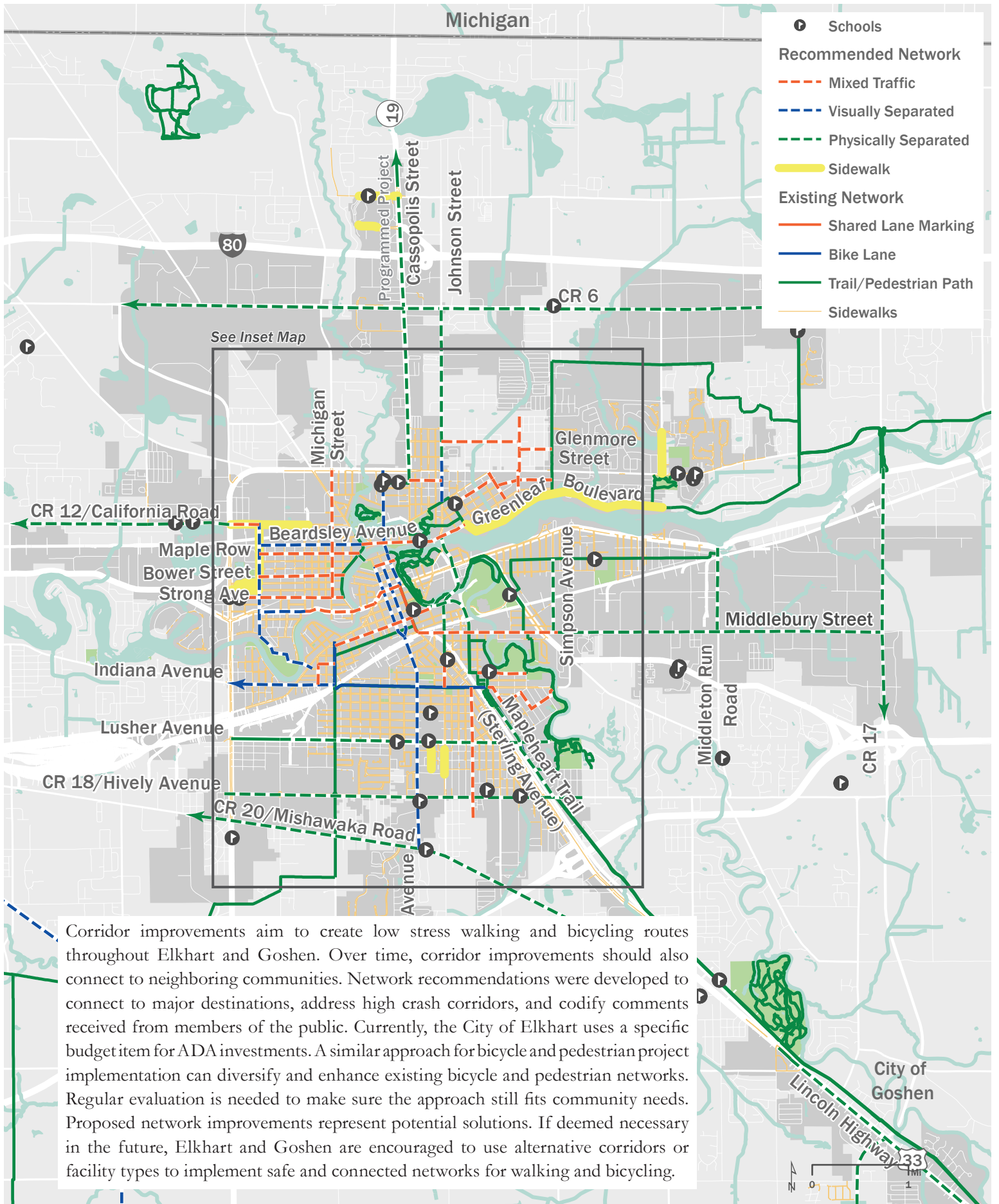
Safe and comfortable street and trail designs for walking and bicycling continue to evolve. The following resources contain guidance for planning and designing sidewalks, bike lanes, trails, and more:

- National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide*
- American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*
- Institute for Transportation Engineers (ITE) *Protected Bikeways Practitioners Guide*





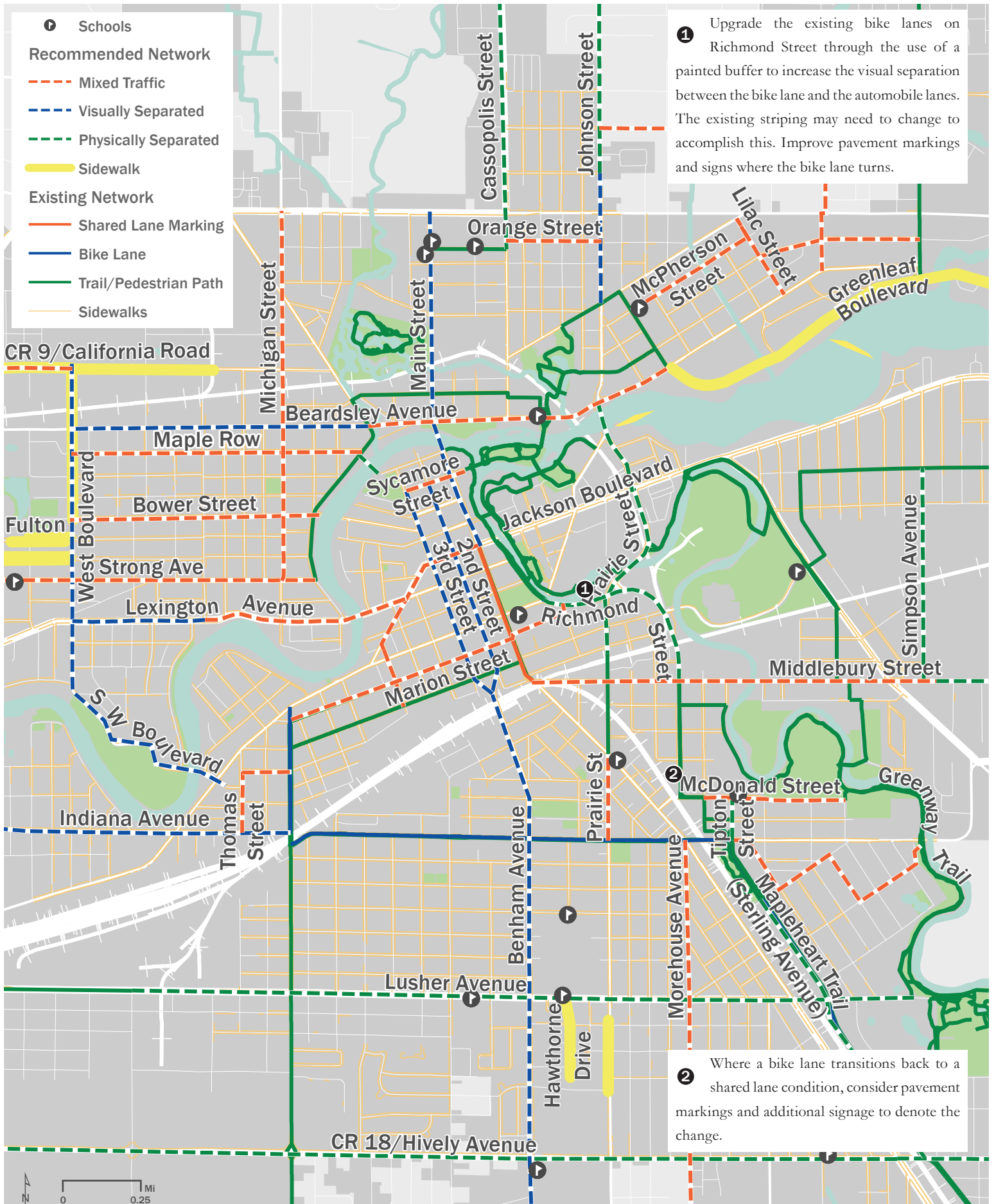




Corridor improvements aim to create low stress walking and bicycling routes throughout Elkhart and Goshen. Over time, corridor improvements should also connect to neighboring communities. Network recommendations were developed to connect to major destinations, address high crash corridors, and codify comments received from members of the public. Currently, the City of Elkhart uses a specific budget item for ADA investments. A similar approach for bicycle and pedestrian project implementation can diversify and enhance existing bicycle and pedestrian networks. Regular evaluation is needed to make sure the approach still fits community needs. Proposed network improvements represent potential solutions. If deemed necessary in the future, Elkhart and Goshen are encouraged to use alternative corridors or facility types to implement safe and connected networks for walking and bicycling.

## Elkhart Pedestrian and Bicycle Network Recommendations












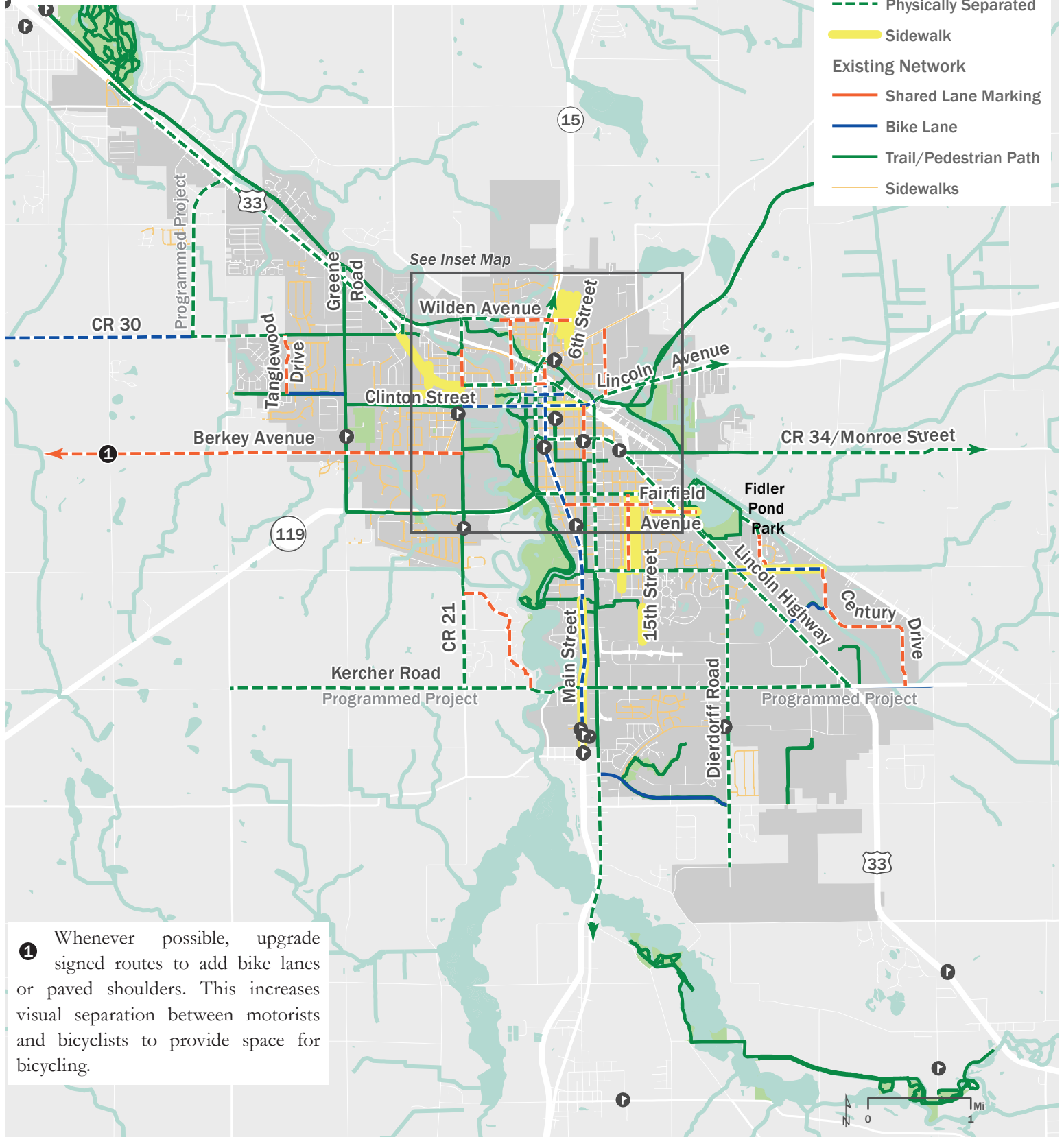
1 Upgrade the existing bike lanes on Richmond Street through the use of a painted buffer to increase the visual separation between the bike lane and the automobile lanes. The existing striping may need to change to accomplish this. Improve pavement markings and signs where the bike lane turns.

2 Where a bike lane transitions back to a shared lane condition, consider pavement markings and additional signage to denote the change.

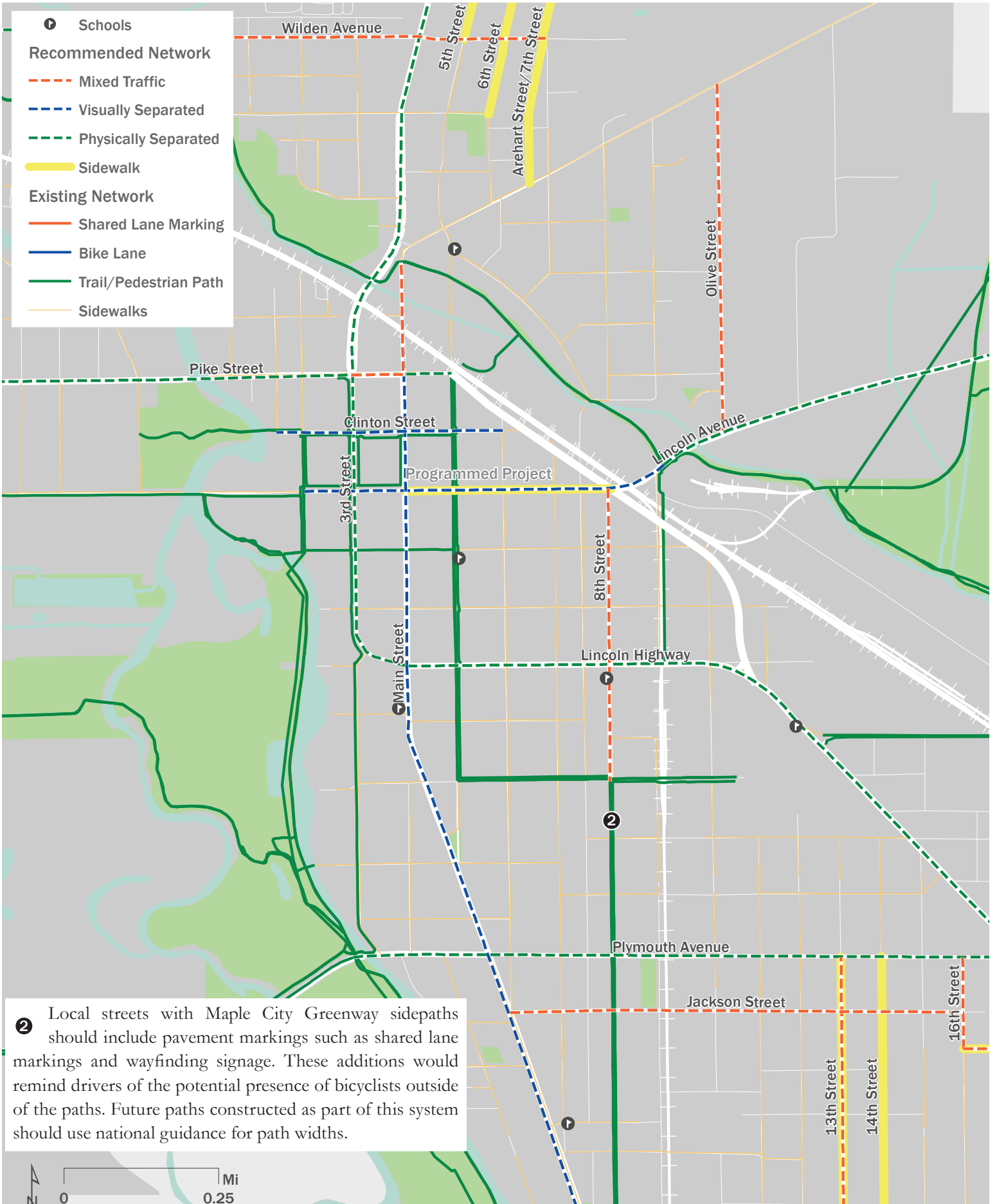
# Elkhart Pedestrian and Bicycle Network Recommendations Inset Map

Corridor improvements aim to create low stress walking and bicycling routes throughout Elkhart and Goshen. Over time, corridor improvements should also connect to neighboring communities. Network recommendations were developed to connect to major destinations, address high crash corridors, and codify comments received from members of the public.

-  Schools
- Recommended Network**
  -  Mixed Traffic
  -  Visually Separated
  -  Physically Separated
  -  Sidewalk
- Existing Network**
  -  Shared Lane Marking
  -  Bike Lane
  -  Trail/Pedestrian Path
  -  Sidewalks



**1** Whenever possible, upgrade signed routes to add bike lanes or paved shoulders. This increases visual separation between motorists and bicyclists to provide space for bicycling.



**Schools**

- Schools

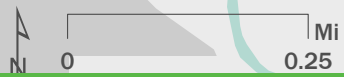
**Recommended Network**

- - - Mixed Traffic
- - - Visually Separated
- - - Physically Separated
- █ Sidewalk

**Existing Network**

- Shared Lane Marking
- Bike Lane
- Trail/Pedestrian Path
- Sidewalks

**2** Local streets with Maple City Greenway sidepaths should include pavement markings such as shared lane markings and wayfinding signage. These additions would remind drivers of the potential presence of bicyclists outside of the paths. Future paths constructed as part of this system should use national guidance for path widths.



# Goshen Pedestrian and Bicycle Network Recommendations Inset Map





# Program Recommendations

**The following recommendations have been developed in the areas of Education, Encouragement, Enforcement, and Evaluation. A single set of recommendations has been provided for both cities, as many efforts will involve some coordination between the Cities of Elkhart, Goshen, and regional entities including Elkhart County and MACOG. The single set of recommendations offers significant opportunities for efficiencies in program implementation.**

The following over arching recommendations should be prioritized to help implement the other program recommendations included in this section.

### **Maintain the Steering Committee, originally convened during this planning process**

This plan was supported by an steering committee. The committee should continue after the plan's adoption to continue interagency cooperation. The steering committee should consider reopening membership after the plan's adoption. A diverse membership will help implement the plan's recommendations.

The committee would continue to provide advice and recommendations to promote walking and bicycling. The recommendations in this section describe potential roles for the steering committee.

### **Establish a Pedestrian and Bicycle Coordinator Position**

Both cities or MACOG should create a Pedestrian and Bicycle Coordinator position by appointing new responsibilities to an existing employee or by creating a new position. Depending on the Cities' preference, the position would be housed in either or both City governments or within MACOG. The Coordinator would oversee several of the program recommendations included in this section. The staff person would be responsible for frequent reporting to City Councils, MACOG, and the public.

Together with local agencies, the position should implement local and regional infrastructure projects.

### **Establish a Bike and Walk Ambassador program**

Cities across the country have created ambassador programs to conduct bike-related events and interact with the public at neighborhood or citywide events. Ambassadors are individuals hired from their community to educate and encourage their peers to ride their bikes more often and to do so safely.

Typically, one person or team manages several ambassadors at a time. The project manager is responsible for the program's structure, timeline, daily operations, and reporting/evaluation. The ambassadors perform in person outreach to community organizations, schools, and other groups.

Ambassador programs succeed by using three strategies: Creating stand-alone events in the warm months (i.e., light or helmet giveaways, bike rodeos), attending pre-existing community events (i.e., free concerts, festivals), and educating school aged children during the school year (i.e., classroom presentations). Appendix 2 describes the program in greater detail, including a sample program calendar.



## Education

Develop formalized education opportunities for residents of all ages.

Plan for seasonal, recurring education events. Leverage existing advocates and supporters to increase education among residents and stakeholders.

Program tasks include:

### League Cycling Instructor (LCI) Training

The City of Elkhart and the City of Goshen should offer LCI training to Elkhart citizens and City staff, and welcome participation by the Police Department. The number of LCIs should be robust enough to include several people who can serve the two cities and the region.

Offer at least one (1) class annually.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- Parks and Recreation Department
- Public Works

#### Potential Supporters

- Elkhart & Goshen Police Departments
- Elkhart & Goshen Fire Departments
- Bike Elkhart
- League of American Bicyclists
- Friends of the Pumpkinvine Nature Trail

## Walking and Bicycling Safety Campaign

A public education campaign should make use of online and printed materials to show support for walking and bicycling in Elkhart and Goshen. Materials created should include maps and calendars of popular events that involve walking and bicycling, and should include messages to foster empathy for people who walk and bicycle. Online materials should be shared by government and community organization social media accounts.

Distribute materials seasonally to public destinations and leverage the public health and bicycle advocacy groups to assist in sharing this information.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Elkhart Mayor's Office
- City of Goshen Mayor's Office
- Elkhart & Goshen Police Departments

#### Potential Supporters

- MACOG
- Elkhart & Goshen Community Schools
- Elkhart County Public Health Department
- Bike Elkhart
- Friends of the Pumpkinvine Nature Trail
- Elkhart & Goshen Fire Departments

## Driver Safety and Awareness Campaign

Develop an advertising and public information campaign for residents in Goshen and Elkhart who drive. Develop materials with the key message of fostering respect, empathy, and the importance of protecting the safety of people who walk and bicycle.

Include key messages in city-owned utility bills or notices at least twice annually, supplement with messages from the Mayor's office.



## Potential Leads

- Pedestrian and Bicycle Coordinator
- City of Elkhart Mayor's Office
- City of Goshen Mayor's Office

## Potential Supporters

- MACOG
- Bike Elkhart
- Elkhart & Goshen Police Departments
- Elkhart & Goshen Fire Departments
- Friends of the Pumpkinvine Nature Trail

## Safe Routes to School Program

Programming should include education program development and delivery. Emphasize engineering improvements that will make it easier to walk and bike to school. Provide bike parking at schools and teach students how to securely lock bicycles every fall. At least 75% of students walk to Roosevelt, Mary Beck, Hawthorne, and Monger Schools. Use these locations as a model for increasing walking at other schools in the region.

School administrators should meet at least one annually to report on progress.

## Potential Leads

- Pedestrian and Bicycle Coordinator
- Elkhart & Goshen Community Schools

## Potential Supporters

- MACOG
- Elkhart County Public Health Department
- Parks and Recreation Department
- Public Works

## Safe Routes for Seniors Program

Launch a program to identify key safety improvements near senior centers or in neighborhoods with senior citizens. Review pedestrian crossings and signal timing for adequacy in accommodating seniors.

Program managers should meet annually with each City to make recommendations and coordinate with capital improvements planning.

## Potential Leads

- Pedestrian and Bicycle Coordinator
- Council on Aging of Elkhart County
- REAL Services of Elkhart County

## Potential Supporters

- Public Works
- Greencroft Communities



*Figure 21. Safe Routes for Seniors programs would identify ways to improve older adults' mobility.*



## Encouragement

Create a culture where walking and bicycling are comfortable, desirable, and supported methods of transportation. Engage in seasonal, repeated activities to encourage residents and visitors to walk and bike, and provide incentives.

Program tasks include:

### Support and Publicize Recurring Events by Walking and Bicycling Organizations

Help publicize Pedal Power Pride, Chain Reaction Bicycle Project, Bike Elkhart, Friends of the Pumpkinvine, and other walking/bicycling organizations' group rides (i.e., Critical Mass, Kidical Mass, Bike n Dine) initiatives within City communications (i.e., newsletters, literature available at public buildings).

Continue First Friday and Maple City Walk programming.

#### Potential Leads

- Bike Elkhart
- Pedal Power Pride
- Greater Elkhart Chamber of Commerce
- Redevelopment Commission
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

#### Potential Supporters

- Mayor's Office
- Neighborhood Associations
- Parks and Recreation Departments
- Health systems (i.e., Goshen Health and Beacon Health)
- Elkhart County Convention and Visitors Bureau

### Partner with Businesses to Promote the Elkhart Riverwalk

Promote the Riverwalk as a downtown amenity that can be reached on foot and on bike. The Riverwalk is already a popular destination within the City and is the site of many events. The City could partner with local businesses to offer promotions for people who walk or bike to the attraction.

#### Potential Leads

- Elkhart Redevelopment Commission
- Elkhart County Convention and Visitor's Bureau
- Greater Elkhart Chamber of Commerce
- Michiana Bike Coalition
- Bike Elkhart

#### Potential Supporters

- Mayor's Office
- MACOG
- TIF Districts
- Elkhart County Convention and Visitors Bureau

### Increase City Presence at Local Events

Grow the number of businesses who participate in Bike to Work Week every May. Stakeholders and steering committee members expressed interest in encouraging participation in regional activities or scaling up local programming.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- Elkhart County Public Health Department

#### Potential Supporters

- Mayor's Office
- Michiana Bike Coalition
- Bike Elkhart
- Pedal Power Pride
- Friends of the Pumpkinvine Nature Trail
- Chain Reaction

## Develop Walking and Bicycling Maps to Support Healthy Recreation

Produce walking and bicycling guides that are customized for the region and promote healthy active transportation and access to local businesses.

Be sure to include local destinations that help residents lead active lifestyles. Examples include grocery stores that offer fresh produce, walking and bicycling trails, the Riverwalk, and more. The map should show ways for residents to reach these areas.

### Potential Leads

- Elkhart County Health Department
- Pedestrian and Bicycle Coordinator
- Health systems (i.e., Goshen Health and Beacon Health)

### Potential Supporters

- Public Works
- MACOG

## Offer Creative Incentives Partnered with Local Bike Share

Doctors and other healthcare professionals can help patients become more active if Elkhart and Goshen create a “Prescription Bike Share” program once bike share launches in the region. This type of program allows doctors to “prescribe” patients a reduced-price bike share membership to help them incorporate exercise within their daily lives.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- MACOG
- Health systems (i.e., Goshen Health and Beacon Health)

## Embrace Bike Share

Bike share systems do well in cities with low-stress bicycle networks that include calm residential streets, paved shoulders or bike lanes, separated bike lanes, and trails. The plan’s infrastructure recommendations are an encouragement tool to help more people feel comfortable bicycling in Elkhart. Infrastructure improvements will help expand existing paths such as the Riverwalk and existing bike lanes such as the Richmond Street separated bike lanes.

Work with City departments to involve bicycle share in City programming and special events. A citywide Bicycle Ambassador’s program could help promote a future bike share system. The bike share system could supply bicycles for free or reduced-cost learn to ride events, in conjunction with area League Cycling Instructors (LCI). The bike share system could also make bicycles available during the Ambassadors’ community bike rides. This would increase the system’s visibility and help form partnerships with local organizations.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- MACOG
- Elkhart County Convention and Visitors Bureau





Figure 22. Zoning and subdivision regulations help encourage walking and bicycling while retaining the culture of Elkhart and Goshen’s downtown areas, neighborhoods, and natural spaces.

## Update Development Policies to Make Walking and Bicycling Easier, More Supported

Include sidewalks for all new, infill, and redevelopment. Sidewalks should be a minimum of five feet wide scaling up to eight or ten feet in high pedestrian use areas and along major arterial roadways and provide appropriate buffering from traffic.

Review and revise zoning and subdivision regulations to provide for:

- Medium-to-high densities wherever appropriate
- Fine-grained mix of land uses
- Short-to medium-length blocks
- Street-oriented buildings
- Parking requirements that reduce the space committed to auto parking and require bicycle parking
- Require street design to be connected to create street network that supports walking, bicycling and transit
- Work to create transit routes that provide access to all residents every half mile or closer
- Provide for safe street crossing at locations where pedestrians need to cross, such as bus stops, schools, parks, and other major destinations
- Incorporate bicycle facilities into street and building design to provide for access and parking that is convenient and accessible.

### Potential Leads

- Elkhart Planning Commission
- Goshen Planning Commission
- Public Works

### Potential Supporters

- MACOG



## Evaluation

Develop a recurring, systematic approach to tracking progress at the City level. Review progress on an annual basis, at a minimum, and prepare an outward-facing report.

Consider an annual presentation to City Council.

Program and policy tasks include:

### **Institutionalize Bicycle and Pedestrian Accommodations through the Establishment of a Standing Bicycle and Pedestrian Committee and Designation of a Pedestrian and Bicycle Coordinator**

This plan was supported by a steering committee. The steering committee should continue after the plan's publication to continue interagency cooperation.

Committee should include local government leaders, metropolitan planning department, chamber of commerce members, local visitors bureau staff, public safety representatives, bike-related business owners, and other walking and bicycling enthusiasts.

The standing committee can continue working toward plan goals before the Pedestrian and Bicycle Coordinator is appointed.

#### Potential Leads

- Pedestrian and Bicycle Coordinator

#### Potential Supporters

- MACOG
- City of Elkhart Planning & Public Works
- City of Goshen Planning & Public Works

### **Project Review for Bicycle and Pedestrian Accommodation**

Establish a review committee for infrastructure projects, and check for consistency with bicycle and pedestrian infrastructure recommendations. Where none are present, review projects for general accommodation and establish a policy that new infrastructure projects should not degrade the walking and bicycling environment

Prepare written project reviews as part of project recommendations before City Council.

#### Potential Leads

- Pedestrian and Bicycle Coordinator
- Public Works

#### Potential Supporters

- Chain Reaction Bike Shop
- Goshen College
- Bike Elkhart
- Elkhart County Public Health Department
- Friends of the Pumpkinvine Nature Trail

### **Collect Bicycle and Pedestrian Count Data on Rolling Basis**

Install counters at various locations to collect data over the course of an entire year. Maintain a database for count data by location. Invest in continuous counters for high-profile locations. Prepare a counts data report as part of annual project reports or as a standalone memorandum.

#### Potential Leads

- Pedestrian and Bicycle Coordinator

#### Potential Supporters

- Public Works
- MACOG
- Elkhart County Convention and Visitors Bureau

## Bicycle and Pedestrian Infrastructure Mapping

When projects are completed, they should be added to each city's GIS database.

Review database at least once annually.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- Parks and Recreation Department
- Public Works
- Elkhart County Highway Department
- INDOT

## Annual Report Card on Walking and Bicycling

Create an annual report card for new or modified bicycle and pedestrian infrastructure. Prepare quarterly reports for City staff in each city. Include bicycle and pedestrian count data where collected, and share year-over-year changes.

### Potential Leads

- Pedestrian and Bicycle Coordinator

### Potential Supporters

- Public Works
- MACOG
- Goshen College Department of Sustainability

## Increase Dialogue Opportunities between City and Residents for Walking and Bicycling

Expand the current 311 system to include codes related to sidewalk, bike lane, and trail maintenance requests. Prepare at least one (1) report annually on ticket levels and response times.

### Potential Leads

- Public Works

### Potential Supporters

- Pedestrian and Bicycle Coordinator
- Elkhart & Goshen Police Departments

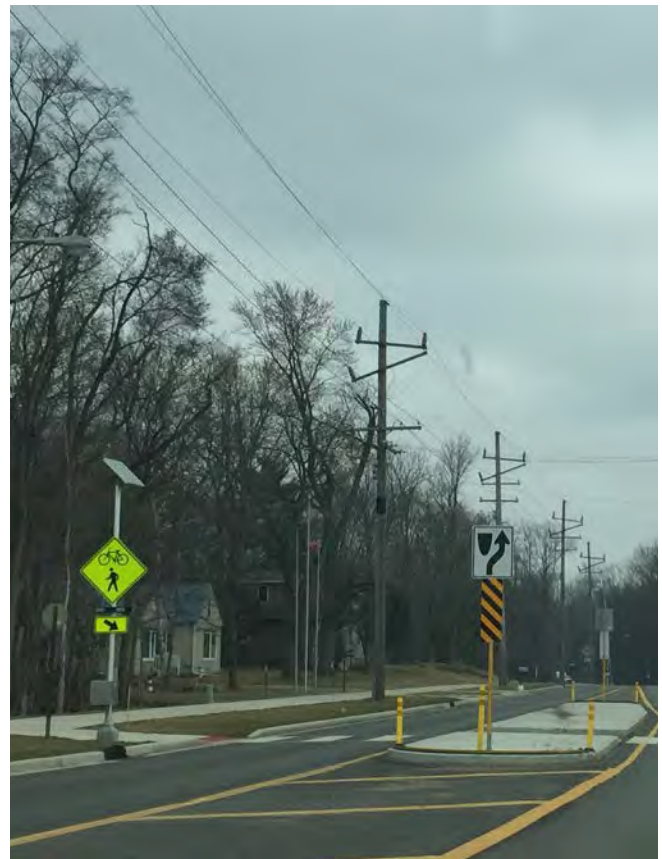


Figure 23. Proper maintenance keeps crossings, sidewalks, bike lanes, and trails clear of debris and snow.



## Achieve Consistent Opening and Closing Times of Trail Facilities

Keep trail open and close times consistent so commuters know can travel after sunset in the winter months.

### Potential Leads

- Parks and Recreation Department
- Public Works Department

### Potential Supporters

- Elkhart & Goshen Police Departments



Figure 24. Attractive pedestrian-scale lighting increases residents' and visitors' feeling of personal security.

## Recommendations for Plan Adoption

This plan illustrates potential infrastructure and programming tools to create a series of recommended actions for becoming more walk and bicycle friendly. They show potential tools to accomplish the plan's goals. Although this plan provides recommendations for potential infrastructure and programming options, cities are not limited to the facility types and streets included in this plan.

Recommendations are designed to be flexible and support multiple methods for implementation. One possible method involves creating an annual fund for pedestrian and bicycle improvements. The annual obligation would help diversify and enhance the respective pedestrian and bicycle networks.

### Potential Leads

- Public Works
- Engineering
- Planning
- Pedestrian and Bicycle Coordinator

### Potential Supporters

- Bike Elkhart and other advocacy groups



## Enforcement

Create a culture that embraces bicycling and walking and emphasizes safe, predictable, and desirable behaviors by people walking, bicycling, and driving. Increase visibility of law enforcement on foot and by bicycle.

Program tasks include:

### Periodic Updates to Bicycle and Pedestrian Safety Best Practices for Public Safety Officers

Incorporate bicycle and pedestrian educational program into training of local law enforcement. This training could be integrated into officers’ Roll Call meetings, formatted as an annual training with in classroom and on-bike components, or incorporated in Police Academy training.

Training materials, such as informational flyers, should be available if the City updates policies related to the rights and responsibilities of people walking and bicycling.

Offer at least one (1) training update annually.

#### Potential Leads

- Elkhart & Goshen Police Departments

#### Potential Supporters

- Pedestrian and Bicycle Coordinator

## Adopt a Vision Zero Policy

Adopt a Vision Zero (VZ) policy that seeks to eliminate all traffic crashes. Vision Zero strategies seek to, “eliminate all traffic fatalities and severe injuries, while increasing safe, healthy, equitable mobility for all.”<sup>1</sup>

Street redesigns, policy changes, education or encouragement programs, and equitable law enforcement come together under the VZ umbrella. The Vision Zero Network is a campaign that brings cities together across the country to work towards these goals. The Cities should take advantage of the network’s resources and online materials, such as case studies.

#### Potential Leads

- Pedestrian and Bicycle Coordinator

#### Potential Supporters

- Parks and Recreation
- Public Works
- Elkhart County Highway Department
- INDOT
- MACOG
- Engineering
- Planning

<sup>1</sup> <http://visionzeronetwork.org/about/what-is-vision-zero/>

## **Conduct Regular Public Safety Reporting to City Officials**

Public safety officers should provide regular reports on traffic crashes involving bicyclists and pedestrians to City officials. Findings could be incorporated in the annual evaluation report proposed in this plan. Reports can establish trends and discuss contributing factors as well as potential solutions.

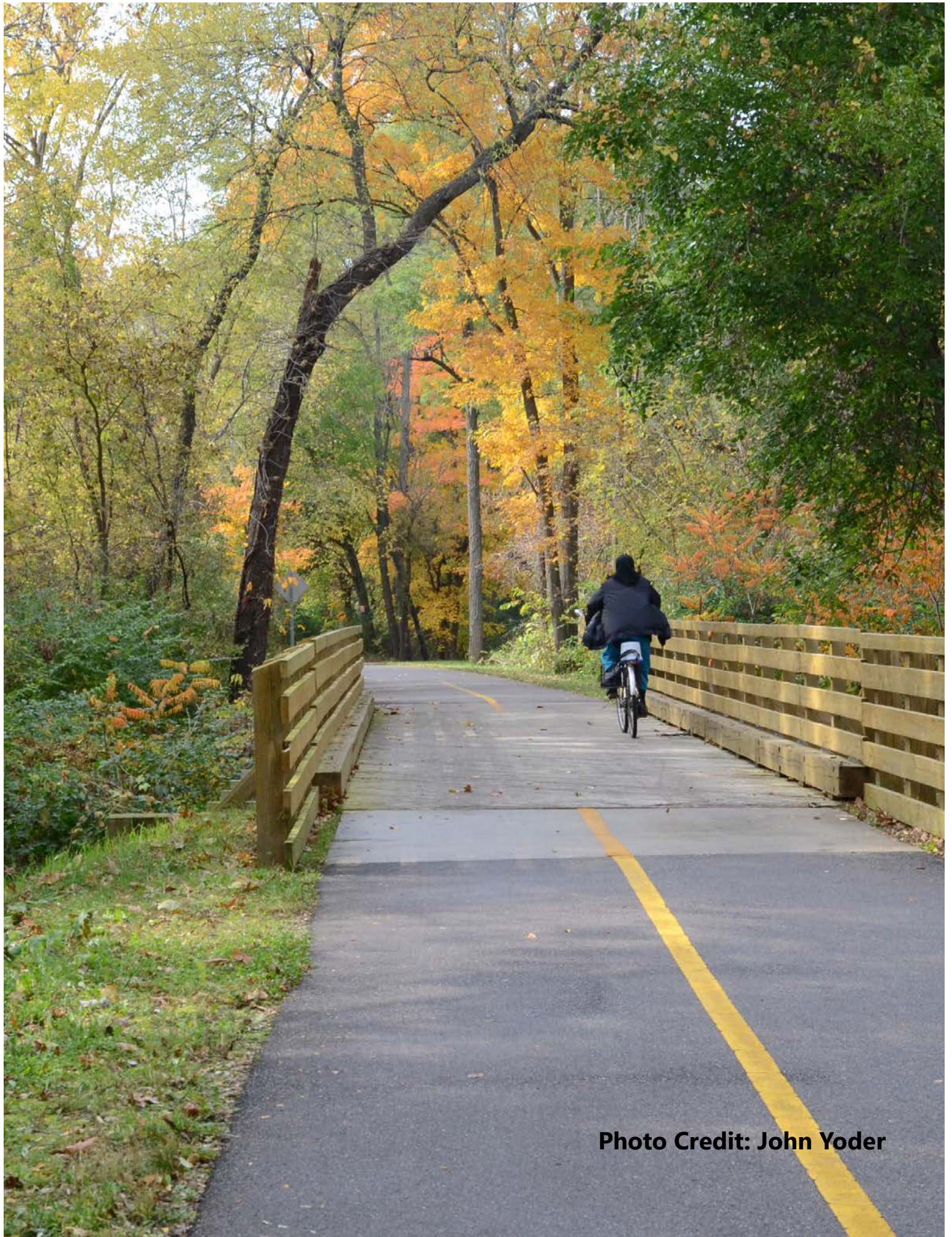
### **Potential Leads**

- Elkhart & Goshen Police Departments

### **Potential Supporters**

- Pedestrian and Bicycle Coordinator





**Photo Credit: John Yoder**



# Infrastructure Implementation

**The recommendations presented in this plan offer guidance and potential tools for creating more walk- and bicycle-friendly cities. Prioritizing projects into high, medium, and low priority levels helps each city allocate resources that align with the plan’s vision and goals.**

This section shows plan recommendations evaluated based upon several factors. Each row represents a pedestrian or bicycle infrastructure project. A “project” is defined as one or more proposed recommendations along a single corridor or along proximate corridors. This means that the prioritized project list is shorter than the overall list of recommended projects found earlier in this plan. Multiple facility types may be included with each distinct project.

Projects were evaluated based on a number of factors: connectivity, safety, project readiness, local support, and accessibility. The factors include:

### **Connectivity**

- A. Does the project close a key gap in the network?
- B. Does the project connect both municipalities?

### **Safety**

- C. Does the project address a safety concern (e.g., crashes/intersection improvement)

### **Project Readiness**

- D. Can the project be constructed without grant assistance (i.e., relatively simple projects that would make more sense to use local funds rather than use staff time to apply for a grant)?
- E. Is the project a roadway retrofit that could be accomplished with restriping?
- F. Is there available pavement width or right-of-way to easily implement the project?

### **Use & Local Support**

- G. Was there evidence of community support on maps or in comments from members of the public or

steering committee members?

- H. Is this project in a high pedestrian use area?

### **Accessibility**

- I. Does this project increase connectivity related to bicycle infrastructure and walkability?
- J. Does this project improve safety and connectivity to parks, schools, and other public facilities?
- K. Does this project modify a previous completely non-accessible route with a fully accessible pedestrian route?

A colored box indicates that a project meets the corresponding factor for prioritization. Projects are separated into high, medium, and low priority projects based on the number of prioritization factors they meet. This pass/fail method allowed the team to count the total number of factors met for each project. High priority projects meet seven to nine factors. Medium priority projects meet five to six factors. Low priority projects meet two to four factors. Programmed infrastructure improvements are not included in this scoring exercise.

### **Project Costs**

Estimated project costs are provided for general facility examples. Costs were developed based on Federal Highway Administration (FHWA) estimates and planning level cost estimates from other cities in the Midwest. Costs were developed in 2017 and represent planning level guidance. Additional engineering is necessary to formulate project costs for specific corridors.

## Cost Estimates by Type of Infrastructure

Infrastructure funding can be structured as a specific allowance set aside per year. Funding and implementation can also occur opportunistically as part of routine street resurfacing activities and other annual projects.

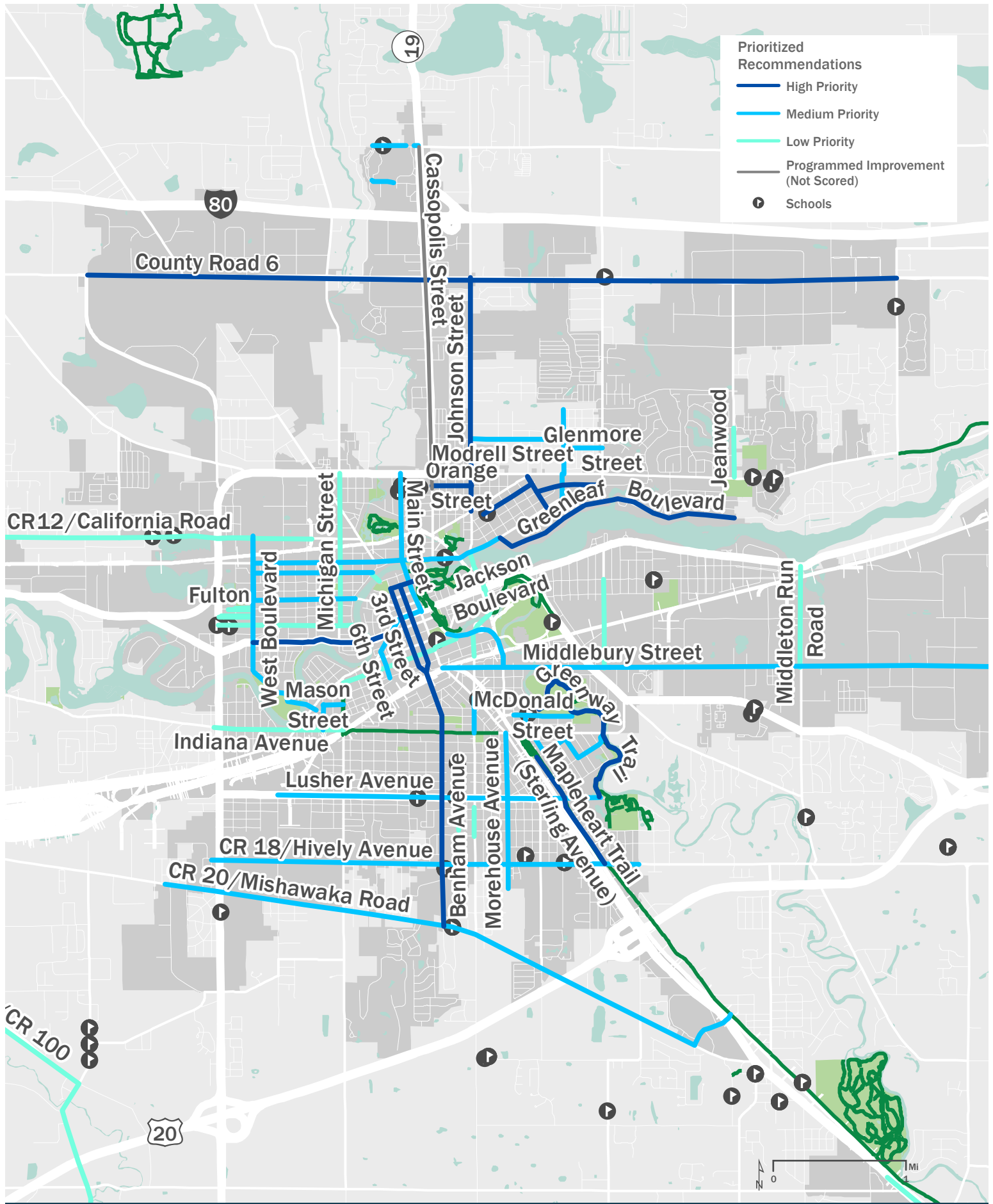
Cost estimates are an essential planning tool used for programming improvements and drafting applications for external funding sources. Cost estimates were developed based on initial planning-level examples of similar constructed projects and industry averages.

All facility designs and associated cost estimates proposed in this plan are conceptual in nature and should undergo final engineering design and review in order to arrive at detailed project costs.

These costs do not include costs for right-of-way acquisition or project design, which can include planning, public process, facility design, and other background work required to implement the project. These additional costs can generally be estimated at 25% of the facility construction cost.

**Table 5. Infrastructure Improvement Cost Estimates**

Facility Type	Per Mile Cost Estimate (Lower Limit)	Per Mile Cost Estimate (Upper Limit)
Signed Route	\$9,000	\$15,000
Shared Lane Marking	\$12,000	\$20,000
Advisory Shoulder	\$15,000	\$20,000
Neighborhood Greenway	\$70,000	\$130,000
Traffic Calming (bumpouts, median island, raised crossing)	\$115,000	\$175,000
Stripe Existing	\$6,000	\$12,000
Parking Lane		
Bike Lanes (no buffer)	\$40,000	\$75,000
Buffered Bike Lanes	\$60,000	\$120,000
Physically Separated Bike Lane	Cost varies depending on separation treatment and configuration	
Sidewalk (estimate for both sides of street)	\$225,000	\$350,000
Sidepath	\$350,000	\$1,500,000
Trail	\$400,000	\$1,800,000
New Pedestrian and Bicycle Bridge	\$11,000,000	\$18,000,000



# Elkhart Prioritized Recommendations



**Table 6. Elkhart High-Priority Projects**

Street Name	Recommended Facility	Total	Criteria												
			A	B	C	D	E	F	G	H	I	J	K		
Sycamore Street from 3rd Street to Main Street	Neighborhood Greenway	8													
3rd Street from Sycamore Street to Benham Avenue	Bike Lane	8													
2nd Street from Sycamore Street to Benham Avenue	Bike Lane	8													
Benham Avenue from 2nd Street/3rd Street to CR 20/Mishawaka Road	Bike Lane	8													
County Road 6 from Nappanee Street to CR 15	Sidepath	7													
Johnson Street from CR 6 to Sunset Avenue	Bike Lane and Sidepath	7													
Orange Street (from Cassopolis Street to Johnson Street), McPherson Street (from Dearborn Street to Lilac Street), Lilac Street (from Baldwin Street to Beardsley Avenue), and Grant Street (from Lilac Street to CR 11)	Neighborhood Greenway	7													
Greenleaf Boulevard from Dearborn Street to Marguerite Avenue)	Sidewalk	7													
Lexington Avenue from West Boulevard to Vistula Street	Bike Lane and Shared Lane Marking	7													
Greenway Trail from McDonald Street to Lusher Avenue	Trail Improvement	7													
Mapleheart Trail (Sterling Avenue) from Red Street to Hively Avenue	Sidepath	7													

**Criteria Key:**

- A. Closes gaps
- B. Connects both municipalities

- C. Addresses safety
- D. Local funding
- E. Restriping

- F. Adequate right-of-way exists
- G. Community support
- H. High pedestrian use

- I. Bicycle infrastructure and walkability
- J. Schools and other public facilities
- K. Pedestrian accessibility



Figure 25. Intersection designs should improve the visibility of people walking and bicycling.

**Table 7. Elkhart Medium-Priority Projects**

Street Name	Recommended Facility	Total	Criteria													
			A	B	C	D	E	F	G	H	I	J	K			
Sanford School Road/CR 4W from Northpointe Boulevard to Cassopolis Street	Sidewalk	6														
Northpointe Boulevard from Lake Pointe Circle to Caravan Drive	Sidewalk	6														
Richmond Street from Elkhart Avenue to Middlebury Street	Barrier Separated Bike Lane	6														
Middlebury Street from Main Street to Simpson Avenue	Sidepath and Shared Lane Marking	6														
Lusher Avenue from 17th Street to Greenway Trail	Sidepath	6														
Modrell Boulevard (from Johnson Street to Independence Street) and Glenmore Street (from Independence Street to CR 11)	Neighborhood Greenway	5														
Independence Street from Medford Street to Beardsley Avenue	Neighborhood Greenway	5														
Main Street from SR 112 to Jackson Boulevard	Stripe Existing Parking Lane and Bike Lane	5														
West Boulevard, Thomas Street, S W Boulevard, and Mason Street from Mishawaka Street to Indiana Avenue	Bike Lane, Sidewalk, Signed Route	5														
Beardsley Avenue from West Boulevard to Greenleaf Boulevard	Bike Lane and Traffic Calming	5														
Maple Row from West Boulevard to Riverside Drive	Neighborhood Greenway	5														
Bower Street from West Boulevard to Riverside Drive	Neighborhood Greenway	5														
Tipton Street (from McDonald Street to Sterling Avenue park), Indiana/Moyer/Ren/Huron/Bar/River (from Tipton Street to Gateway Park)	Sidepath and Signed Route	5														
Jackson Street from Harrison Street to Main Street	Neighborhood Greenway	5														
CR 17 from CR 17 Trail to Verdant Street	Sidepath	5														
Prairie Avenue from Main Street to Indiana Avenue	Signed Route	5														
McDonald Street from Princeton Boulevard to Troy Avenue	Signed Route	5														
Morehouse Avenue from Indiana Avenue to Lynne Lane	Neighborhood Greenway	5														

**Criteria Key:**

- A. Closes gaps
- B. Connects both municipalities

- C. Addresses safety
- D. Local funding
- E. Restriping

- F. Adequate right-of-way exists
- G. Community support
- H. High pedestrian use

- I. Bicycle infrastructure and walkability
- J. Schools and other public facilities
- K. Pedestrian accessibility

Street Name	Recommended Facility	Total	Criteria												
			A	B	C	D	E	F	G	H	I	J	K		
CR 18/Hively Avenue from Nappanee Street to Hazel Street	Sidepath	5													
CR 20/Mishawaka Road (from Grand Street to Concord Mall Drive) and Concord Mall Drive (from Mishawaka Road to Mapleheart Trail	Sidepath	5													

**Table 8. Elkhart Low-Priority Projects**

Street Name	Recommended Facility	Total	Criteria												
			A	B	C	D	E	F	G	H	I	J	K		
Jeanwood Drive from Lake Drive to CR 10	Sidewalk	4													
Michigan Street from SR 112 to Strong Avenue	Shared Lane Marking	4													
Strong Ave from Nappanee Street to Riverside Drive	Advisory Shoulder	4													
Prairie Street and CR 9/Johnson Street from Beardsley Avenue to State Street	Sidepath	4													
Marion Street from Oakland Avenue to Richmond Street	Signed Route	4													
Indiana Avenue from Nappanee Street to Oakland Avenue	Bike Lane	4													
Simpson Avenue from Wood Street to Middlebury Street	Sidepath	4													
Hawthorne Drive and CR 9/Prairie Street from Lusher Avenue to Thorndale Drive	Sidewalk	4													
Mishawaka and CR 12/California Road from Woodrow Street to Mapleheart Trail	Sidewalk, Shared Lane Marking, Sidepath	3													
Kilbourn Street (from Nappanee Street to West Boulevard) and Fulton Street (from Wildwood Avenue to West Boulevard)	Sidewalk	3													
New Ped/Bike Bridge from Riverside Drive to Langle Park	New Pedestrian and Bicycle Bridge	3													
Middleton Run Road from SR 120 to Middlebury Street	Sidepath	3													

**Criteria Key:**

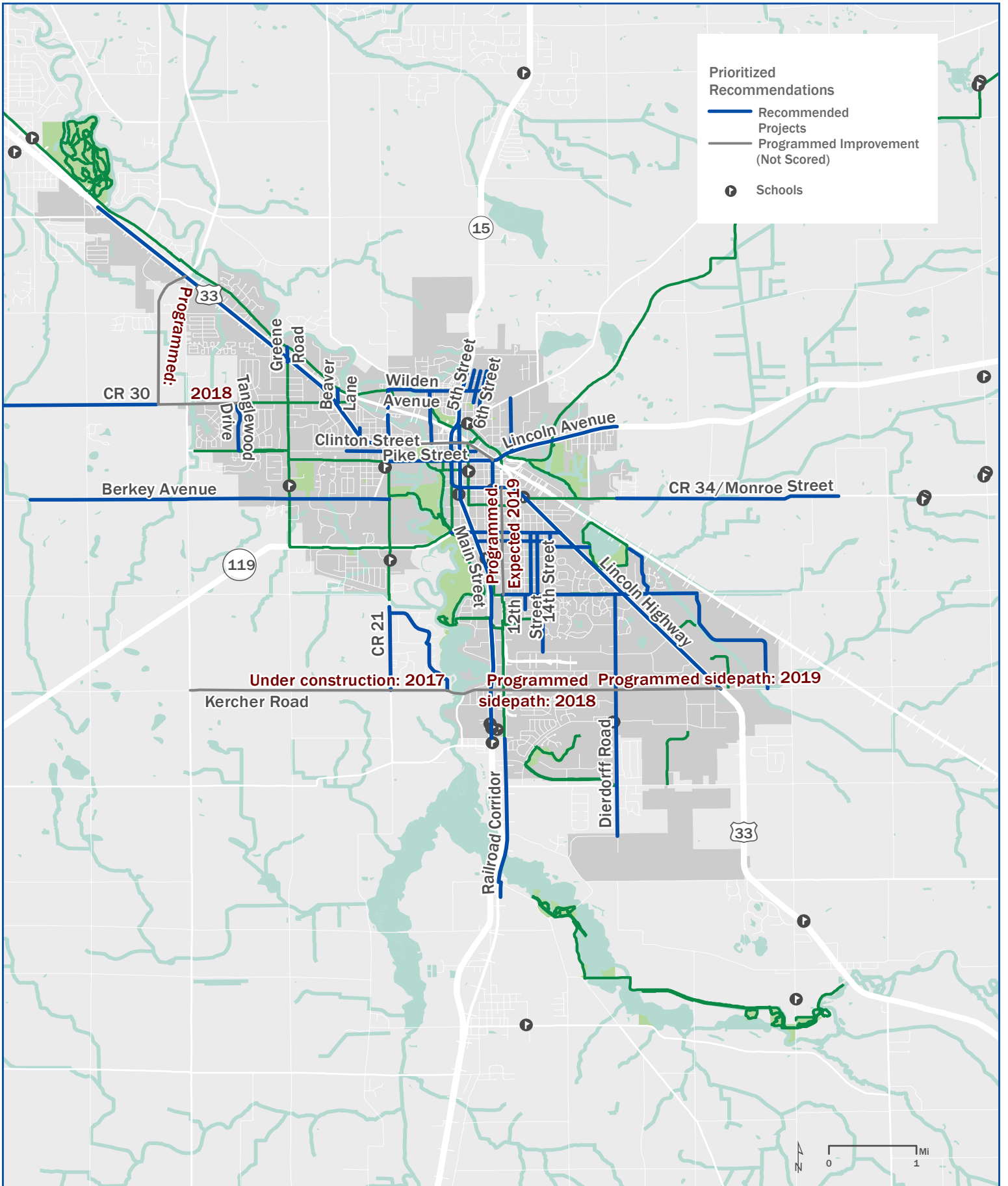
- A. Closes gaps
- B. Connects both municipalities

- C. Addresses safety
- D. Local funding
- E. Restriping

- F. Adequate right-of-way exists
- G. Community support
- H. High pedestrian use

- I. Bicycle infrastructure and walkability
- J. Schools and other public facilities
- K. Pedestrian accessibility





**Prioritized Recommendations**

- Recommended Projects
- Programmed Improvement (Not Scored)
- Schools

**Table 9. Goshen Recommended Projects**

Street Name	Recommended Facility	Criteria										
		A	B	C	D	E	F	G	H	I	J	K
8th Street from Lincoln to Central City Trail	Neighborhood Greenway											
Main Street from Mapleheart Trail to Woodlawn Drive	Bike Lane and Signed Route											
Lincoln Highway from Main Street to Kercher Road	Sidepath, Sidewalk											
Main Street (from Middlebury Street to southern municipal boundary) and 3rd Street (from Mapleheart Trail to Lincoln Highway)	Sidepath and Separated Bike Lane											
Main Street from Westwood Road to Kercher Road	Bike Lane and Sidewalk											
Riverside Boulevard from Division Street to Pike Street	Sidewalk											
Clinton Street from Rogers Park to 6th Street	Bike Lane											
Lincoln Avenue from Pumpkinvine Trail to 29th Street	Bike Lane, Sidewalk, and Sidepath											
CR 36/College Avenue from Programmed north-south trail at railroad tracks to Century Drive	Sidepath, Sidewalk, and Paved Shoulder											
CR 21 from CR 36 to Kercher Road*	Sidepath											
Path from southeast side of Fidler Pond to Spring Brooke Drive	Trail, Signed Route											
Greene Road from Mapleheart Trail to Greene Road Trail	Sidepath											
Beaver Lane from Mapleheart Trail to Bashor Road Trail	Sidepath											
1st Street from Wilden Avenue to Pike Street	Signed Route											
New Trail from Rogers Park Connector to Lincoln Avenue	Trail											
CR 34/Monroe Street from Hillcrest Drive to CR 131*	Sidepath											
Plymouth Avenue from Millrace Canal Trail to Lincoln Highway	Sidepath											
Jackson Street, Fairfield Avenue, and 16th Street from Main Street to Fidler Pond Park	Neighborhood Greenway, Sidewalk, and Signed Routes											
Meadow Ridge Drive and Orchard Drive from CR 21 to Kercher Road*	Neighborhood Greenway											
Wilden Avenue from Indiana Avenue to 7th Street	Neighborhood Greenway and Sidepath											

**Criteria Key:**

A. Closes gaps

B. Connects both municipalities

C. Addresses safety

D. Local funding

E. Restriping

F. Adequate right-of-way exists

G. Community support

H. High pedestrian use

I. Bicycle infrastructure and walkability

J. Schools and other public facilities

K. Pedestrian accessibility

\* Denotes a project located outside of Goshen: would be implemented by other stakeholders

Street Name	Recommended Facility	Criteria										
		A	B	C	D	E	F	G	H	I	J	K
Tanglewood Drive from Bashor Road to Clinton Street	Signed Route											
CR 21/Indiana Avenue from Wilden Avenue to Pike Street	Sidepath and Traffic Calming											
13th Street and 14th Street from Plymouth Avenue to College Avenue	Sidewalk and Neighborhood Greenway											
15th Street (from College Avenue to Mervin Street) and 12th Street (from Winona Interurban Trail to Eisenhower Drive)	Sidewalk											
Century Drive from College Avenue to Kercher Avenue	Signed Route											
Railroad Corridor from southern municipal boundary to Baintertown Hydro Loop*	Trail											
Arehart Street/7th Street, 6th Street, and 5th Street	Sidewalk											
Olive Street from Middlbury Street to Lincoln Avenue	Advisory Shoulder											
Clinton Street from Riverside Boulevard to Indiana Avenue	Sidewalk											
Dierdorff Road from College Road to Country Road 27	Sidepath											
Berkey Avenue from CR 15 to Indiana Avenue	Advisory Shoulder											
CR 20/CR 100/CR 3 from Ash Road to CR 30*	Paved Shoulder											
CR 30 from CR 3 to Bashor Road	Paved Shoulder											

**Criteria Key:**

A. Closes gaps

B. Connects both municipalities

C. Addresses safety

D. Local funding

E. Restriping

F. Adequate right-of-way exists

G. Community support

H. High pedestrian use

I. Bicycle infrastructure and walkability

J. Schools and other public facilities

K. Pedestrian accessibility

\* Denotes a project located outside of Goshen: would be implemented by other stakeholders





**Appendix 1**  
**Community Assessment Scorecards**

## Elkhart Walk Friendly Community Assessment

The City of Elkhart scored six out of 17 possible points (update based on City’s feedback to questions, as noted in the assessments. Update relevant sections in assessment table) on the City’s abridged WFC assessment. Although the City has worked on pedestrian-supportive projects in the past, the assessment revealed that several of these programs occur on a case-by-case basis, rather than a comprehensive program.

Elkhart’s abridged assessment is provided below.

**Table 10. City of Elkhart Walk Friendly Community Assessment**

City of Elkhart Walk Friendly Community Assessment	YES	NO
<b>Community Profile</b>		
Are there specific government staff or contractors whose primary duties are devoted to walk-ability and pedestrian safety issues?		X
Do you have a Pedestrian Advisory Committee or other venue for citizen input? Comment: Public input is requested for each government-led planning initiative.		X
COMMUNITY PROFILE SCORE TOTAL	0/2	
<b>Planning and Evaluation</b>		
Has your community adopted a pedestrian plan or pedestrian safety action plan? Comment: Pedestrian components are considered in local and regional plans. This planning effort will establish robust pedestrian recommendations.		X
Do planning efforts involve safety goals related to walking (i.e., crash reduction)?	X	
Has your community adopted an ADA Transition Plan for the public right of way?	X	
Has your community adopted a Complete Streets policy or ordinance?		X
Does the city have a policy requiring sidewalks on both sides of arterial and collector streets, pedestrian friendly parking standards, infill development requirements, and standards for urban amenities (i.e., street furniture, lighting)? Comment: Sidewalk requirements in new developments have been discussed in previous plans. Elkhart rescinded a snow clearing requirement in 2016 that required homeowners to clear snow on sidewalks in front of their property.		X
Does your community have an ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips?		X
PLANNING SCORE TOTAL	2/6	



City of Elkhart Walk Friendly Community Assessment	YES	NO
<b>Education and Encouragement</b>		
Does your community offer Safe Routes to School (SRTS) programming? Comment: Refer also to Elkhart's BFC audit.	X	
Does your community provide education and training programs related to walking education, safety, or design for staff in your municipality? City of Elkhart staff: please comment on this question.		
Does your community have walking tours, guides, or maps available?		X
Does your community hold Open Street (AKA ciclovía, Sunday Parkways) or similar events? Comment: There are a number of annual charity walks and runs within Elkhart and surrounding communities.		X
EDUCATION AND ENCOURAGEMENT SCORE TOTAL	1/4	
<b>Engineering</b>		
Do your design standards require the latest pedestrian-friendly engineering requirements and specifications?	X	
Does your community inventory sidewalks, curb ramps, and other features?	X	
Does your community employ a traffic calming strategy? Comment: Residents have requested traffic calming measures as part of neighborhood projects.	X	
ENGINEERING SCORE TOTAL	3/3	
<b>Enforcement and Evaluation</b>		
Does your community have a traffic safety officer within the Police Department? Comment: However, the Elkhart County Sheriff's Department organized a traffic safety detail near three high schools in February 2017.		X
Does your community use targeted enforcement programs to ensure the safety and security of people walking? Comment: The Indiana Safe Routes to School Guidebook includes enforcement recommendations ( <a href="http://www.in.gov/isdh/files/SRTS_Guidebook%202016.pdf">http://www.in.gov/isdh/files/SRTS_Guidebook%202016.pdf</a> ).		X
ENFORCEMENT TOTAL	0/2	
WALK FRIENDLY TOTAL	6/17	

## Elkhart Bike Friendly Community Assessment

The City of Elkhart received eight out of 17 possible points. Once the City submits a BFC application, the League will respond with a customized report card regarding areas of improvement. This plan will include specific recommendations and next steps to support BFC certification. The City of Elkhart's community score card is provided here:

**Table 11. City of Elkhart Bike Friendly Community Assessment**

City of Elkhart Bike Friendly Community Assessment	YES	NO
<b>Engineering</b>		
Does your community have a comprehensive, connected and well-maintained bicycling network? Comment: The City's efforts to create a connected network include placing Quaker Trace wayfinding signage throughout the city and connecting paths, bike routes, and shared lanes to parks, downtown, and other destinations. This plan will include network recommendations to create a more connected on street and off street network that is comfortable for people of all ages.		X
Is bike parking readily available throughout the community? Comment: Twenty-one bicycle racks were installed in the downtown area in 2015-2016. Bike Elkhart donated seven racks and Elkhart's Redevelopment Commission donated the remaining fourteen.	X	
Is there a Complete Streets ordinance or another policy that mandates the accommodation of cyclists on all road projects? Comment: The City unanimously passed a bicycle buffer ordinance in 2014 that requires motorists to provide three feet of passing distance between their motor vehicle and bicyclists when passing on city streets.		X
<b>ENGINEERING SCORE TOTAL</b>	1/3	
<b>Education</b>		
Is there a community-wide Safe routes to School program that includes bicycling education? Comment: The schools operate Safe Routes to School (SRTS) programs, although they are not typically institutionalized within the local or regional government.	X	
Are there bicycling education courses available for adults in the community? Comment: At least two League Cycling Instructors currently reside in Elkhart ( <a href="http://bgindy.com/articles/bicycle-safety-education-resources-pg936.htm">http://bgindy.com/articles/bicycle-safety-education-resources-pg936.htm</a> ). Bicycle Indiana provides information and resources on local instructors, programs, and best practices. These programs are not institutionalized through the City.		X
Does your community educate motorists and cyclists on their rights and responsibilities as road users? Comment: See above.		X
<b>EDUCATION SCORE TOTAL</b>	1/3	



City of Elkhart Bike Friendly Community Assessment	YES	NO
<b>Encouragement</b>		
Does your community have an up-to-date bicycle map? Comment: Maps can be found on the City’s website, which the City is currently updating. Third party maps are available at bike shops and kiosks. Gateway Mile produces a print map based on MACOG data.	X	
Does the community celebrate bicycling during national bike month (May) with community rides, Bike to Work Day or media outreach? Comment: Past Bike to Work Week events have included rides to invite residents to try newly established signed bicycle routes. The City holds an annual Mayor’s Ride.	X	
Does the community host any major community cycling events or rides? Comment: See above.	X	
Is there an active bicycle advocacy group in the community? Comment: Bike Elkhart, Bicycle Indiana, Michiana Bicycle Association	X	
ENCOURAGEMENT SCORE TOTAL	4/4	
<b>Enforcement</b>		
Do law enforcement officers receive training on the rights and responsibilities of all road users?		X
Does your community have law enforcement or other public safety officers on bikes?		X
Do local ordinances treat bicyclists equitably? Comment: §73.01 OPERATORS TO CONFORM TO MOTOR VEHICLE RULES. Operators of bicycles, when on a public highway or street, shall conform to the rules established for the operation of motor vehicles, including the directions and the instructions of official traffic-control signals and devices applicable to vehicles, unless otherwise directed by a police officer. This planning effort will further discuss this topic.	X	
ENFORCEMENT SCORE TOTAL	1/3	
<b>Evaluation and Planning</b>		
Is there a specific plan or program to reduce cyclist/motor vehicle crashes? Comment: Safety is a component of this and previously completed plans.		X
Does your community have a current comprehensive bicycle plan? Comment: The MACOG Active Transportation Plan outlines recommendations and this plan builds upon that and other previously completed plans.	X	
Is there a Bicycle Advisory Committee that meets regularly? Comment: Bike Elkhart members are often consulted for input on City projects.		X
Does your community have a bicycle program manager?		X
EVALUATION AND PLANNING TOTAL	1/4	
BICYCLE FRIENDLY TOTAL	8/17	

## Goshen Walk Friendly Community Assessment

The City of Goshen scored six out of 17 possible points (update based on City’s feedback to questions, as noted in the assessments. Update relevant sections in assessment table) on the City’s abridged WFC assessment. Although Goshen offers a fairly robust sidewalk network, the assessment identifies areas for improvement.

The City of Goshen’s abridged Walk Friendly Assessment is provided here.

**Table 12. City of Goshen Walk Friendly Community Assessment**

City of Goshen Walk Friendly Community Assessment	YES	NO
<b>Community Profile</b>		
Are there specific government staff or contractors whose primary duties are devoted to walk-ability and pedestrian safety issues?		X
Do you have a Pedestrian Advisory Committee or other venue for citizen input? Comment: Public input is requested for each government-led planning initiative.		X
COMMUNITY PROFILE SCORE TOTAL	0/2	
<b>Planning and Evaluation</b>		
Has your community adopted a pedestrian plan or pedestrian safety action plan? Comment: Pedestrian components are considered in local and regional plans. This planning effort will establish robust pedestrian recommendations.		X
Do planning efforts involve safety goals related to walking (i.e., crash reduction)?	X	
Has your community adopted an ADA Transition Plan for the public right of way?	X	
Has your community adopted a Complete Streets policy or ordinance?		X
Does the city have a policy requiring sidewalks on both sides of arterial and collector streets, pedestrian friendly parking standards, infill development requirements, and standards for urban amenities (i.e., street furniture, lighting)? Comment: Sidewalk improvements have been mentioned in various previously completed local and regional plans.		X
Does your community have an ongoing pedestrian counting and/or survey program that allows for long-term trend analysis of walking trips?		X
PLANNING SCORE TOTAL	2/6	

City of Goshen Walk Friendly Community Assessment	YES	NO
<b>Education and Encouragement</b>		
Does your community offer Safe Routes to School (SRTS) programming? Comment: Refer also to Goshen's BFC audit.	X	
Does your community provide education and training programs related to walking education, safety, or design for staff in your municipality? City of Goshen staff: please comment on this question.		X
Does your community have walking tours, guides, or maps available? Comment: Goshen's Resource Book ( <a href="http://goshenindiana.org/media/uploads/0/53_city_of_goshen_resource_book.pdf">http://goshenindiana.org/media/uploads/0/53_city_of_goshen_resource_book.pdf</a> ) and the Good of Goshen website discusses the Maple City Greenway ( <a href="http://goodofgoshen.com/visit-goshen/destinations/">http://goodofgoshen.com/visit-goshen/destinations/</a> ).	X	
Does your community hold Open Street (AKA ciclovía, Sunday Parkways) or similar events? Comment: Downtown Goshen offer "First Friday" programming and other events throughout the year.	X	
EDUCATION AND ENCOURAGEMENT SCORE TOTAL	3/4	
<b>Engineering</b>		
Do your design standards require the latest pedestrian-friendly engineering requirements and specifications? City of Goshen staff: please comment on this question.		X
Does your community inventory sidewalks, curb ramps, and other features?	X	
Does your community employ a traffic calming strategy?		X
ENGINEERING SCORE TOTAL	1/3	
<b>Enforcement and Evaluation</b>		
Does your community have a traffic safety officer within the Police Department? Comment: However, the Elkhart County Sheriff's Department organized a traffic safety detail near three high schools in February 2017.		X
Does your community use targeted enforcement programs to ensure the safety and security of people walking? Comment: The Indiana Safe Routes to School Guidebook includes enforcement recommendations ( <a href="http://www.in.gov/isdh/files/SRTS_Guidebook%202016.pdf">http://www.in.gov/isdh/files/SRTS_Guidebook%202016.pdf</a> ).		X
ENFORCEMENT TOTAL	0/2	
WALK FRIENDLY TOTAL	6/17	



## Goshen Bike Friendly Community Assessment

The City received nine out of 17 possible points on the Community Scorecard, shown below, as part of this planning effort. This means the City is well on its way towards improving its current BFC Bronze status, provided the City maintains momentum related to creating infrastructure and programming opportunities for residents and visitors. The City of Goshen's community score card is provided here.

**Table 13. City of Goshen Bike Friendly Community Assessment**

City of Goshen Bike Friendly Community Assessment	YES	NO
<b>Engineering</b>		
Does your community have a comprehensive, connected and well-maintained bicycling network? Comment: The City is making efforts to create a connected network.		X
Is bike parking readily available throughout the community? Comment: In addition to publicly installed racks, some business owners are opting to install end of trip facilities for their customers.	X	
Is there a Complete Streets ordinance or another policy that mandates the accommodation of cyclists on all road projects? Comment: The City unanimously passed a bicycle buffer ordinance in 2014 that requires motorists to provide three feet of passing distance between their motor vehicle and bicyclists when passing on city streets.		X
<b>ENGINEERING SCORE TOTAL</b>	1/3	
<b>Education</b>		
Is there a community-wide Safe routes to School program that includes bicycling education? Comment: The program began as a partnership between Goshen Community Schools and residents ( <a href="http://www.wearegoshen.org/blog-1/2015/5/15/how-mary-helped-the-one-about-goshens-safe-routes-to-school">http://www.wearegoshen.org/blog-1/2015/5/15/how-mary-helped-the-one-about-goshens-safe-routes-to-school</a> ).	X	
Are there bicycling education courses available for adults in the community? Comment: There is at least one League Cycling Instructor (LCI) in Goshen ( <a href="http://bgindy.com/articles/bicycle-safety-education-resources-pg936.htm">http://bgindy.com/articles/bicycle-safety-education-resources-pg936.htm</a> ). Chain Reaction Bicycle Project provides education programming in partnership with local government.	X	
Does your community educate motorists and cyclists on their rights and responsibilities as road users? Comment: See above.		X
<b>EDUCATION SCORE TOTAL</b>	2/3	
<b>Encouragement</b>		
Does your community have an up-to-date bicycle map? Comment: The community's GIS layers are up-to-date. A bicycle map will be produced as part of this plan. The Goshen Parks and Recreation Department has a map of the Maple City Greenway system, but it is not intended to be followed closely for navigation ( <a href="http://goshen-indiana.org/trails">http://goshen-indiana.org/trails</a> ). MACOG produces a regional map ( <a href="http://www.macog.com/PDFs/BPN/BikeMap.pdf">http://www.macog.com/PDFs/BPN/BikeMap.pdf</a> ).		X

City of Goshen Bike Friendly Community Assessment	YES	NO
<p>Does the community celebrate bicycling during national bike month (May) with community rides, Bike to Work Day or media outreach?  Comment: The City of Goshen celebrates Michiana Bike Month. Goshen holds an annual Mayor’s Bike Ride. Goshen College typically composes a team for the annual Corporate Challenge as part of Michiana Bike to Work Week.</p>	X	
<p>Does the community host any major community cycling events or rides?  Comment: Annual Pumpkinvine bicycle ride.</p>	X	
<p>Is there an active bicycle advocacy group in the community?  Comment: Goshen Bikes meets monthly and offers bicycle education. The group maintains a Google Group and a Facebook page to keep members of the public informed of bicycle-related events. Regional bicycle advocacy programs are active in the Goshen area. The Friends of the Pumpkinvine Nature Trail organize an annual community bike ride and other events.</p>	X	
ENCOURAGEMENT SCORE TOTAL	3/4	
<b>Enforcement</b>		
Do law enforcement officers receive training on the rights and responsibilities of all road users?		X
Does your community have law enforcement or other public safety officers on bikes?		X
<p>Do local ordinances treat bicyclists equitably?  Comment: §4.6.1.2 Vehicle defined. The term “vehicle” refers to an automobile, a motorcycle, a truck, a trailer, a semi-trailer, a tractor, a bus, a school bus, a recreational vehicle, or a motorized bicycle.  Public involvement exercises completed as part of this plan will investigate whether residents feel they are equitably treated when bicycling in Elkhart.</p>	X	
ENFORCEMENT SCORE TOTAL	1/3	
<b>Evaluation and Planning</b>		
<p>Is there a specific plan or program to reduce cyclist/motor vehicle crashes?  Comment: Safety is a component of this and previously completed plans.</p>		X
<p>Does your community have a current comprehensive bicycle plan?  Comment: The Goshen comprehensive plan, Uncommonly Great Goshen, contains a transportation chapter that discusses bicycling. The MACOG Active Transportation Plan outlines recommendations and this plan builds upon that and other previously completed plans.</p>	X	
<p>Is there a Bicycle Advisory Committee that meets regularly?  Comment: The Maple City Advisory Committee (MCBAC) is composed of members of the public and City employees. The group also encourages participation in local bicycling events.</p>	X	
Does your community have a bicycle program manager?		X
EVALUATION AND PLANNING TOTAL	2/4	
BICYCLE FRIENDLY TOTAL	9/17	







**Appendix 2**  
**Ambassador Program Details**



## Method

Conduct regular bicycling and walking related events and interact with non-riders/walkers at other public events to educate and to encourage people to ride their bikes more and do so safely.

The following three strategies would help educate Elkhart and Goshen residents of all ages.

### Organize Bicycling Ambassador Events in Spring/Summer

Example stand-alone events include bike rodeos, helmet giveaways, light giveaways, learn-to-ride events and community bike rides. At least two instances of each event should be scheduled per summer to allow for community participation.

- **Bike Rodeos:** Usually created for children, but can be used for adults who want to start riding again.
- **Helmet and Light Giveaways:** An extension of current advocates' work. Giveaways are good ways to capture a large audience and promote safety and injury reduction. Ambassadors install the lights and properly fit each helmet to model their correct use. Local police could be encouraged to participate, which offers an informal way to familiarize police and residents with laws regarding walking and bicycling.
- **Learn-to-Ride Events:** Offering free learn to ride lessons on a regular basis to adults and children accomplishes two goals: 1. Properly educates anyone who gets lessons. 2. Gives the ambassadors a regular presence when not doing other outreach. Classes would ideally occur weekly and have two to four students per teacher. Combining classes with the light and helmet giveaways will help cross-promote the classes.
- **Community Bike Rides:** Bike rides of all lengths are very important in encouraging riding for multiple trip purposes. Rides should occur at regular intervals within each month from May to September (i.e., first Tuesday of the month, second Saturday). Each month should offer three or four rides of varying lengths (i.e., one short, one medium, one long).

### Attend Existing Community Events

There are several regular public events, festivals and activities at which Ambassadors could host a booth or activity. Do not limit the outreach to once per recurring event. Instead, attend as many regular community events as possible. These events offer a way to talk to non-cyclists and promote upcoming events organized by the Ambassadors.

### Educate School Aged Children During the School Year

There are 21 schools in Elkhart and 11 schools in Goshen. Going directly to each school and educating the children and youth on safe walking and biking will ensure that every child of appropriate age can receive this information. This can be done class by class or as assemblies. Going class by class will allow greater participation, especially at the high school level. Target ages are seven to ten year olds and 15 to 16 year olds. Note that in even large markets, like Chicago, Marin County or Portland, this kind of work is done on a school by school basis. Additionally, it can be hard to utilize National Bike and National Walk to School Days as a way to reach every school. Even the largest outreach programs are unable to reach every school on these days, unless the schools plan some programming themselves.

## Evaluation

A successful program can be measured in several dimensions:

### Participation in Events

What is the programs capacity compared to how many people attended the events? If teaching learn-to-ride classes, the number of people participating is typically smaller than a group ride. If you have lights or helmets, did you give them all away, or did everyone who showed up receive one?

### Number of People Contacted

After each event, measure the number of people that attended the event and how many people the outreach staff reached. As a rule, for one on one conversations, talking to 25-50 people in a two hour period is good

for one outreach staff member. If you are handing out literature, the number of people contacted will be higher. Look at how many people attended the event over all, how many did you talk to?

### Number of People Who Now Ride

This number can be measured through the American Community Survey or through surveys sent to homes or online. Done at regular intervals, this can give a good measure of ridership increases.

### Reduction in Crash Numbers

In addition to an increase in ridership, a safer biking environment also is a good measure of biking improvement. State crash data can lag behind outreach done by a year or two; work with local law enforcement to get unofficial crash data. Serious and fatal crashes usually stay relatively the same between unofficial and official status.

## Sample Ambassador Calendar: Summer 2017

A sample calendar is shown below. The calendar assumes one to two Ambassadors are available for outreach during the month.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
			1 Learn to Ride	2 Evening Community Event	3 Community Events Morning and Afternoon	4 Off
5 General Outreach Morning	6 Community Ride – 2 miles (Beginners and families)	7 Off	8 Learn to Ride	9 Evening Community Events	10 Community Events Morning and Afternoon	11 Off
12 General Outreach Morning	13 Off	14 General Outreach Morning	15 Learn to Ride	16 Evening Community Events	17 Community Events Morning and Afternoon	18 Off
19 General Outreach Morning	20 General Outreach Morning	21 Off	22 Learn to Ride	23 Bike Light Giveaway	24 Community Events Morning and Afternoon	25 Community Ride – 10 Miles (Intermediate)
26 Off	27 General Outreach Morning	28 Off	29 Learn to Ride	30 Community Ride – 25 Miles (Expert)		

