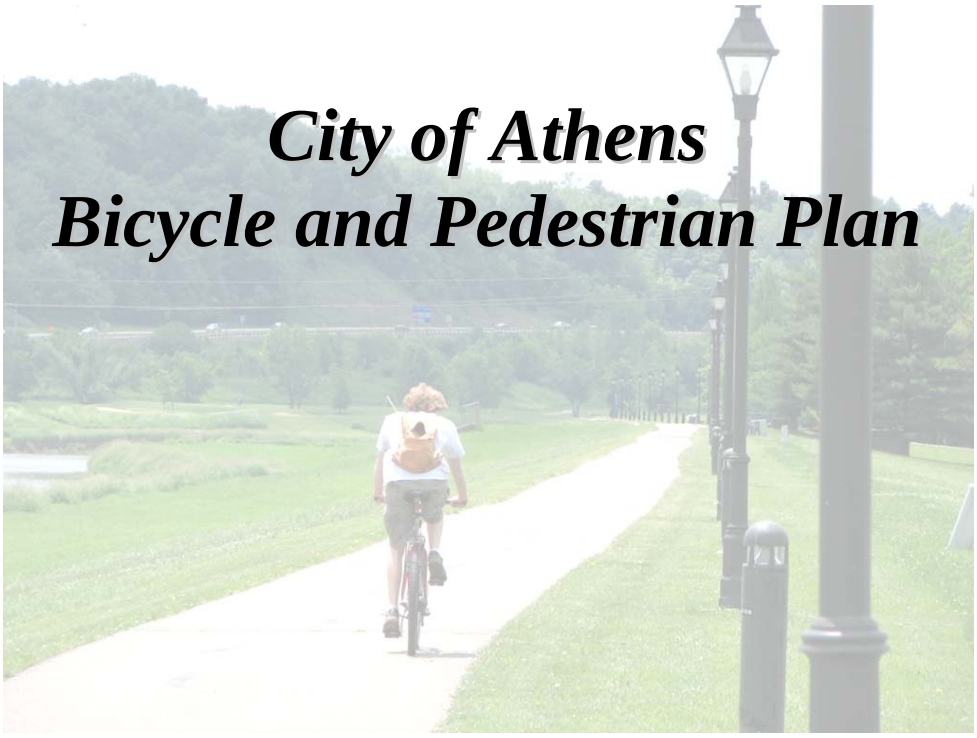
# *City of Athens*
# *Bicycle and Pedestrian Plan*



Prepared for:

City of Athens

Prepared by:

THE GREENWAY COLLABORATIVE, INC.

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# *Contents*



*Proposed Bicycle and Pedestrian Network Map (this is a large map) may be downloaded from the Project Page at www.greenwaycollab.com/athens.htm

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# 1. Introduction

The City of Athens is a great city for walking and bicycling. Of all communities nationwide between the population of 15,000 and 25,000, Athens has the second highest number of pedestrian commuters and the 11th highest number of bicycle commuters according to the 2000 Census. According to Bikes At Work Inc.'s Car-Free Database, over 45% of Athens residents walked or biked to work.

This can be attributed to a number of factors. Foremost, is the presence of Ohio University. University towns are typically at the top of the highest non-car commuting cities. But Athens' compact form and relatively dense street network also are key contributing factors.

There is though considerable room for improvement in providing safe, convenient and attractive facilities for pedestrians and bicyclists. While there have been significant improvements to the physical environment in recent history, there are still many additional opportunities at hand. This document identifies near-term opportunities to improve the physical environment, guides long-term development and makes recommendations on programs that promote and support non-motorized transportation.

Athens is also fortunate to have a dedicated group of elected officials, public employees and community volunteers who are dedicated to making Athens even a better place to live, study, work and play. This document is intended to help guide the city towards that goal.

The document is divided into three main segments:

### Existing Conditions
Assesses the state of the existing pedestrian and bicycle facilities.

### Proposed Facilities
Covers the specific long and near term improvement recommendations to the transportation system to establish a non-motorized transportation network.

### Recommended Policies and Programs
Describes the support system necessary for a successful pedestrian and bicycle network.

# 1.1 Glossary of Terms

Within this document there are a number of terms that may be unfamiliar to many people. The following is a brief glossary of some of the transportation terms that are found in this document:

**AASHTO** – American Association of State Highway & Transportation Officials.

**Bicycle Quality/Level of Service (Bike Q/LOS)** – a model for evaluating the perceived safety and comfort of bicycling in a roadway based on conditions within the road (not surrounding land uses) expressed as a letter grade with "A" being best and "F" being worst.

**Bicycle Boulevard-** a low-volume and low-speed street that has been optimized for bicycle travel through treatments such as traffic calming and traffic reduction; signage and pavement markings; and intersection crossing treatments.

**Bike Lane –** a portion of the roadway designated for bicycle use. Pavement striping and markings sometimes accompanied with signage are used to delineate the lane. Examples can be found on portions of Richland Ave.

**Bike Route –**a designation that can be applied to any type of bicycle facility. It is intended as an aid to help bicyclists find their way to a destination where the route is not obvious.

**Bulb-outs** – see Curb Extensions.

**Clear Zones** – area free of obstructions around roads, Shared-use Paths, and Walkways.

**Clearance Interval** – the flashing "Don't Walk" or flashing "Red Hand" phase of pedestrian signals. It indicates to pedestrians that they should not begin to cross the street. A correctly timed clearance interval allows a pedestrian who entered the crosswalk during the "Walk" phase to finish crossing the street at an unhurried pace.

**Complete Street-** streets that are designed and operated to enable safe access for all users.

**Crossing Islands** – a raised median within a roadway typically set between opposing directions of traffic that permits pedestrians to cross the roadway in two stages. A crossing island may be located at signalized intersections and at unsignalized crosswalks. These are also known as **Refuge Islands.**

**Crosswalk** – the area of a roadway that connects sidewalks on either side at an intersection of roads (whether marked or not marked) and other locations distinctly indicated for pedestrian crossings by pavement markings.

**Curb Extensions** – extending the curb further into the intersections in order to minimize pedestrian crossing distance, also known as **Bulb-outs**.

**Dispersed Crossing** – where pedestrians typically cross the road at numerous points along the roadway, rather than at an officially marked crosswalk.

**E-Bike** – a bicycle that is propelled by an electric motor and/or peddling.

**Fines** – finely crushed gravel 3/8" or smaller. The fines may be loosely applied or bound together with a stabilizing agent.

**Inside Lane** – the travel lane adjacent to the center of the road or the Center Turn Lane.

**Ladder Style Crosswalk** – a special emphasis crosswalk marking where 1' to 2' wide white pavement markings are placed perpendicular to the direction of a crosswalk to clearly identify the crosswalk.

**Lateral Separation** – horizontal distance separating one use from another (pedestrians from cars, for example) or motor vehicles from a fixed obstruction such as a tree.

**Leading Pedestrian Interval** –a traffic signal phasing approach where the pedestrian "Walk" phase precedes the green light going in the same direction by generally 4 to 5 seconds.

**Level of Service (LOS)** – a measurement of the motor vehicle flow of a roadway expressed by a letter grade with "A" being best or free flowing and "F" being worst or forced flow/heavily congested. Also see Bicycle Level of Service and Pedestrian Level of Service.

**Long-term Plan** – reflects the vision of the completed non-motorized system. Some improvements may require the reconstruction of existing roadways, the acquisition of new right-of-way, or significant capital investments.

**Mid-block Crossings** – locations that have been identified based on land uses, bus stop locations and the difficulty of crossing the street as probable candidates for Mid-block Crosswalks. Additional studies will need to be completed for each location to determine the ultimate suitability as a crosswalk location and appropriate solution to address the demand to cross the road.

**Mid-block Crosswalk** – a crosswalk where motorized vehicles are not controlled by a traffic signal or stop sign. At these locations, pedestrians wait for a gap in traffic to cross the street, motorists are required to yield to a pedestrian who is in the crosswalk (but not if the pedestrian is on the side of the road waiting to cross).

**Mode-share / Mode split** – the percent of trips for a particular mode of transportation relative to all trips. A mode-share / mode split may be for a particular type of trip such as home-to-work.

**Mode** – distinct types of transportation (cars, bicycles and pedestrians are all different modes of travel).

**Near-term Opportunities** –improvements that may generally be done with minimal changes to existing roadway infrastructure. They include road re-striping projects, paved shoulders, new sidewalks and crossing islands. In general, existing curbs and drainage structures are not changed.

**Neighborhood Greenway** – a route that utilizes residential streets and short connecting pathways that link destinations such as parks, schools and **Shared Use Paths**. Neighborhood Greenways share the characteristics of a **Bicycle Boulevard** but, in addition, provide accommodations for pedestrians and sustainable design elements such as rain gardens.

**OMUTCD** – Ohio Manual of Uniform Traffic Control Devices. This document is based on the National Manual of Uniform Traffic Control Devices (MUTCD). It specifics how signs, pavement markings and traffic signals are to be used. The current version is the 2005 OMUTCD. A new version of the National Manual of Uniform Traffic Control Devices was adopted on December 16, 2009. Ohio and other states must adopt a state manual that conforms with the national manual within two years.

**Out-of-Direction Travel** – travel in an out-of-the-way, undesirable direction.

**Outside Lane** – the travel lane closest to the side of the road.

**Pedestrian Desire Lines** – preferred pedestrian direction of travel.

**Pedestrian Quality/Level of Service (Ped. Q/LOS)** – a model for evaluating the perceived safety and comfort of the pedestrian experience based on conditions within the road ROW (not surrounding land uses) expressed as a letter grade with "A" being best and "F" being worst.

**Refuge Islands** – see Crossing Islands.

**Roundabouts** – yield-based circular intersections that permit continuous travel movement.

**Shared Roadway –**bicycles and vehicles share the roadway without any portion of the road specifically designated for the bicycle use. Shared Roadways may have certain undesignated accommodations for bicyclists such as wide lanes, paved shoulders, and/or low speeds.

**Shared Use Arrow –** a pavement marking consisting of a bike symbol with a double chevron above, also known as "sharrows". These pavement markings are used for on-road bicycle facilities where the right-of-way is too narrow for designated bike lanes. The shared use arrow alerts cars to take caution and direct cyclists to a safe lane position. Cities such as Portland and San Francisco have effectively used these markings for several years. The Shared Use Arrow is included in the 2009 National Manual of Traffic Control Devices. At the time of this report, Ohio has not adopted the national manual, so the City of Athens will need permission from the FHWA to experiment with these markings. Other cities in Ohio, such as Cincinnati, are also experimenting with these markings with FHWA.

**Shared Use Path –** a wide pathway that is separate from a roadway by an open unpaved space or barrier or located completely away from a roadway. A Shared Use Path is shared by bicyclists and pedestrians. There are numerous sub-types of Shared Use Paths including Sidewalk Bikeways that have unique characteristics and issues. An example of a Shared Use Path is the Hockhocking-Adena Bikeway.

**Shy Distance** – the distance that pedestrians, bicyclists and motorists naturally keep between themselves and a vertical obstruction such as a wall or curb.

**Sidepath** – see **Sidewalk Bikeways.**

**Sidewalk Bikeways –** a specific type of Shared Use Path that parallels a roadway generally within the road right-of-way. This is also known as a **Sidepath**.

**Signalized Crosswalk** – a crosswalk where motor vehicle and pedestrian movements are controlled by traffic signals. These are most frequently a part of a signalized roadway intersection but a signal may be installed solely to facilitate pedestrian crossings.

**Speed Table** – raised area across the road with a flat top to slow traffic.

**Splitter Islands** – crossing islands leading up to roundabouts that offer a haven for pedestrians and that guide and slow the flow of traffic.

**Yield Lines** – a row of triangle shaped pavement markings placed on a roadway to signal to vehicles the appropriate place to yield right-of-way. This is a new pavement marking that is used in conjunction with the new "Yield to Pedestrians Here" sign in advance of marked crosswalks.

# 2. Existing Conditions

The major influences on non-motorized travel may be distilled down to two factors: the physical environment and the social environment. The influence of the physical environment is not limited to the existence of specific facilities such as bike lanes and sidewalks. Just as important as the facilities is the underlying urban form. The majority of bicycle and pedestrian trips are for short distances. Even with first-rate facilities, large blocks of homogeneous land uses and spread-out development will inhibit many non-motorized trips.

Topics:

## 2.1 General Conditions

The City of Athens has two distinct patterns. The older parts of town including Uptown, generally have a grid street pattern and most of the primary roads are two to three lanes wide. Pedestrian and bicycle travel is generally easy and comfortable in these areas and there are often numerous route options.

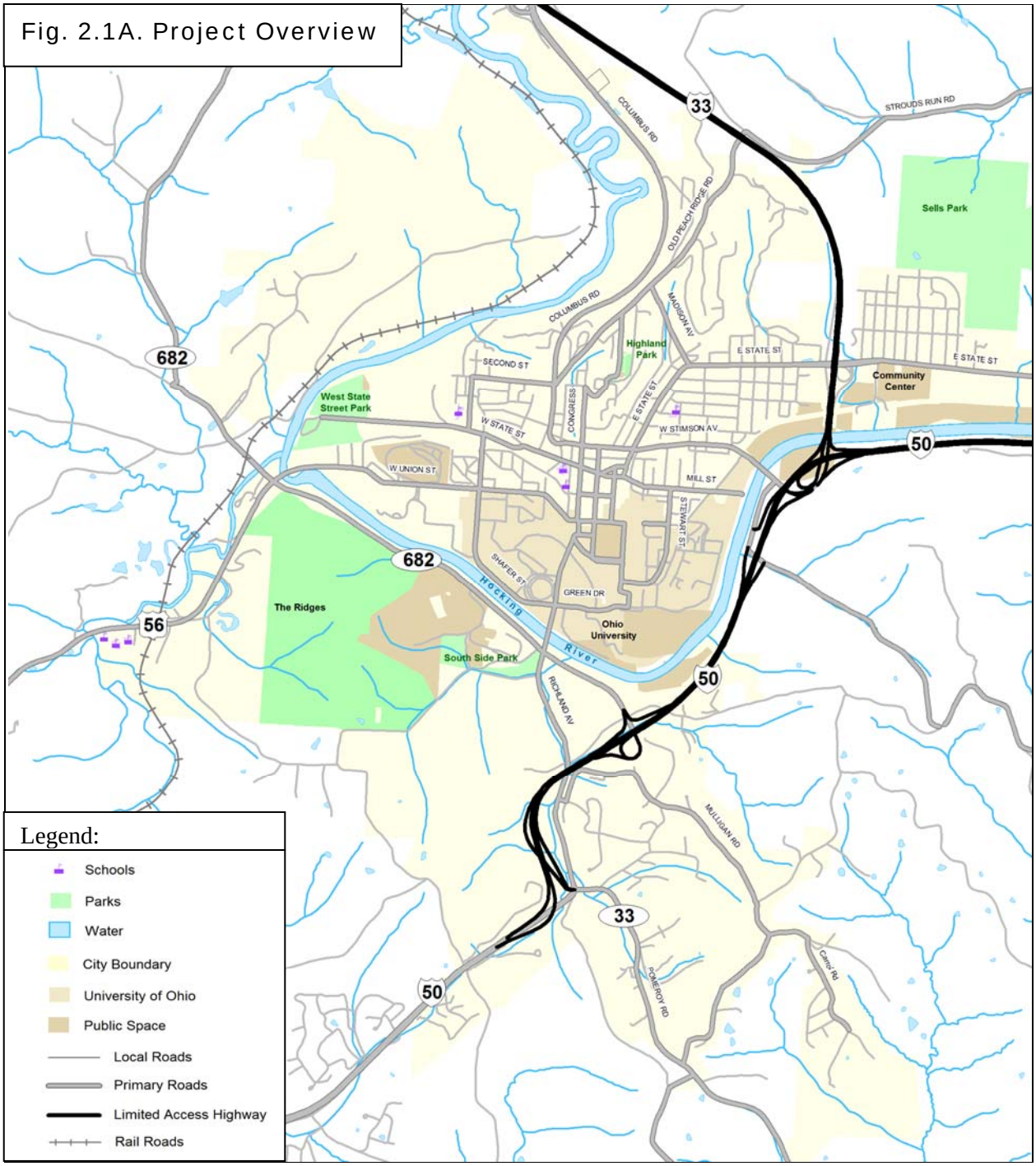
The newer parts of town, including the Far East Side and development along Richland Ave and Columbus Rd, often consist of dispersed land uses that are for the most part, scaled towards automobile use. There exist few alternatives in these areas for bicycle and pedestrians. The result is a non-motorized environment that is not favorable to walking and bicycling for everyday transportation.

The artificial barrier of the freeway tends to fragment the City from a non-motorized standpoint. The City should work to both minimize the impact of the artificial barrier and increase the land use diversity throughout the City.

The following maps provide a general summary of the existing conditions in the City of Athens:

- Fig. 2.1A. City Overview
- Fig. 2.1B. Road Functional Classification
- Fig. 2.1C. Neighborhoods
- Fig. 2.1D. Bicycle/Pedestrian Crash Inventory
- Fig. 2.1E. Bicycle/Pedestrian Count
- Fig. 2.1F. Existing Road Cross Section
- Fig. 2.1G. Existing Safe Routes to School

Fig. 2.1A. Project Overview




**Population:** 21,192 (currently estimate)

**Journey to Work Data:**
(Based on 2000 Census)

| | |
|---|---|
| 2.94% | By Bicycle |
| 42.39% | Walked |
| 1.04% | Took Public Transit |
| 46.37% | Non-Car Commute |

East End Extension:

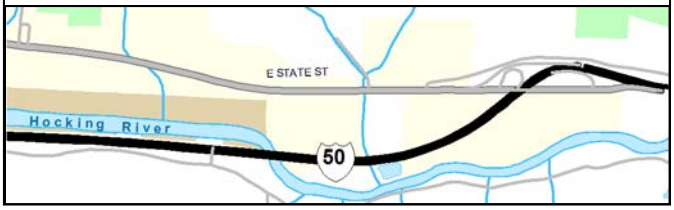
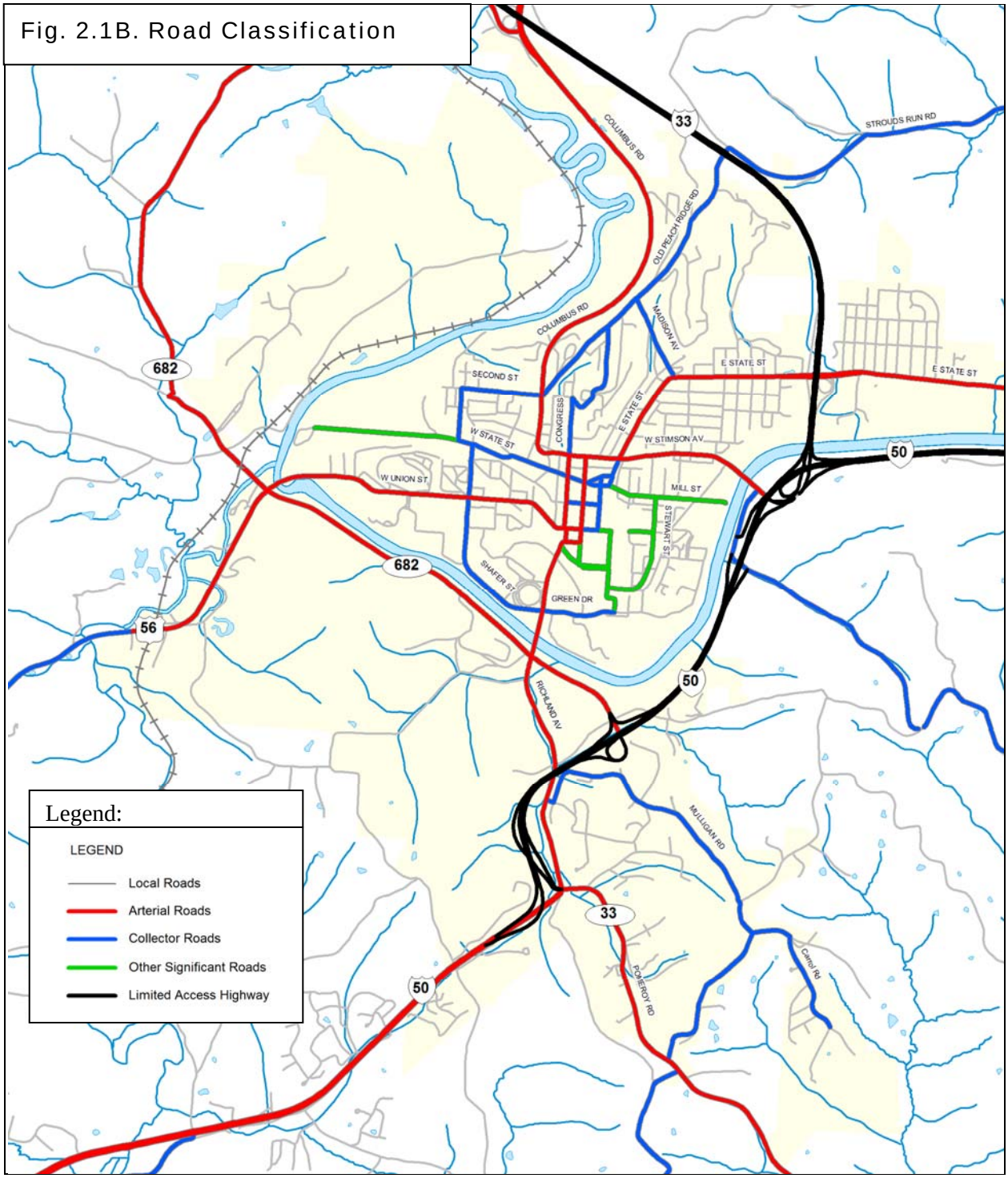


Fig. 2.1B. Road Classification




The National Functional Classifications are referenced in AASHTO guidelines and the guidelines in this document. While the National Functional Classification is intended to define a road hierarchy, substantial variation in road characteristics may be found within the classifications.

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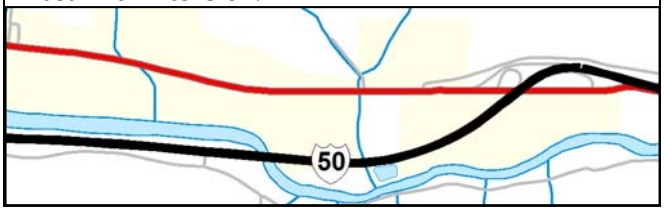
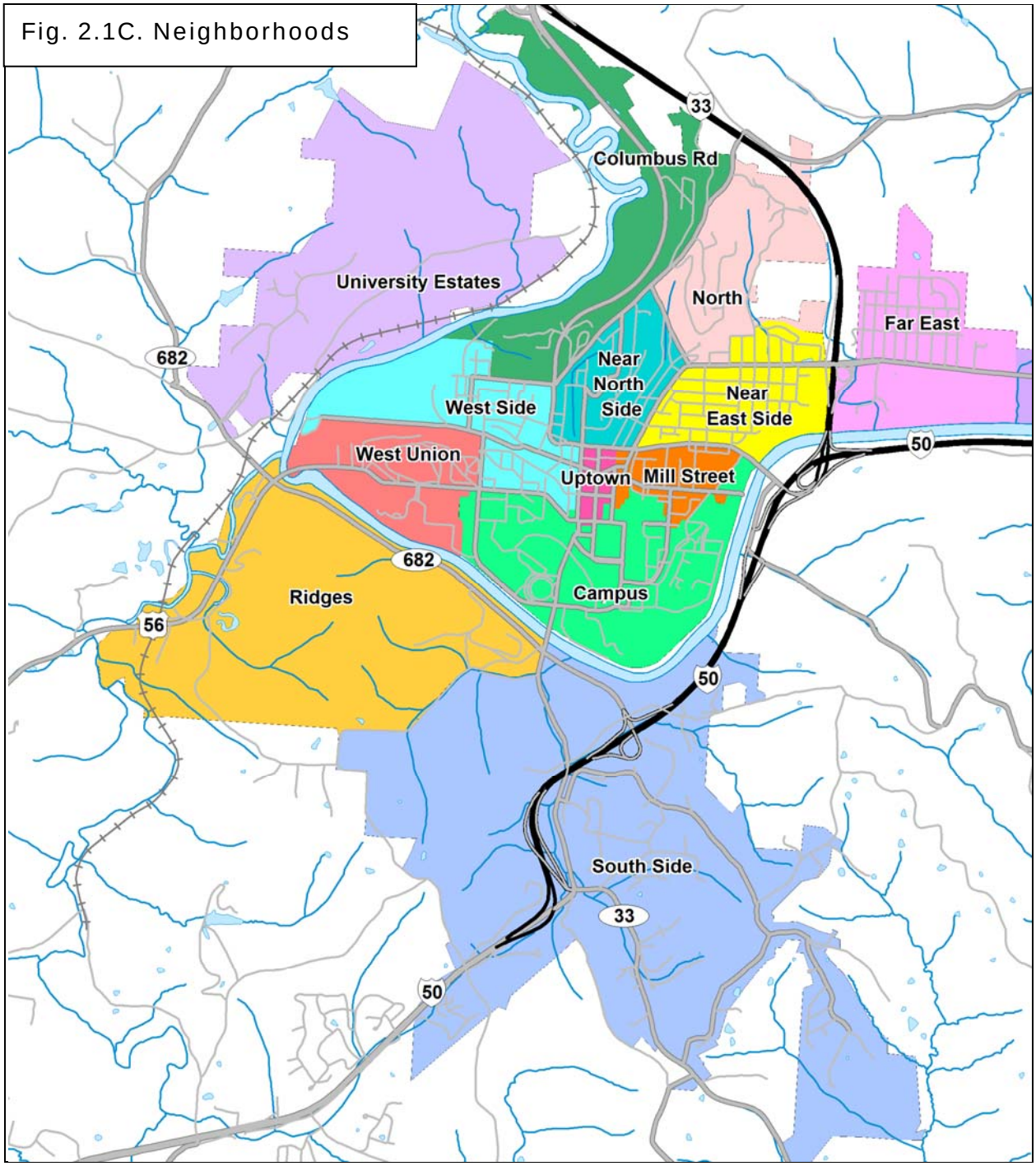


Fig. 2.1C. Neighborhoods




The city of Athens may be described of being comprised of 14 different neighborhoods. The boundaries of some of the neighborhoods are not necessary well defined.

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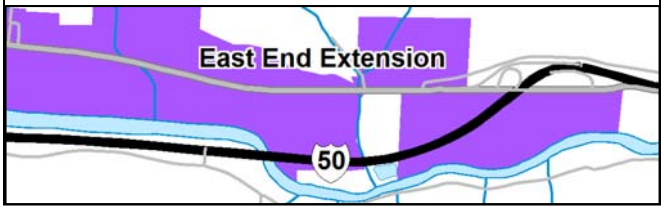
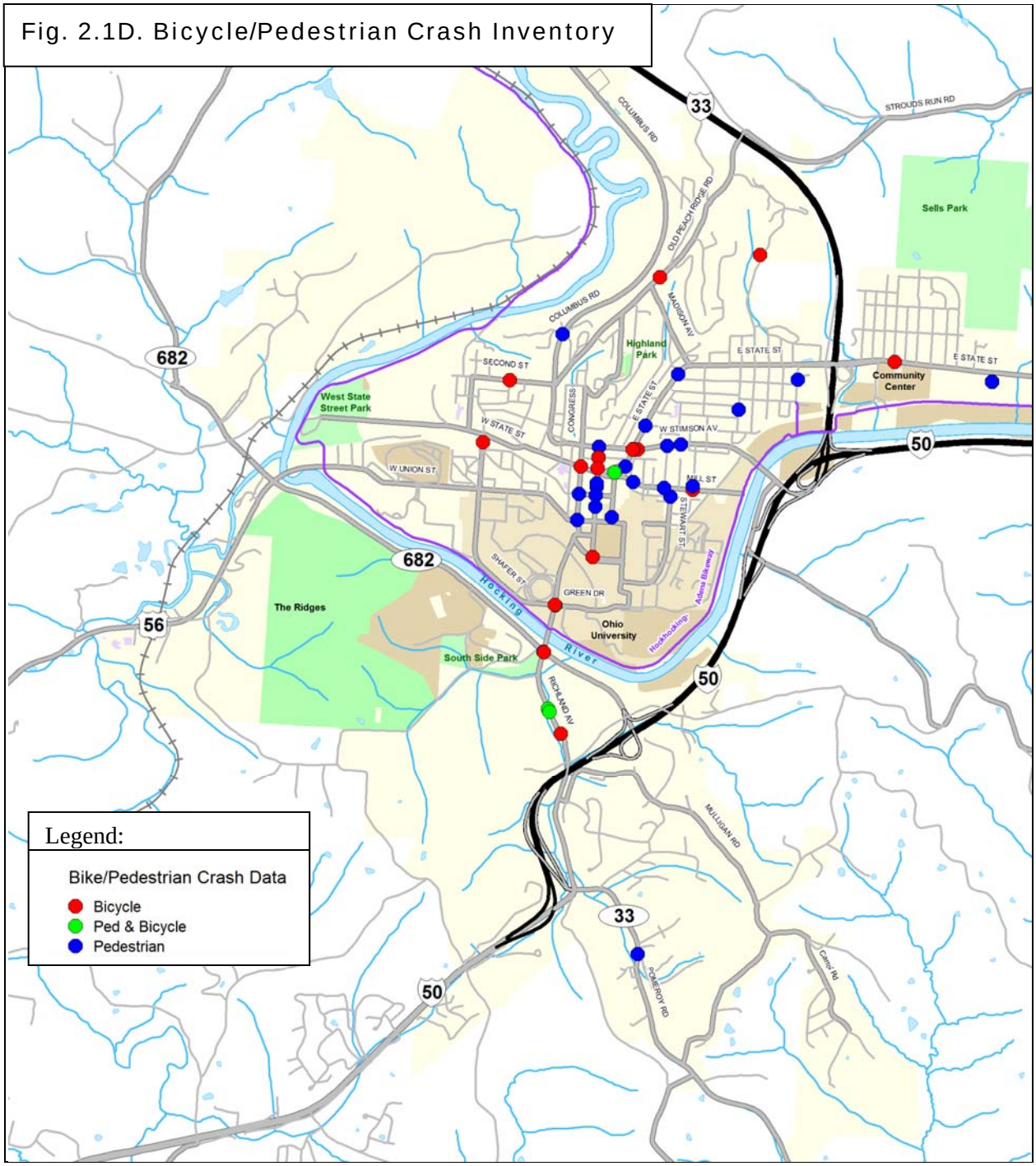


Fig. 2.1D. Bicycle/Pedestrian Crash Inventory




The majority of crashes occur in the Uptown Area where there is a high amount of pedestrian, bicycle and motor vehicle traffic. This includes one pedestrian fatality at the intersection of SR 682 and Richland Ave.

The crashes were reported between January 2005 through July 2009.

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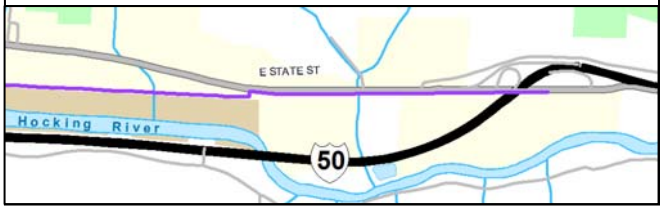
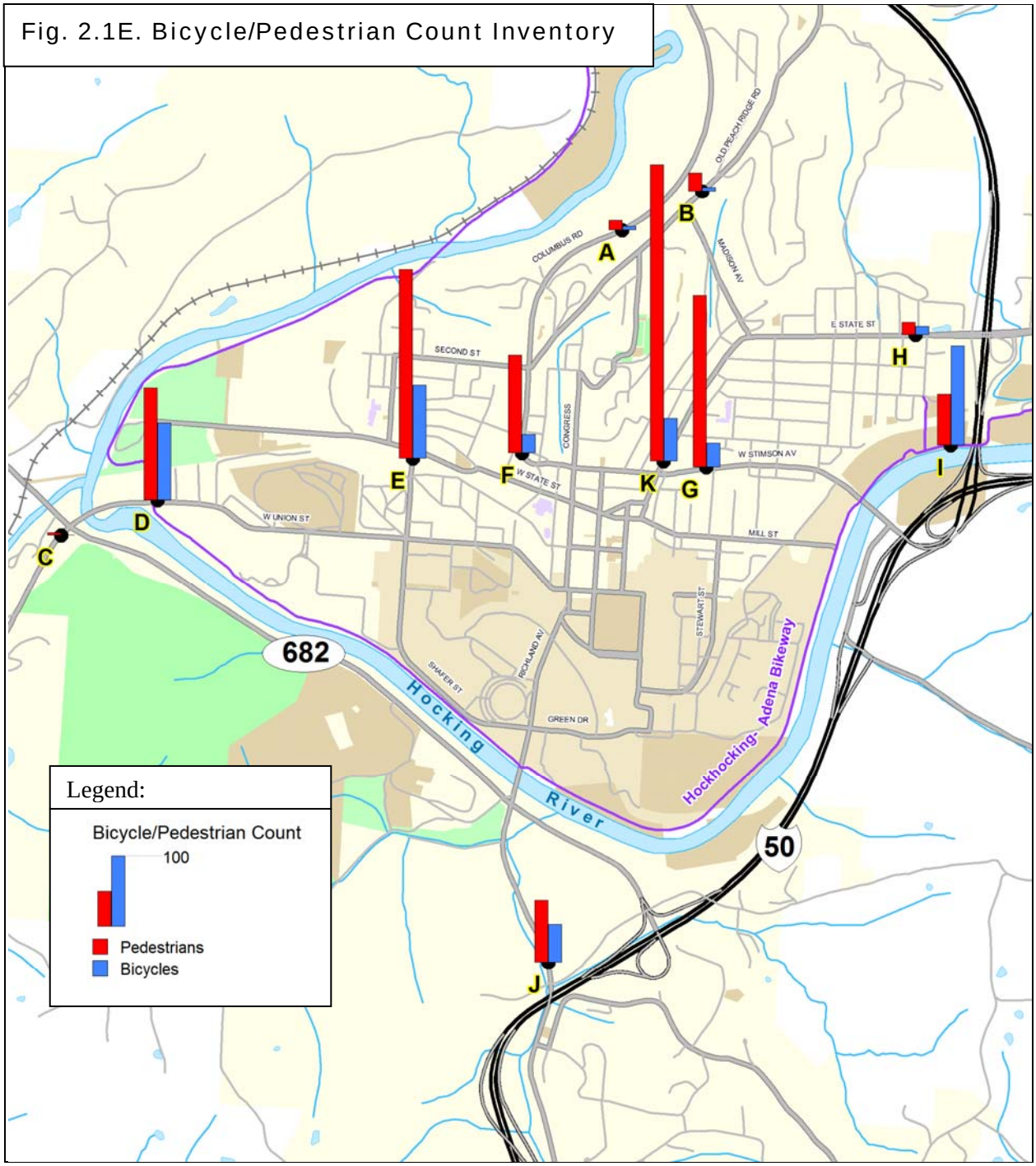


Fig. 2.1E. Bicycle/Pedestrian Count Inventory




There is significantly more pedestrian than bicycle traffic. The disparity is highest in the uptown area and decreases at the outskirts of town. This pattern is to be expected as the distance between trip origins and destinations generally increases on the less dense edges of town and these trips are more quickly done via bicycle.

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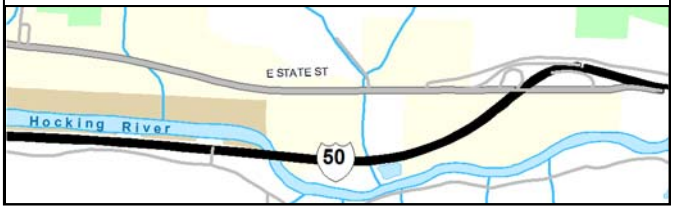
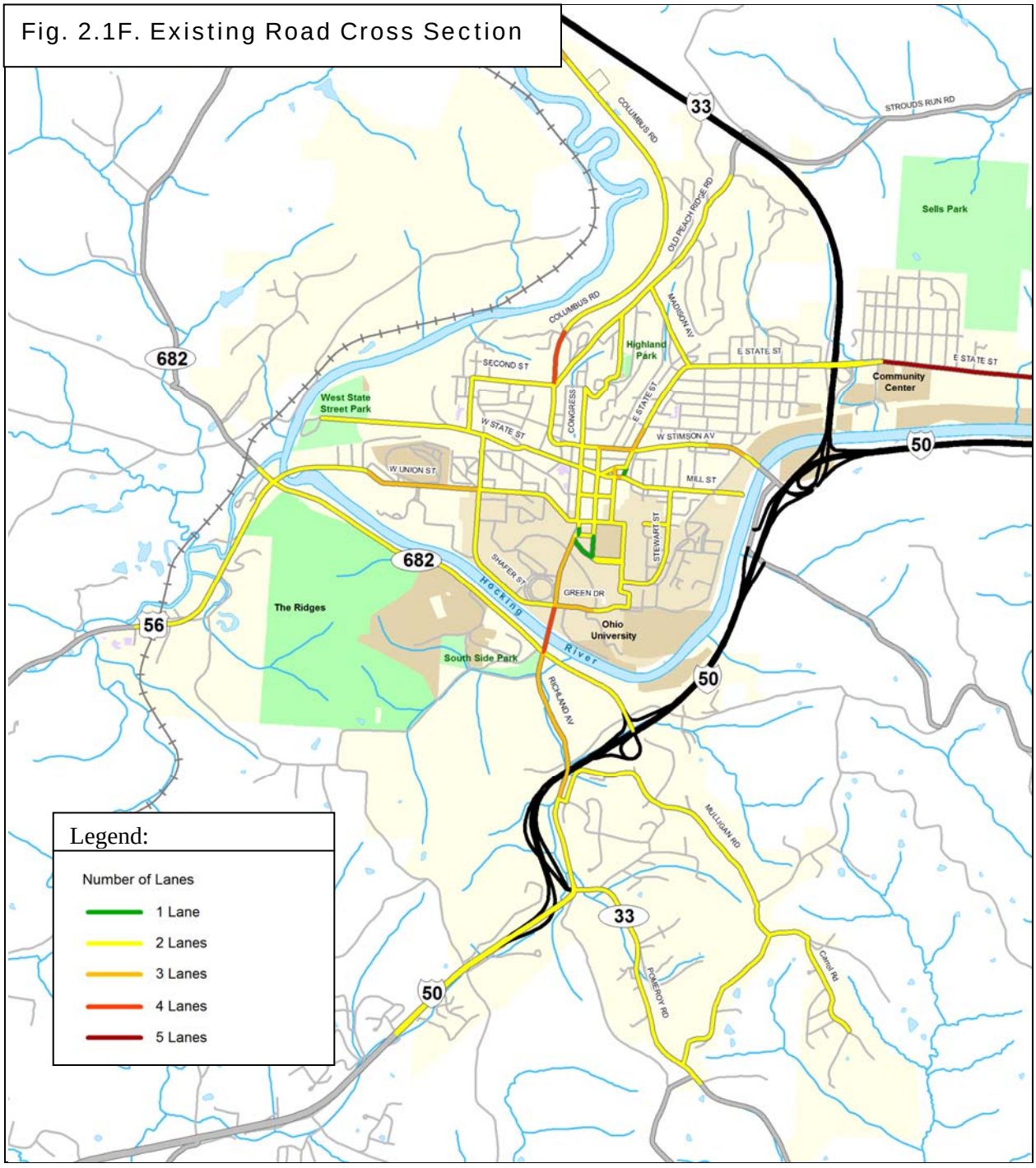


Fig. 2.1F. Existing Road Cross Section




The majority of the primary roads have two to three lanes and low speeds. These provide a good environment for on-road bicycle travel along primary roads as well as pedestrian crossings. The main exception is East State Street east of the freeway.

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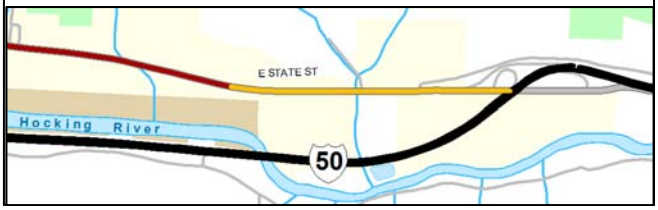
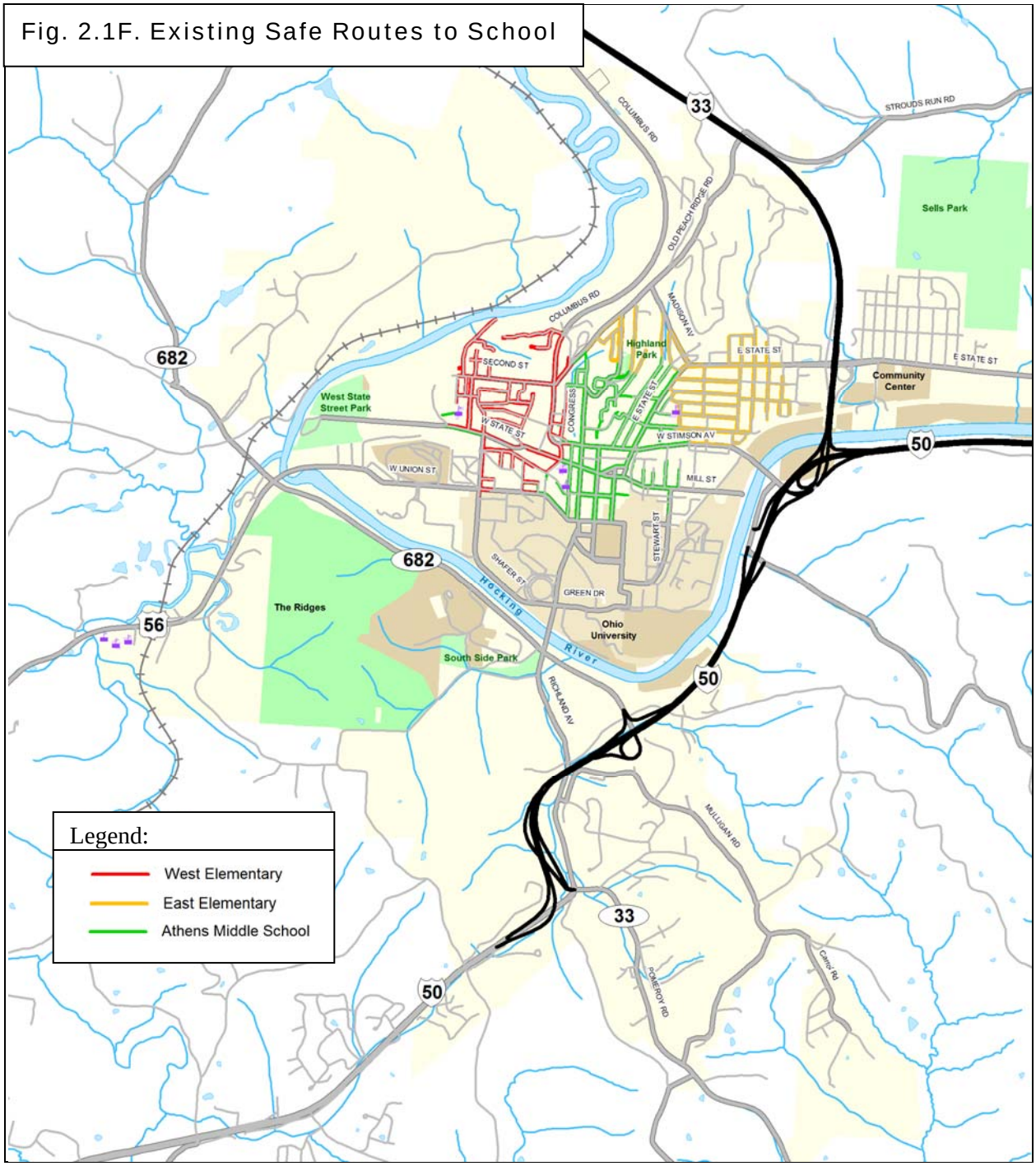


Fig. 2.1F. Existing Safe Routes to School




Safe Routes to School is a national program funded by National Highway Traffic Safety Administration devoted to identifying the best routes for children to walk to school, based on safe facilities and street crossing. For more information refer to section 4.3 Safe Routes to School.

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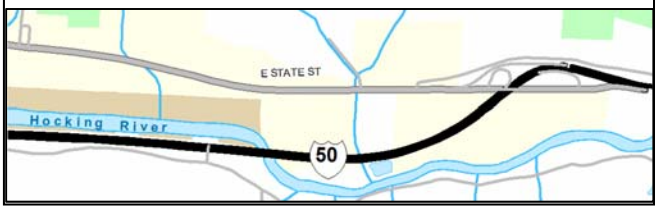


## 2.2 The Pedestrian Environment

The City of Athens has a fairly complete sidewalk system along most major roadways in the built up areas but there remains significant gaps along major roadway especially away from the Uptown Area. The quality of the pedestrian experience on these sidewalks varies greatly throughout the City. Some of the existing sidewalks are in poor condition and proper maintenance and repairs are required to make them accessible. Some sidewalks have little if any buffer, such as a row of trees or parked cars, between the sidewalk and the roadway. This lack of a barrier has been shown to have a significant adverse impact on the quality of the walking experience.

Another major issue lies with cross-roadway accommodations. There are significant stretches of the major thoroughfares that provide no means to cross the roadway via a marked crosswalk. There are also places where logical crossings are not accommodated. Even where there are marked crosswalks, these crosswalks could stand for upgrades.

The following maps provide a general summary of the existing conditions of pedestrian facilities in the City of Athens:

- Fig. 2.2 A. Existing Sidewalk Quality
- Fig. 2.2 B. Existing Crosswalk Spacing Analysis

## Sidewalk Level of Service

A key factor to a pedestrians comfort level on a sidewalk is the degree of separation from the roadway. Elements such as lawn buffers and vertical elements tend to make a pedestrian feel more separated from the roadway, increasing the pedestrian's level of comfort when on a sidewalk.

The sidewalk level of service rating system is designed to help identify a pedestrian's level of comfort when on a sidewalk based on the amount of separation from the roadway. The rating system is broken up into five categories A, B, C, D and E. A sidewalk with a rating of "A" has the best pedestrian comfort level and a sidewalk with a rating of "E" has the worst pedestrian comfort level.

**A - Rating**
Sidewalk is setback from roadway and contains vertical elements such as closely spaced trees and/or light poles.

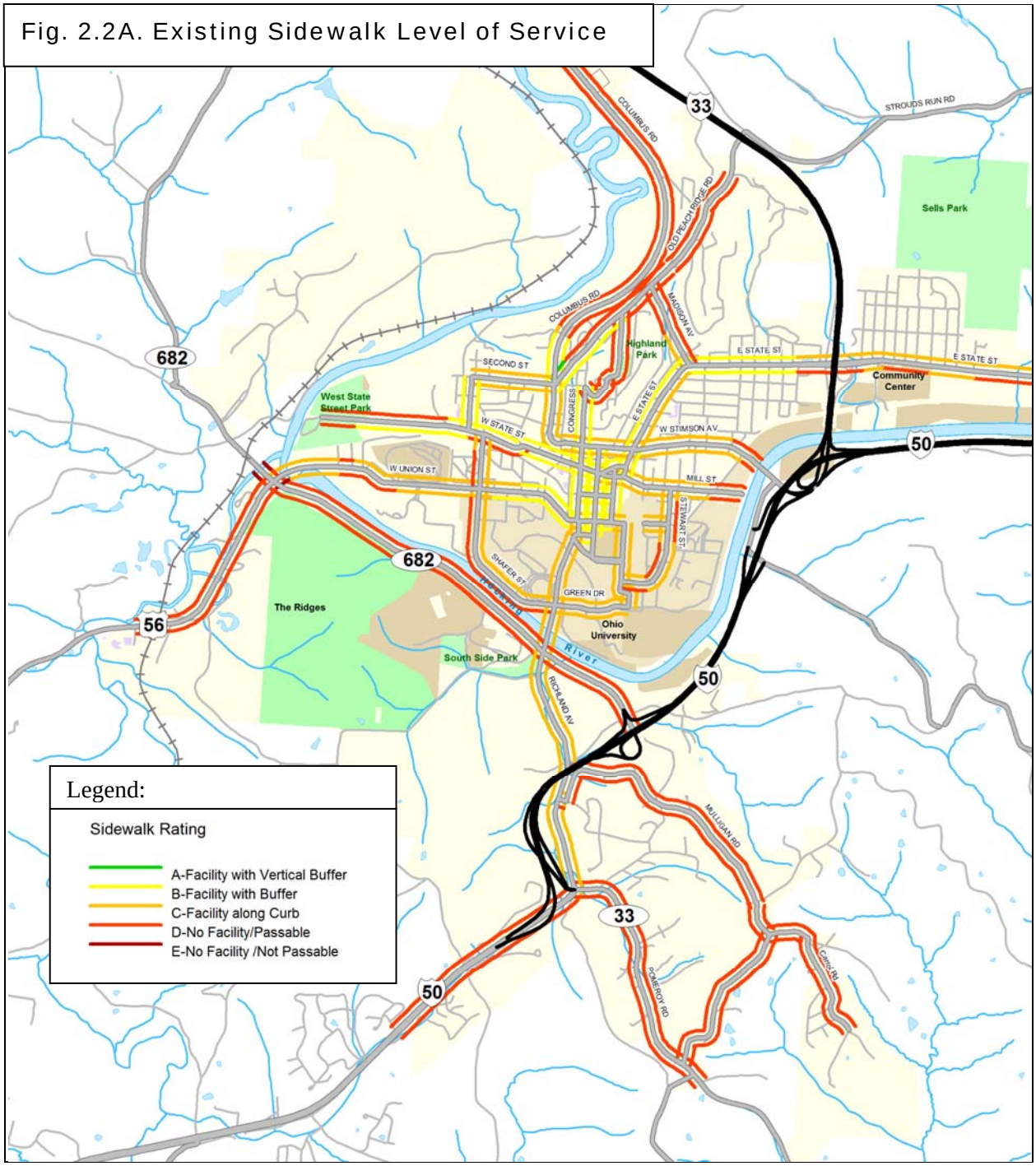
**B - Rating**
Sidewalk is setback from roadway but contains no vertical elements.

**C - Rating**
Sidewalk is directly adjacent to the roadway along the curb and has no buffer space or vertical elements.

**D - Rating**
No sidewalk facility is built, but the area is physically passable by foot.

**E - Rating**
No sidewalk facility is built and the area is not physically passable by foot. Physical barriers such as streams or expressway overpasses usually contribute to this type of situation.

Fig. 2.2A. Existing Sidewalk Level of Service




A key factor to a pedestrians comfort on a sidewalk is the degree of separation from the roadway. Buffer (lawn extensions) and vertical elements such as trees and light poles increase the pedestrians comfort level.

East End Extension:

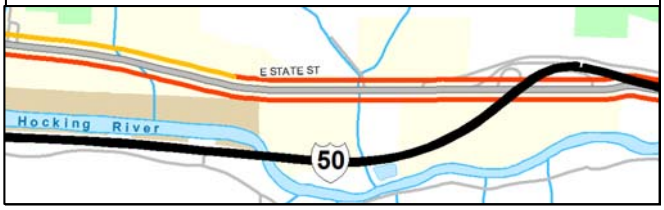
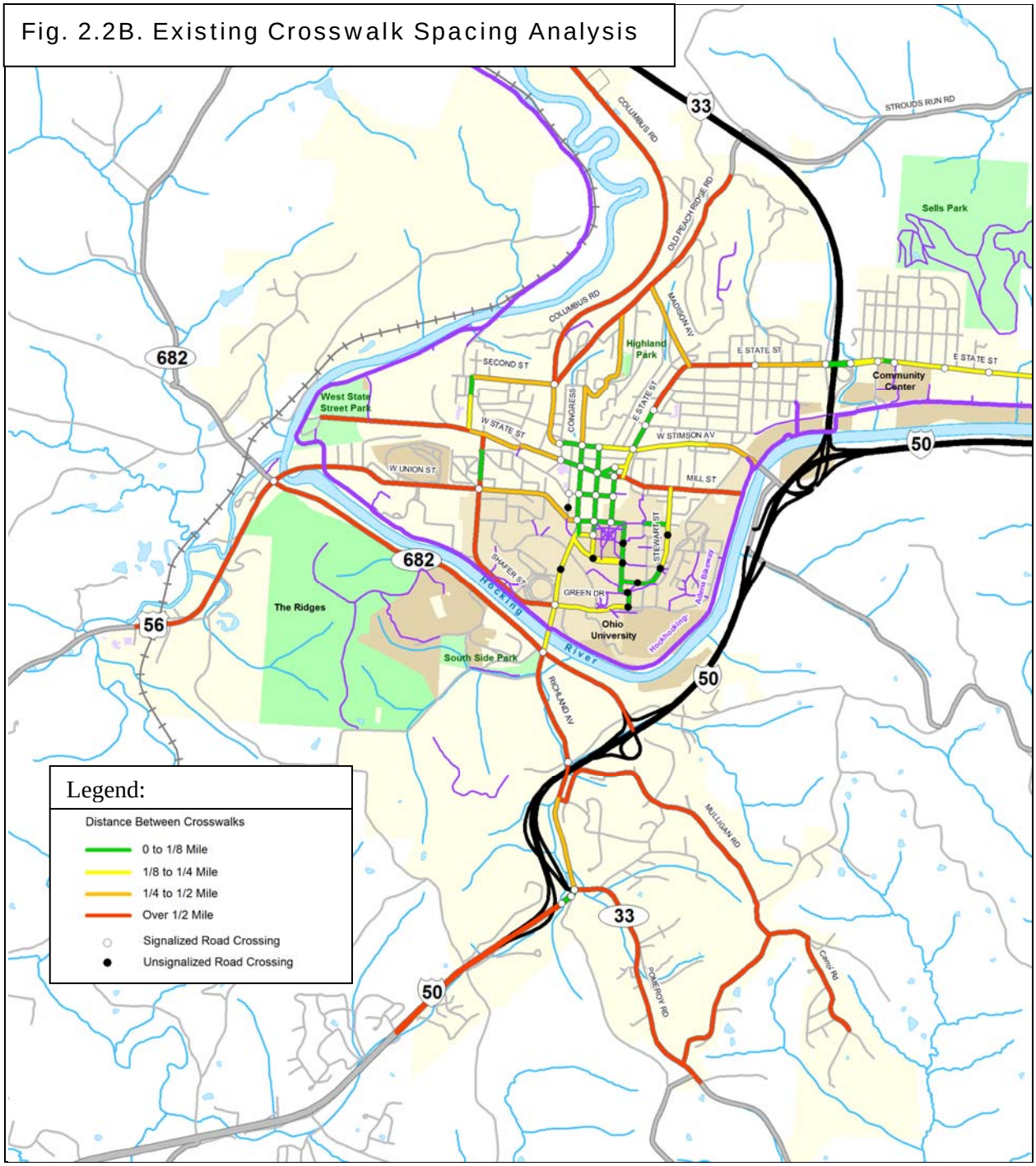


Fig. 2.2B. Existing Crosswalk Spacing Analysis




Crosswalk spacing is a key factor in directness of travel. Most pedestrian trips for personal business (like walking to the store) are about ½ mile long. Where there is demand to cross the road and crosswalk spacing is over 1/8 of a mile apart, mid-block crossings are likely to occur.

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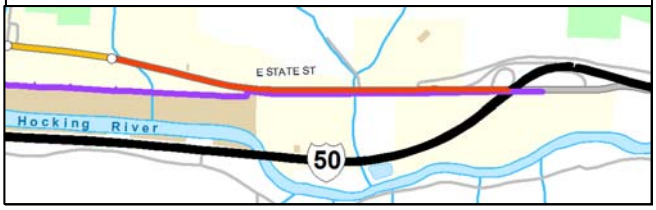


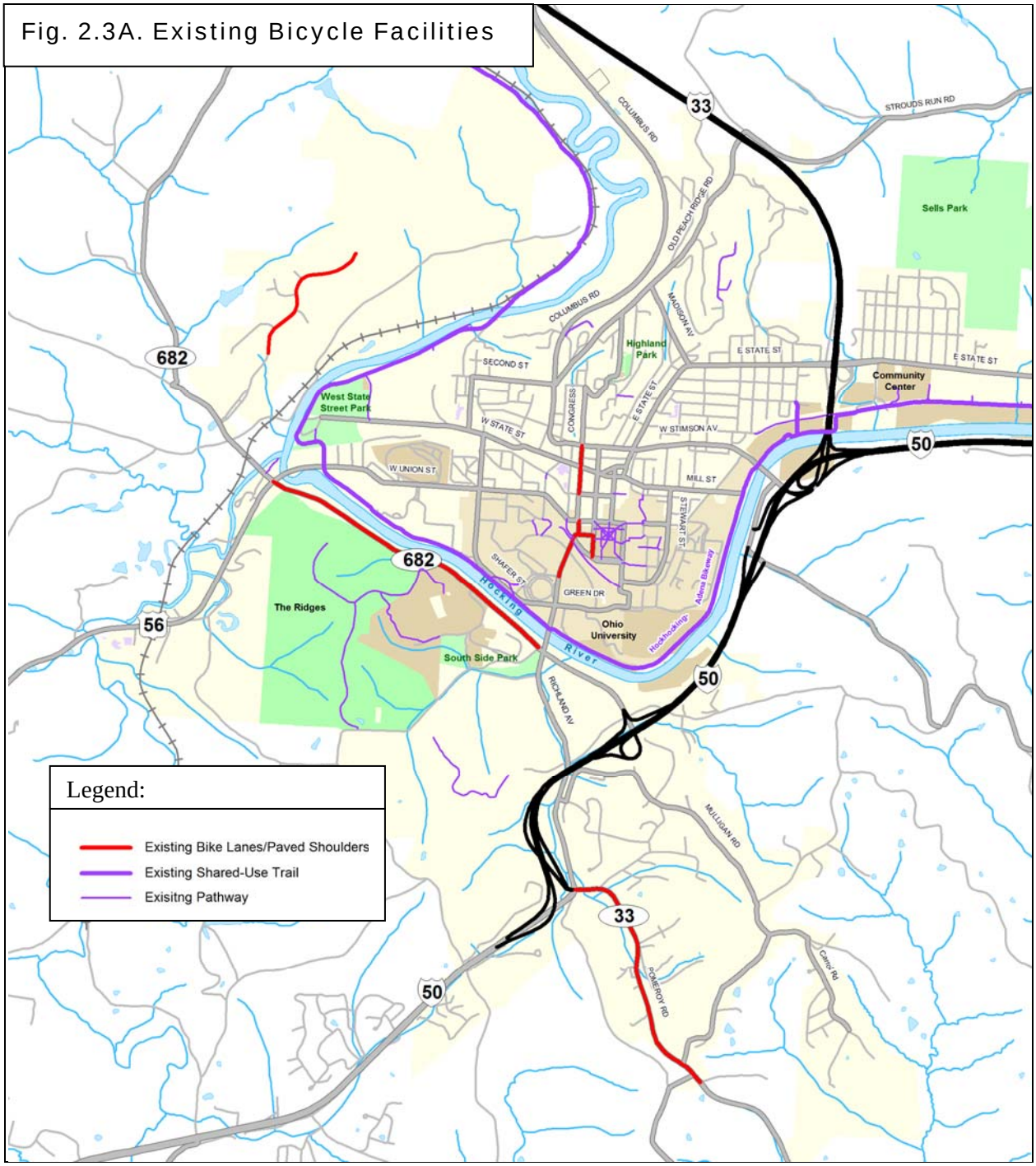
## 2.3 The Bicycling Environment

The approach to handling bicycles in the City is inconsistent and incomplete. The Hockhocking-Adena Bikeway functions as the main off-road bicycle facility following the river around the city. The Uptown area has a few isolated bike lanes. However, bicyclists that choose to take a different route are forced to share the busy arterial road with motorist or ride along the sidewalk when commuting across town. Even together, the on-road and off-road facilities do not make for a complete system and transfers between on-road and off-road facilities are not logical or convenient. In short, there is no cohesive system.

The following maps provide a general summary of the existing bicycling conditions in the City of Athens:

- Fig. 2.3A. Existing Bike Lanes
- Fig. 2.3B. Potential Roadway Conversions
- Fig. 2.3C. Slope

Fig. 2.3A. Existing Bicycle Facilities




There are over 3 miles of existing bike lanes in the city.

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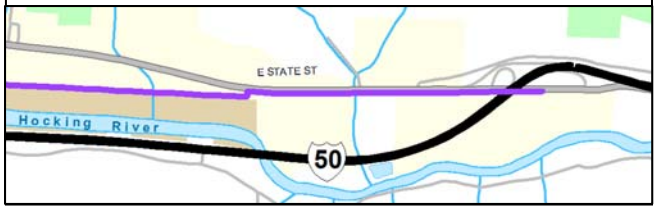
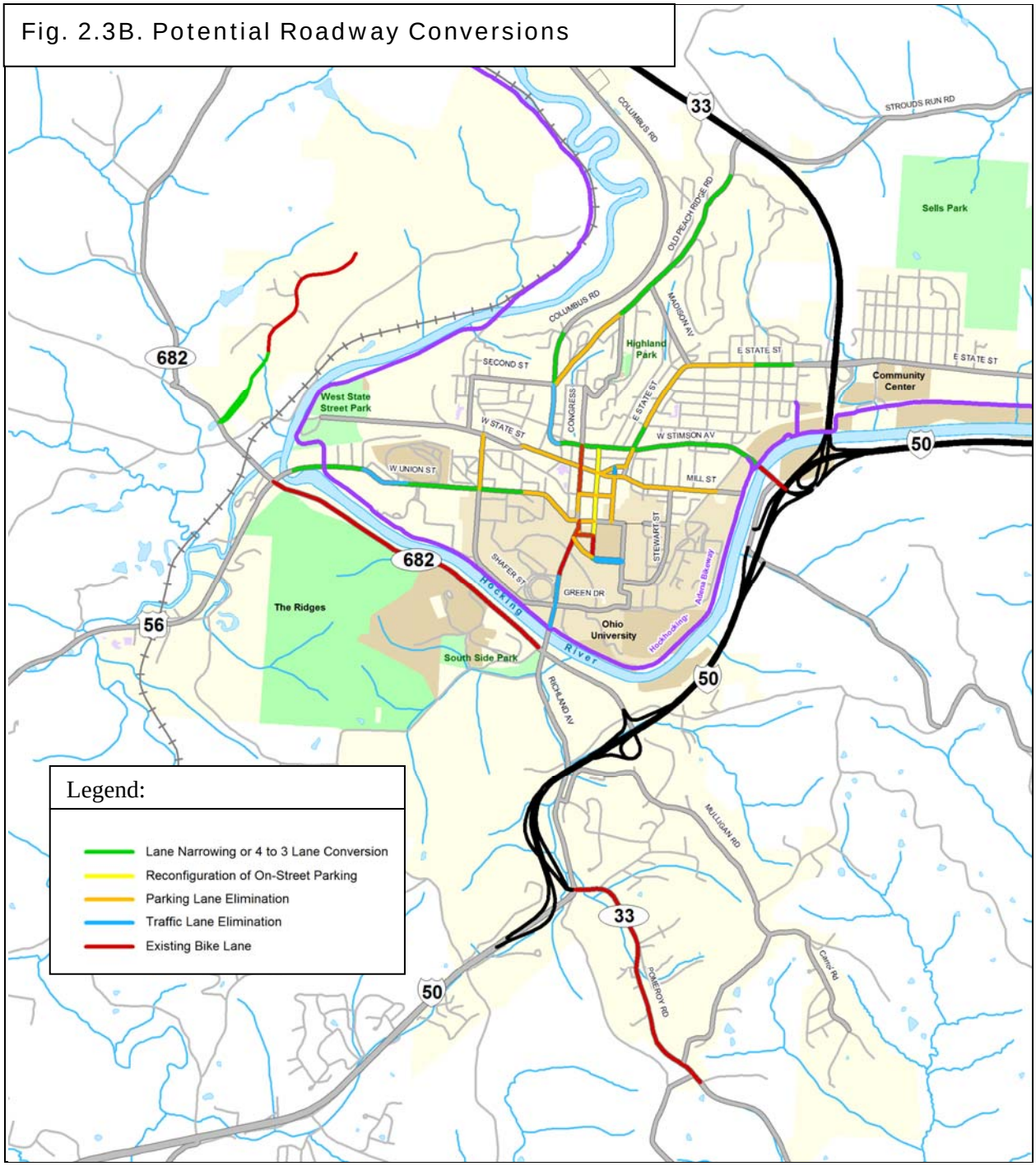


Fig. 2.3B. Potential Roadway Conversions




Bike Lanes May be provided in the Uptown Area by Removing On-Street Parking on One Side. Alternatively, Shared-use Arrows May be Used if Parking is to be Retained on Both Sides of the Street. Removing on-street parking does diminish the pedestrian level of service as it provides a barrier between the sidewalk and the roadway.

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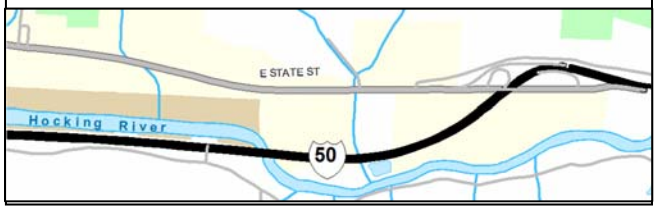
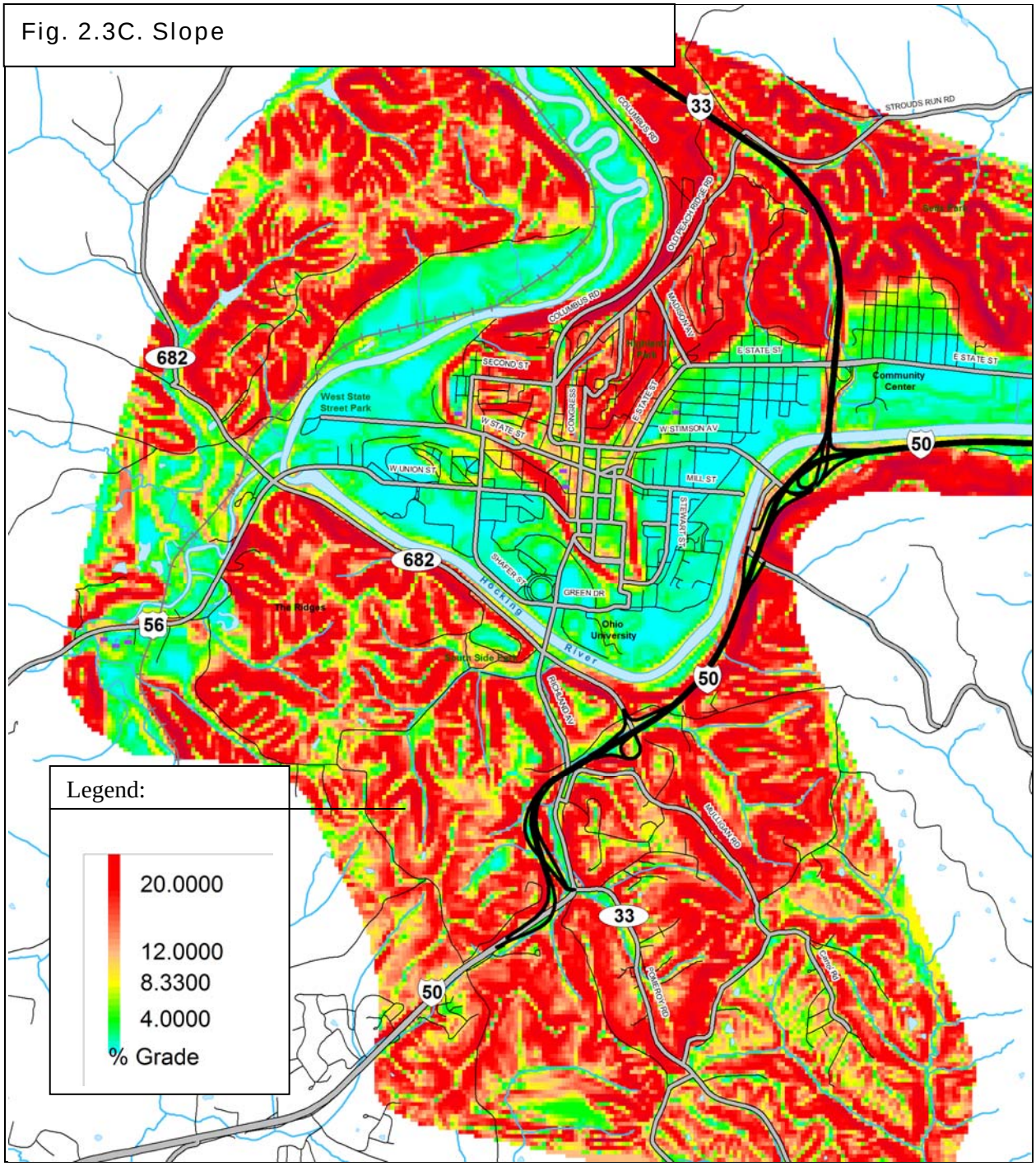
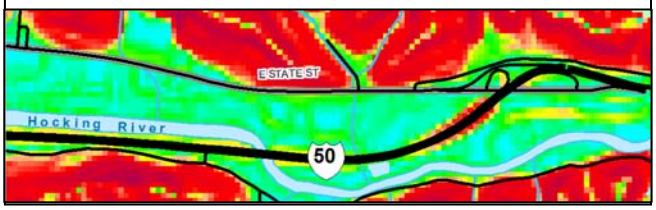


Fig. 2.3C. Slope




Many of the roadways in Athens contain challenging hills for bicyclists. While bicyclists generally prefer more level routes, the choice between a steep direct path and an indirect flat route depends on the individual cyclist and the purpose of the trip.

East End Extension:



## 2.4 Non-motorized Trip Characteristics

The desire to expand non-motorized transportation choices is generally driven by two factors. First is the goal to accommodate non-motorized transportation given the numerous economic, social, health and environmental benefits. The second goal is often to maximize the potential of the existing transportation system, which could take several forms. This could include shifting trips from single occupancy motor vehicles to bicycling, walking or transit, thus expanding the number of people a corridor can serve. Regardless of the goal, the question is what change in transportation choices will occur if the environment for walking or bicycling is improved?

Answering this question precisely is hampered by limited data, sparse research on the subject, and the nuances that go into any transportation choice. What is likely, though, is that the number of people who walk and bicycle will increase when the environment for bicycling and walking is improved. Also, these increases in walking and bicycling do not necessarily have a reciprocal increase in bicycle and pedestrian crashes. Rather, with improved facilities and increases in the number of bicyclists and pedestrians, the crash rates typically decrease as motorists become accustomed to the presence of non-motorized traffic.

One of the least understood aspects of transportation planning is the notion of self-selection. It has been demonstrated that individuals who move to an area with a better non-motorized environment will indeed walk and bicycle more[1]. What is unknown is how much of that increase is the result of the environment alone vs. how much is the result of an individual's choice to live in a place because its environment supports bicycling and walking.

### Existing General Non-motorized Mode-split

To understand Athens potential to increase the number of people walking and bicycling, it is helpful to look at how Athens current bicycling and walking trends compare to other areas. Then we may be able to gauge approximately how many more people may be enticed to walk and bicycle

When looking at how Athens compares to peer cities (college towns with a population 15,000 to 25,000) its pedestrian and bicycle commute numbers are already exceptionally high with almost half of the population choosing a non-motorized commute to work.

With the number of people who are already bicycling and walking it is not likely that there will be huge spikes in the percentage of people who walk and bicycle in the city. Rather, the improvements will better serve the people who currently walk and bike and perhaps encourage those same people to bicycle and walk more often and for more trip types. If there is any increase in the percentage of people who walk and bicycle, it will likely come from the bicyclists. At just shy of 3% currently, a goal of 6% of trips by bicycle is not an unrealistic target once the facilities improve.

[1] Krizek, Kevin J., Residential Relocation and Changes in Urban Travel: Does Neighborhood-Scale Urban Form Matter? *Journal of the American Planning Association*. Spring, Vol. 69, No. 3, p.265-281.

Table 2.4A Peer City Commute to Work Comparison

| City | Year 2000 Population | % Bike | % Pedestrian | % Public Transit | % Total Non-Car |
|---|---|---|---|---|---|
| Amherst Center, MA | 17,155 | 2.12% | 44.31% | 5.79% | 52.22% |
| Athens, OH | 21,192 | 2.94% | 42.39% | 1.04% | 46.37% |
| Isla Vista, CA | 18,381 | 20.01% | 13.93% | 7.02% | 40.96% |
| Bainbridge Island, WA | 20,308 | 1.59% | 3.8% | 31.74% | 37.13% |
| Scarsdale Village, NY | 17,823 | 0.07% | 0.74% | 35.57% | 36.38% |
| College Park, MD | 24,590 | 2.14% | 23.28% | 9.1% | 34.52% |
| South Orange, NJ | 16,964 | 0% | 11.4% | 22.73% | 34.13% |
| Oxford, OH | 22,087 | 2.58% | 28.86% | 2.11% | 33.55% |
| Wilkinsburg Borough, PN | 19,196 | 0.29% | 3.98% | 28.18% | 32.57% |
| Pullman City, WA | 24,740 | 1.76% | 22.53% | 8.25% | 32.54% |

From the US 2000 Census commute to work data as compiled in the online Carfree Census Database found at Bikesatwork.com, compiled by Bikes At Work, Inc., Ames, IA.

# 3. Proposed Facilities

### Master Plan vs. Corridor Planning

The recommendations in this section represent a Master Plan level evaluation of the suitability of the proposed facilities for the existing conditions. Prior to proceeding with any of the recommendations, a corridor level assessment should be done in order to fully evaluate the feasibility and appropriateness of any roadway modification and/or proposed bicycle or pedestrian facility.

### Removal of On-Street Parking

In areas where there is potential to add bike lanes to roads where on-street parking will need to removed, an evaluation of the removal of on-street parking to accommodate bike lanes should be done on a case by case basis.

### Proposed Improvements Outside the City of Athens

On some of the illustrations, improvements are proposed for areas outside of the limits of the City of Athens. These should not be construed as detailed recommendations as they have not received the same level of evaluation as those facilities within the City. Rather, they show diagrammatically how non-motorized facilities within the City may interact with non-motorized facilities in the surrounding communities.

### Topics:

# 3.1 Spectrum of Non-motorized Transportation

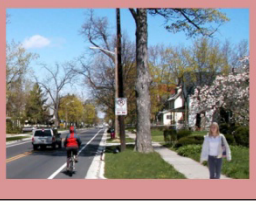
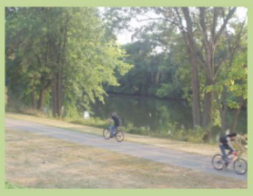
There is no such thing as a typical pedestrian or bicyclist. A single person's preferences for a walking or bicycle route may vary based on the type of trip. A person's daily commute route will likely favor directness of travel over a scenic route (but not always). An evening or weekend ride, walk or run for recreation and exercise will be based on an entirely different set of criteria. It will likely favor local roads and trails through parks and schools.

Individuals also vary greatly in their tolerance of traffic, hills, weather and numerous other factors. A child will likely choose to keep to local roadways on their way to school provided they have safe ways to cross busy streets. An adult who is just starting to bicycle again will likewise shy away from busy roadways, sticking to residential roads wherever possible. But an experienced bicyclist may choose the busy road for its directness of travel. The solution then is not one dimensional, but rather responds to the needs of the various users and trip types. By doing so the plan addresses the needs of the majority of the community's population, not simply a small interest group.

Bicycle and walking are not exclusive modes of travel either. Most bicycle trips will also include some time as pedestrian. Also, some bicycling and walking trips may be a part of a longer multi-modal journey. For example, someone may ride their bike to a bus and then walk from the bus to their final destination.

The following provides an overview of the different elements that go into creating a non-motorized network.

## 3.1 B. Spectrum of Non-motorized Links

| COMPLETE STREETS | NEIGHBORHOOD CONNECTORS | OFF-ROAD TRAILS |
|---|---|---|
|  |  |  |
| **Facility Types:**<br>• Bike Lanes & Sidewalks<br>• Sidepaths (where there are few intersecting driveways or roadways)<br>• Paved Shoulders<br>• Shared-use Arrows | **Facility Types:**<br>• Guided Routes<br>• Named Routes<br>• Bike and Pedestrian Boulevards<br>• Neighborhood Greenways | **Facility Types:**<br>• Foot Trails<br>• Soft-surfaced Trails<br>• Hard-surfaced Trails |
| **CONTEXT AREAS:** | | |
| • Primary Roads | • Local and Residential Roads<br>• Connecting Pathways Through Neighborhood Parks and Schools<br>• Crossing Improvements Where Neighborhood Connectors Intersect Primary Roadways | • Major Parks and Waterfronts<br>• Abandoned Rail Corridors<br>• Active Rail Corridors<br>• Transmission Corridors |
| **PRIMARY TRIP TYPES:** | | |
| • Daily Transportation to Work and Personal Business | • Mix of Daily Transportation, Safe Routes to School and Close to Home Recreation | • Use Depends on Location<br>• Recreation Destination |
| **TRIP CHARACTERISTCS:** | | |
| • Users Typically Segregated Into Mode Specific Facilities Such as Sidewalks and Bike Lanes<br>• Exposure to High Speed and High Volumes of Motorized Vehicle Traffic<br>• Just as Direct a Path of Travel as Using a Motor Vehicle | • More of a Shared Space, Sidewalks May or May Not Be Present<br>• Moderate Exposure to Low Speed and Low Volumes of Motorized Vehicle Traffic<br>• In Some Cases Trips Via Neighborhood Connectors May Be Longer Than the Same Trip Via Complete Streets | • Non-motorized Users Separated from Motorized Vehicle Traffic<br>• Minimal Exposure to Motorized Traffic at Roadway Crossings<br>• Directness of Travel Depends on the Route and What Resources It Connects |

## Neighborhood Connectors

The City of Athens has many existing paved and unpaved trails and a few bike lanes around the city. These provide great opportunities for non-motorized travel; however they may not be accessible to everyone. Many people may find themselves driving to a trail head and then getting on the trail, which can be a hassle and time consuming, especially if they have to load and unload equipment. Although there are a few existing bike lanes in the city that would assist in getting someone to their destination, they are only small segments that do not create a connected system and not everyone is comfortable using them.

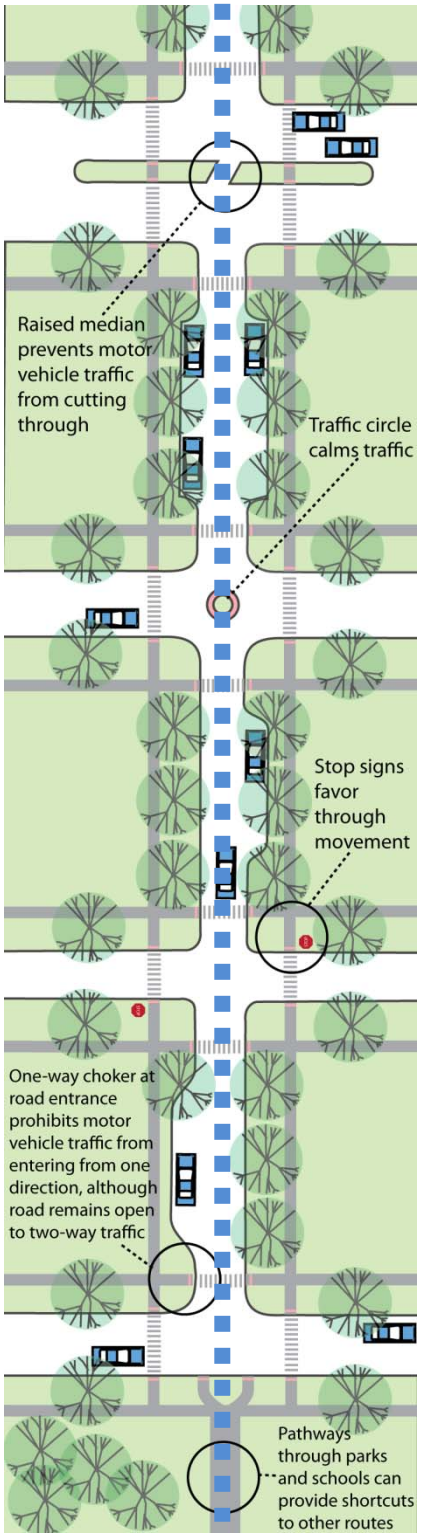
Neighborhood Connectors are non-motorized routes that help link pedestrians and bicyclists to primary destinations. They link neighborhoods and guide people to key destination and major trails or recreation areas. These routes are usually a combination of low volume local roads and short pathways through parks and schools. They provide a great way to navigate through a city, where arterial and collector roads may be undesirable. They can also function as an extension of an off-road trail, creating a smooth transition between two trail systems. Overall, they provide an attractive, convenient and comfortable environment that is welcoming to all bicyclists and pedestrians.

Many of these routes include traffic calming methods that slow and reduce the amount of motor vehicle traffic on the street. These are called Bicycle and Pedestrian Boulevards. Special treatments such as traffic calming and traffic reduction, signage and pavement markings and intersection crossing treatments all help to optimize these routes and provide a safer environment for bicycles and pedestrians.

Neighborhood Greenways take the elements of the Bicycle and Pedestrian Boulevard concept to the next level. They incorporate sustainable design elements such as rain gardens, bio-swales, native plantings, etc. These routes may also include pedestrian amenities such as art installations, benches, interpretive signs, and community vegetable and ornamental gardens. They may take on many different looks from avant-garde to traditional.

Where a neighborhood connector route intersects a busy multi-lane primary road and continues on the other side of the road, a traffic signal or appropriately designed mid-block crossing should be provided.

Fig. 3.1 C.
Each corridor needs to be specifically tailored to its needs by selecting the appropriate mix of design elements.



## Signs and Wayfinding

**Bicycle and Pedestrian Route Characteristics**
Routes signed as a bicycle and pedestrian routes should be along roads that have a relatively high Quality/Level of Service for bicyclists and pedestrians. The route should not have any known hazards to bicyclists and pedestrians and should be maintained in a manner that is appropriate for bicycle and pedestrian use. While many local roads may meet these criteria, the key is that the road is part of a specific route to a particular place. Obvious routes need not be marked. Signed Routes should be used judiciously to identify obscure routes to key destinations that avoid travel along major roadways.

Bicycle and Pedestrian Routes generally do not include specific bicycle improvements such as Bike Lanes. Bike Lane pavement markings and signs already indicate that a road segment is designed to specifically accommodate bicycles. Bicycle and Pedestrian Route signs are to be used where no obvious bicycle facility exists yet the route is advantageous to bicyclists. Thus road segments with Bike Lanes should generally not be marked as a Bicycle and Pedestrian Route.


**Bicycle and Pedestrian Guide Signs**
The most basic bicycle and pedestrian route signs are Guide Signs (shown to the left). These are used on designated guided routes to inform bicyclists and pedestrians of changes in direction and the distance to the next destination. Bicycle and Pedestrian Guide Signs are placed at changes in direction of designated routes. Not every non-motorized facility will necessarily be designated a route. Bicycle and Pedestrian Guide Signs should be used where the signage would help direct a bicyclist and/or pedestrian to a key destination that may not be obvious.

**Bicycle and Pedestrian Route Identification Signs**
Some routes are significant enough to warrant a name or numerical designation. Typically these are key connectors between off-road trails or used to help delineate a trail that incorporates many different facility types, like a Neighborhood Greenway. Bicycle and Pedestrian Route Identification Signs (shown to the right) establish a unique identification for a route. These signs are typically used with auxiliary plaques that indicate the direction of travel and any changes in direction of the route.

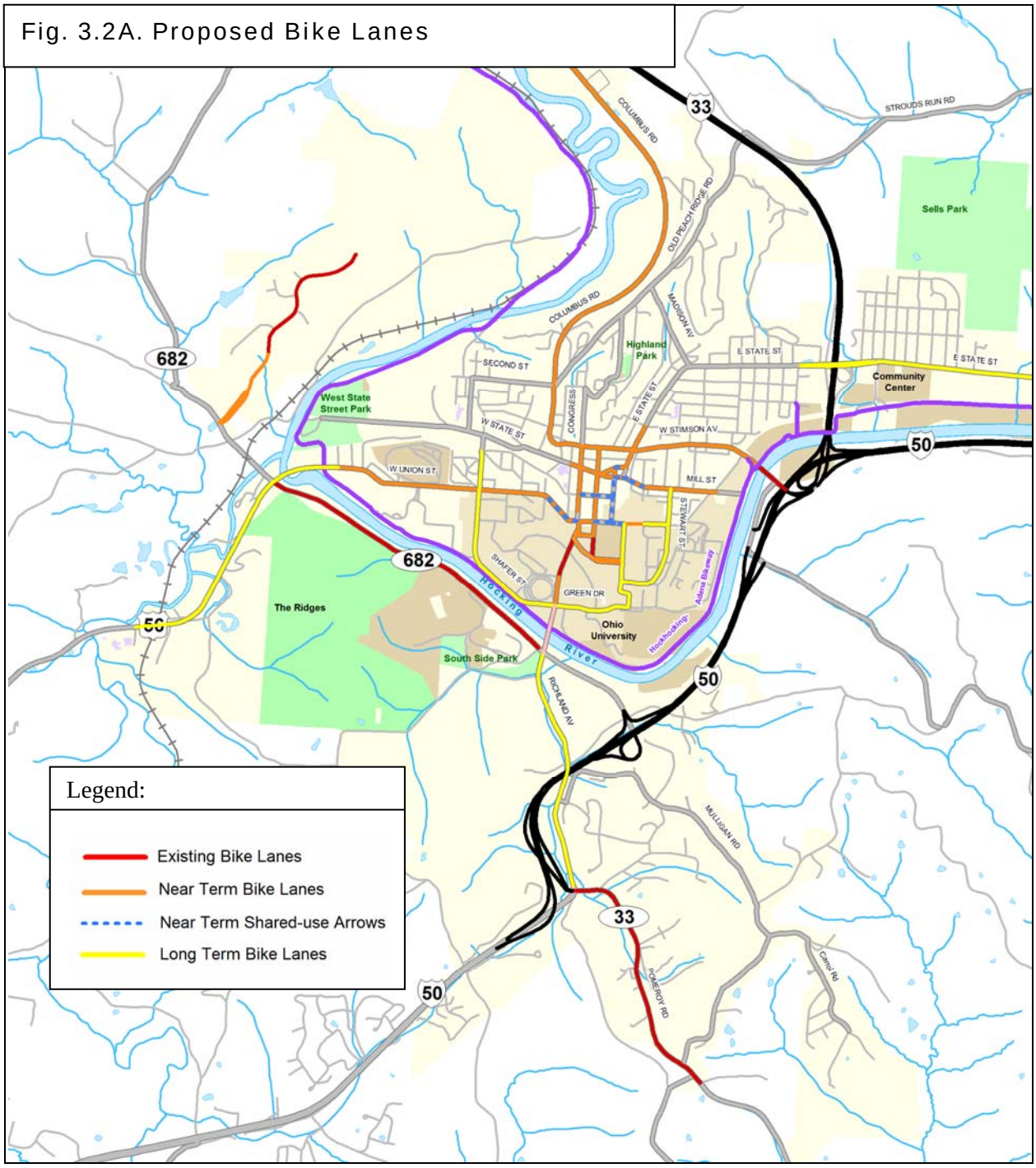

**Compliance with OMUTCD**
The signs shown are based on signs included in the 2009 MUTCD. At the time of this report, Ohio has not adopted the national manual. The signs in the new MUTCD are also bicycle route signs; no pedestrian icon is included. Thus, the City of Athens will need permission from FHWA to experiment with these signs. Other cities are also pursuing experimenting with these signs with FHWA.

## 3.2 Non-Motorized Transportation Network Overview

The following maps illustrate the Proposed Non-Motorized Transportation Network:

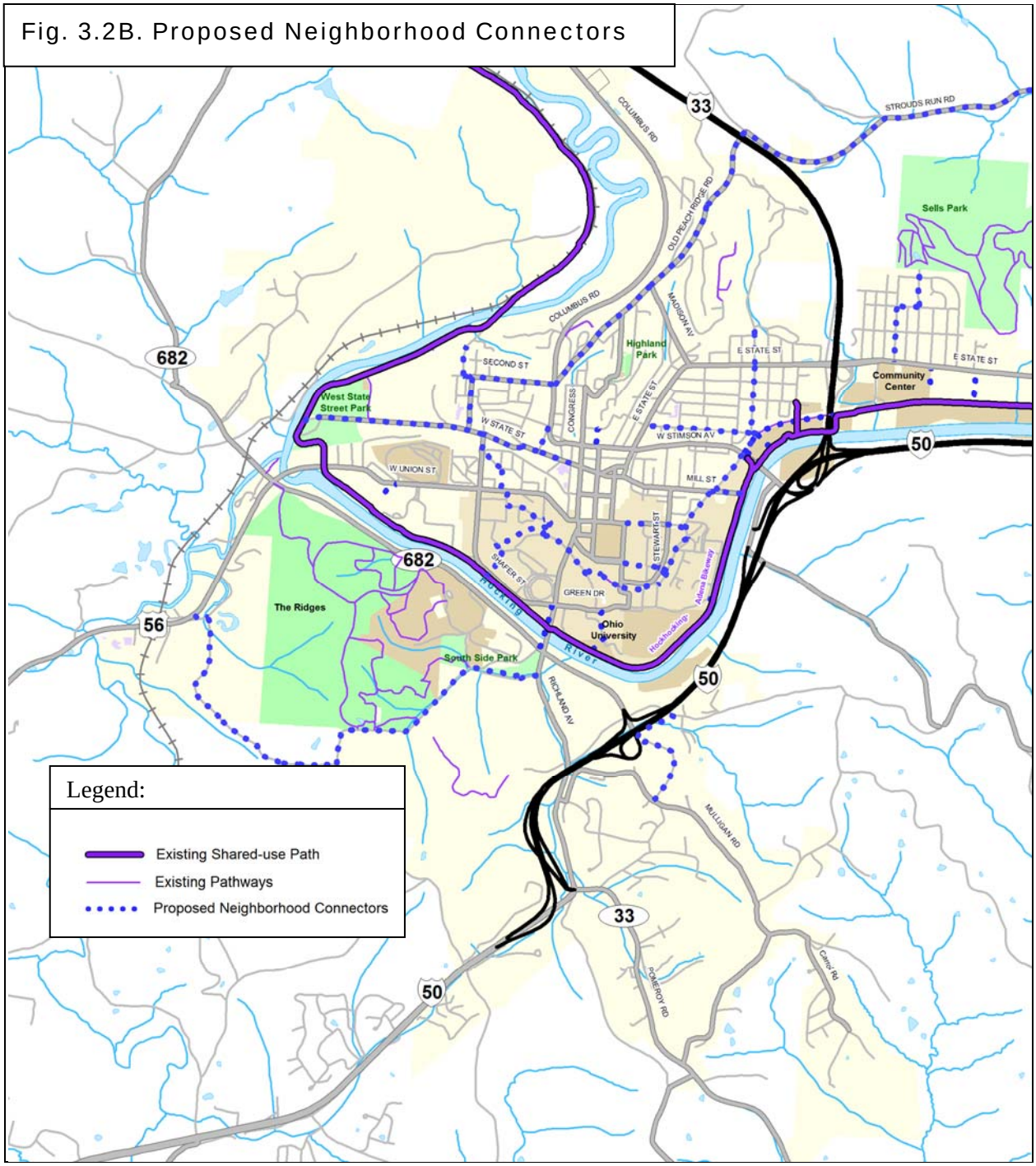
- Proposed Bicycle and Pedestrian Network Map (this is a large map) may be downloaded from the Project Page at www.greenwaycollab.com/athens.htm
- Fig. 3.2A. Proposed Bike Lanes
- Fig. 3.2B. Proposed Neighborhood Connectors
- Fig. 3.2C. Proposed Neighborhood Connector Facilities
- Fig. 3.2D. Neighborhood Connector Facilities
- Fig. 3.2E. Proposed Trail Extensions
- Fig. 3.2F. Proposed Sidewalk/Sidepath Improvements
- Fig. 3.2G. Proposed Road Crossing Improvements
- Fig. 3.2H. Crossing Improvement Facilities
- Fig. 3.2I. Proposed Stairways
- Fig. 3.2J. Proposed Non-motorized Bridges
- Fig. 3.2K. Proposed Bicycle Parking Facilities
- Fig. 3.2L. Bicycle Parking Facilities
- Fig. 3.2M. Proposed Highland Pedestrian Route
- Fig. 3.2 N. Priority Corridors

Fig. 3.2A. Proposed Bike Lanes




Around 6.2 miles of new Bike Lanes are proposed within the City for near term implementation and 6.8 miles are proposed for long term implementation. When combined with the 3.7 miles of existing Bike Lanes, the City will have will have approximately 16.7 miles of Bike Lanes. See section 5.3 Proposed Road Cross-sections for more details.

Fig. 3.2B. Proposed Neighborhood Connectors




The neighborhood connector system provides connectivity between destinations around the city for bicyclists and pedestrians who would not be comfortable traveling on the primary road system, even if bicycle lanes were present.

East End Extension:

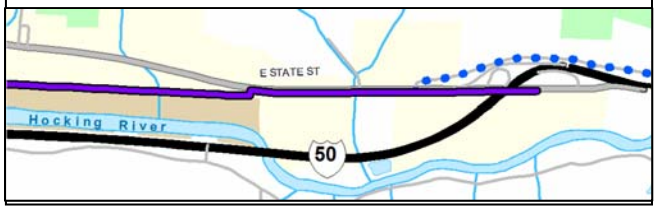
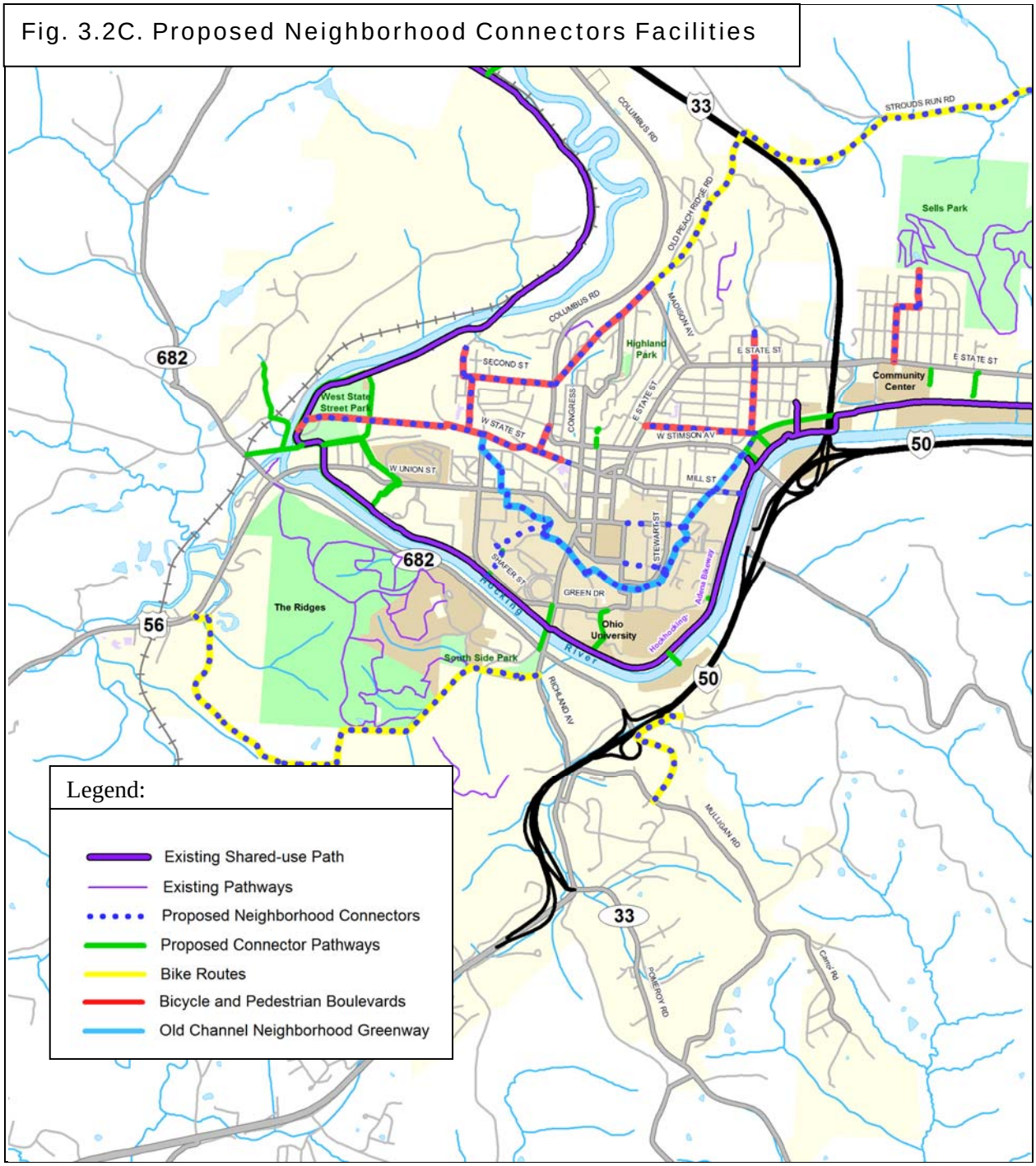
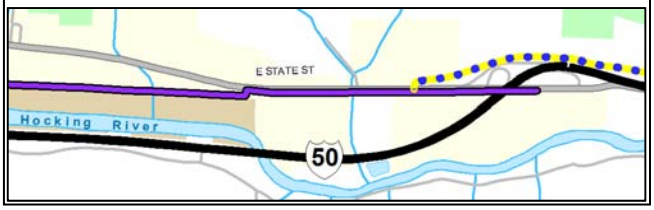


Fig. 3.2C. Proposed Neighborhood Connectors Facilities




The proposed neighborhood connectors consist of a combination of different facilities including, pathways, share-use paths, and low-volume local roadways.

East End Extension:



## Fig. 3.2D. Neighborhood Connector Examples

### GUIDED ROUTES: GR

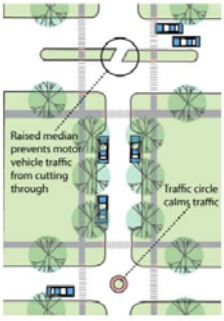

- Located primarily on low speed, low traffic volume local roads and connecting pathways
- Signs provide wayfinding by noting direction and distance to key destination such as schools, parks and the downtown
- Identify routes that may not be obvious to someone who is unfamiliar to the area


### NAMED ROUTES: NR

- Incorporates the elements of the Guided Routes
- Provides trail system branding and specific route identification
- Are helpful in providing consistency where a long-distance route is comprised of a number of different facility types
- Generally used on routes that provide key connections between major destinations – something worthy of a name or number


### BICYCLE AND PEDESTRIAN BOULEVARDS: BPB

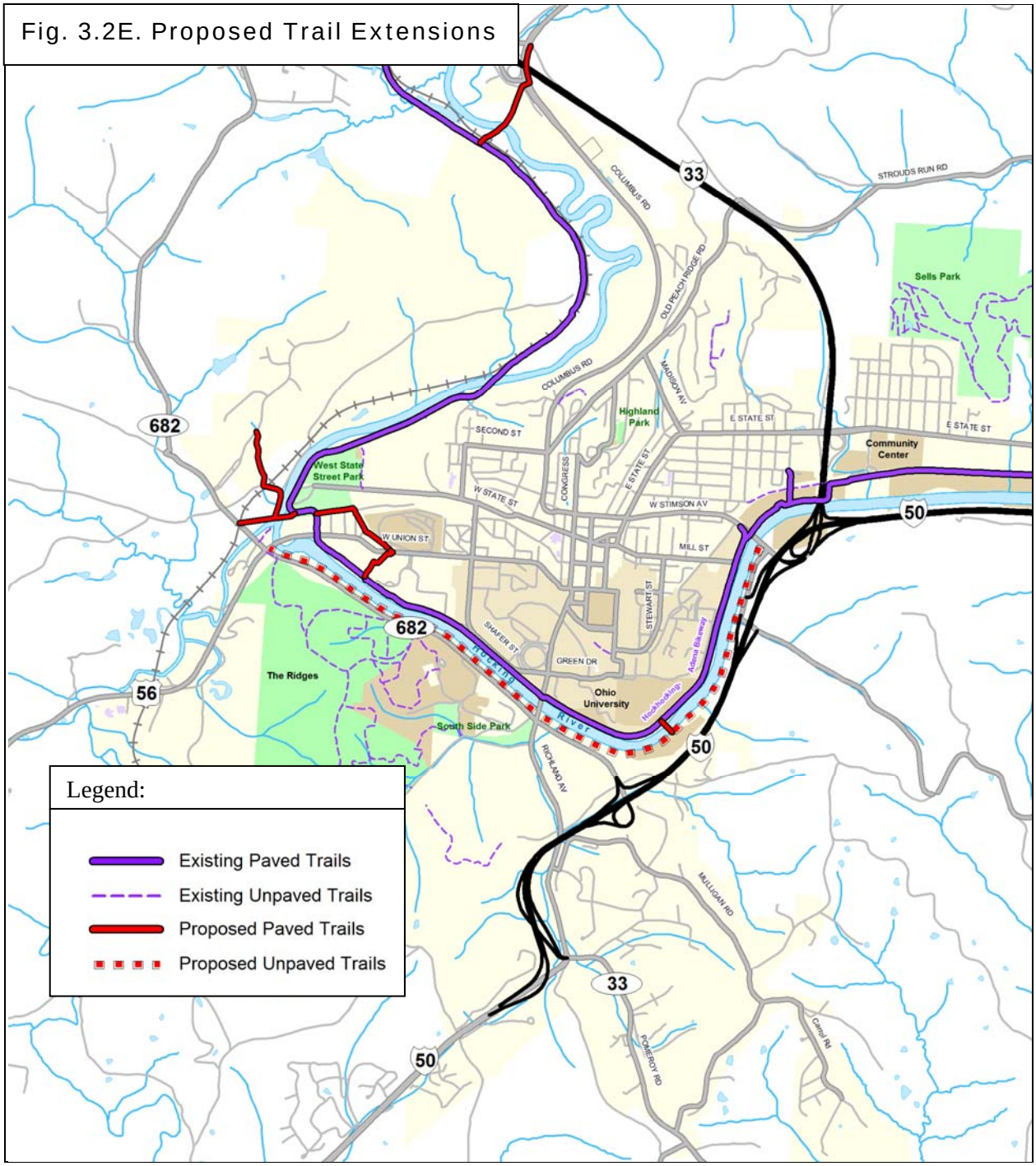
- Generally Incorporates the elements in Guided Routes, and Named Routes
- Route is optimized for bicycle travel while discouraging through motor vehicle traffic via tools such as motor vehicle diverter islands that are permeable to bicycles and pedestrians
- Motor vehicle speeds reduced through calming measures
- Stop signs and yield sign are oriented to provide unimpeded flow of bicycle traffic




### NEIGHBORHOOD GREENWAYS: NG

- Incorporates elements of the Guided Bike Routes, Named Bike Routes, and Bicycle Boulevards
- Designed for pedestrian and bicycle use
- Contains elements that reflect the character of the surrounding community such as natural areas, local art, community gardens and historic features.
- Has sustainable design elements such as rain gardens and permeable pavement

Fig. 3.2E. Proposed Trail Extensions




The Hockhocking-Adena Bikeway that presently ends at Holzer Clinic will be extended 1.53 miles to connect with County Road 24A. One of the goals of County bicycle planning is to connect established bikeways with the paved county roadway system so that cyclist can commute to urban areas on the best possible routes for cyclists.

East End Extension:

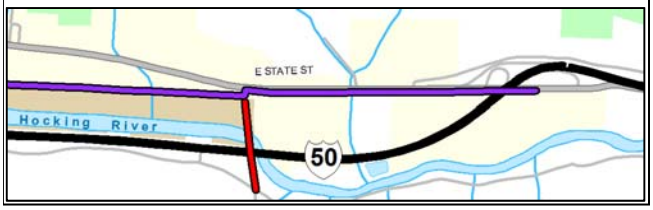
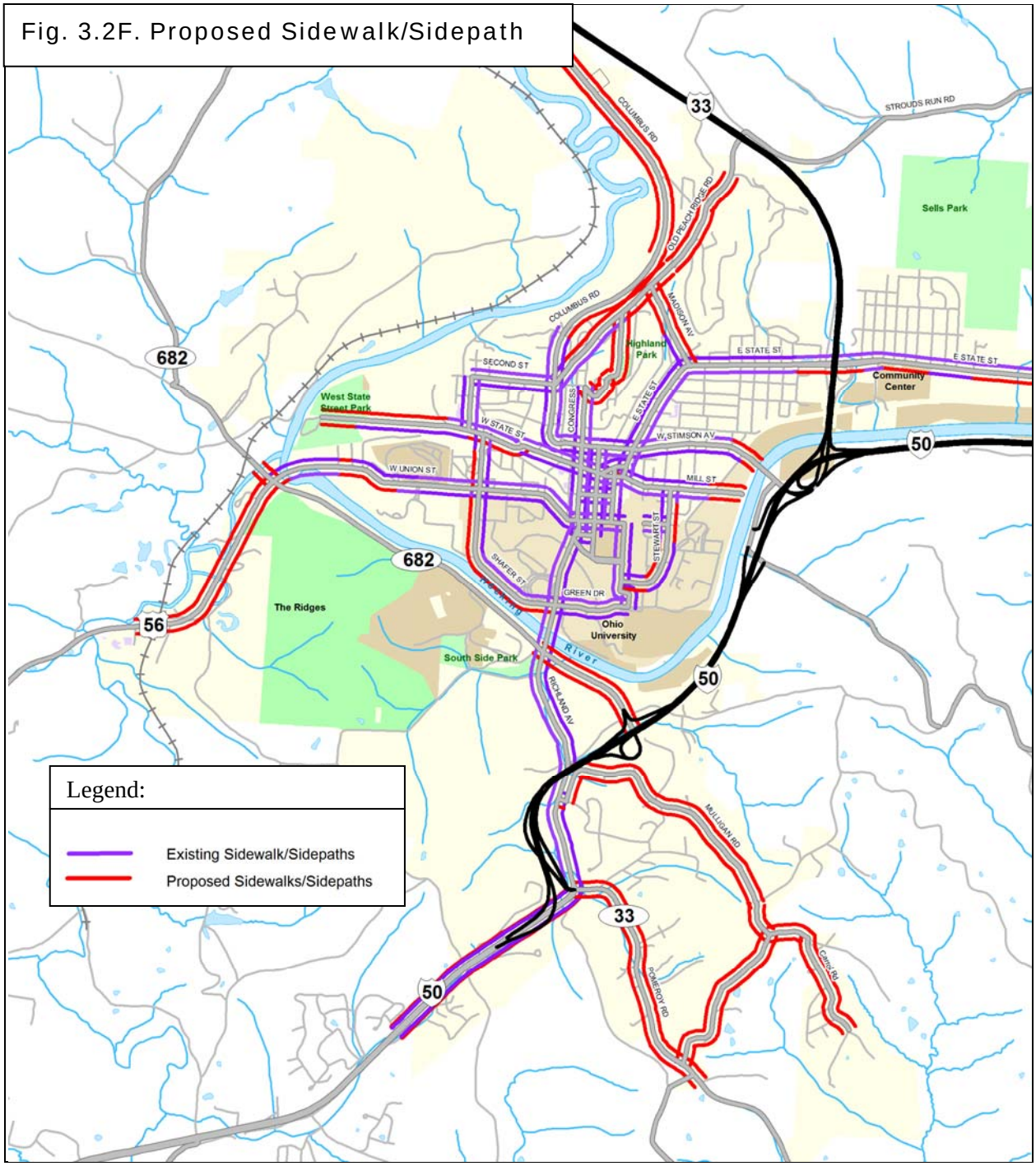


Fig. 3.2F. Proposed Sidewalk/Sidepath




Sidewalks/Sidepaths along major collector and arterial roads should be 6’ to 8’ wide with a buffer zone and vertical elements such as trees between the sidewalk and road.

East End Extension:

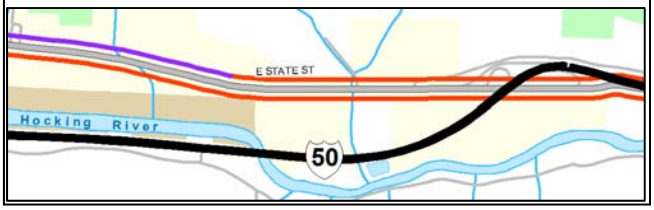
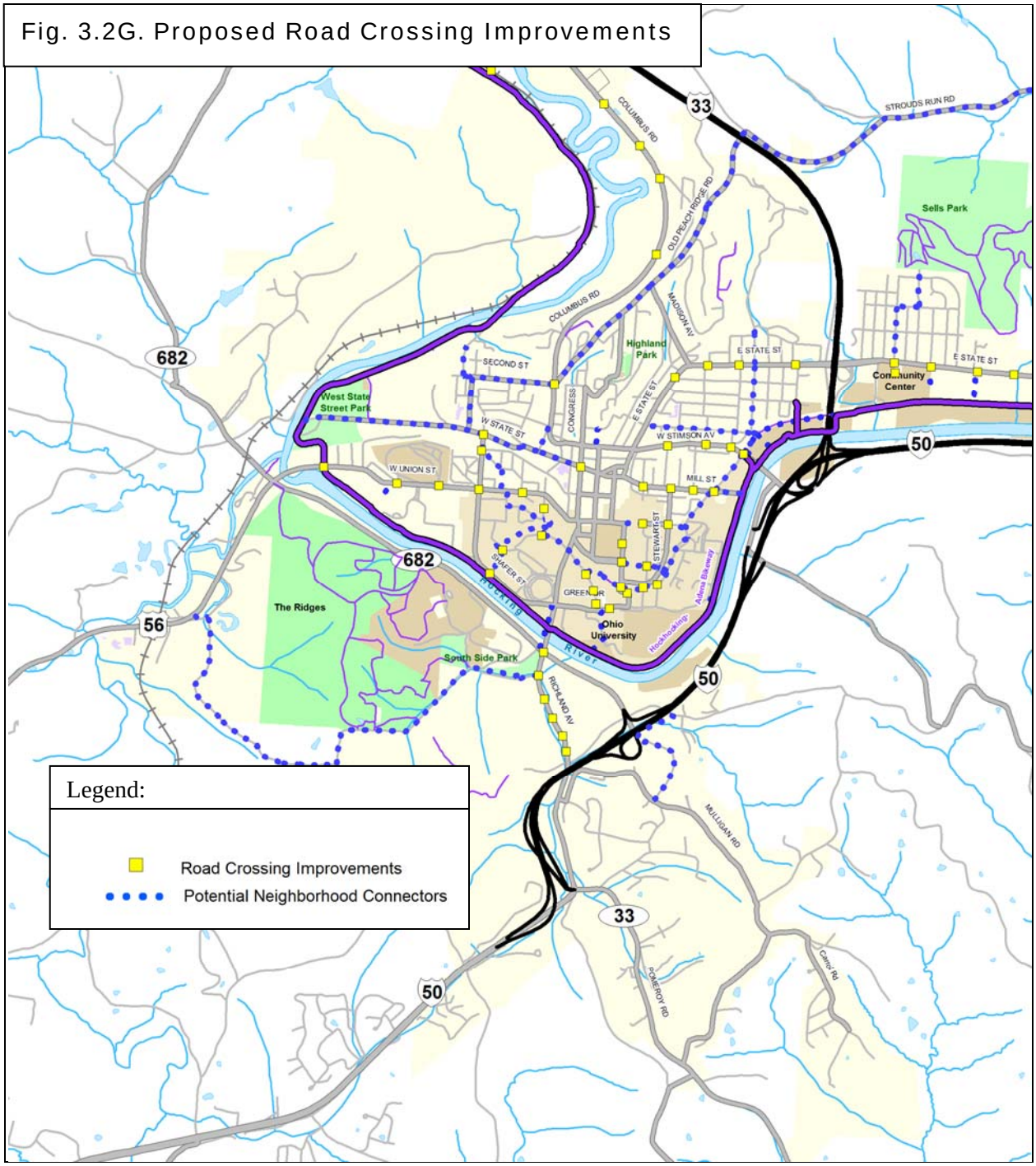
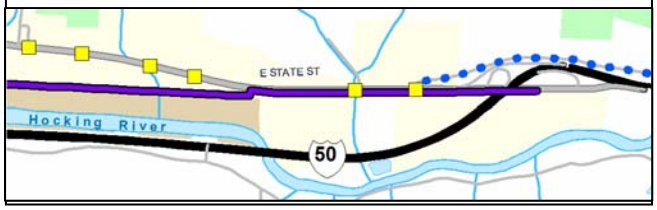


Fig. 3.2G. Proposed Road Crossing Improvements




Road Crossing Improvements are needed in areas where there is a high demand to cross. These areas occur where a bike route crosses a collector or arterial road, a major bus stop or bus shelter is present, there is a long distance between crosswalks, or there is a high demand based on land use and population density.

East End Extension:



## Fig. 3.2H. Crossing Improvement Examples

### ACTUATED RECTANGULAR RAPID FLASH BEACON: RFB

- High intensity LED flashers that are paired with crosswalk signs
- LED flashers alternate and get motorist attention when activated
- Push-button or passively activated
- Can be linked to advanced warning signs
- Solar powered models available
- Passive activation works best when there is a long pedestrian approach, such as a pathway

### CROSSING ISLAND: CI

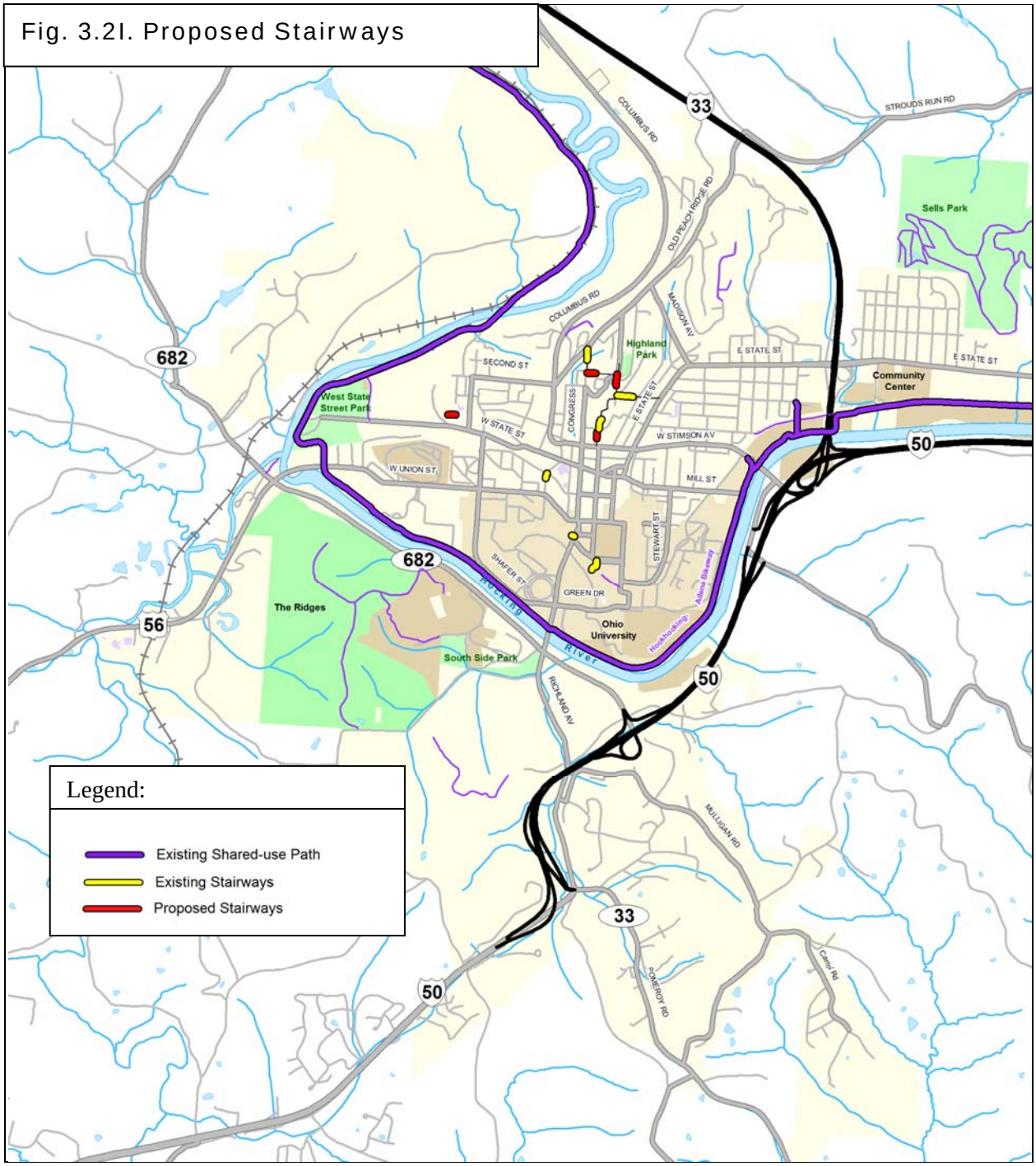

- Pedestrians only have to cross one direction of traffic at a time.
- Provide Storage area for pedestrians waiting for acceptable gaps in the flow of traffic before completing the street crossing
- Can be combined with Actuated Rectangular Rapid Flash Beacons
- Good for locations where there are three or more busy lanes and/or high speed roadways.

### HYBRID PEDESTRIAN SIGNAL: HPS

- Used to help pedestrians cross mid-block where a traditional pedestrian crosswalk signal would be inappropriate
- Minimizes delay to motor vehicle traffic
- Good for locations where there are few usable gaps in traffic, usually on high speed/high volume roadways when a crossing island is not feasible

The signal is kept dark at its resting state. When a pedestrian activates the crossing button, a flashing yellow signal is displayed to motorists. This is followed by a steady yellow then a solid red at which time the pedestrian is displayed a walk signal. During the clearance interval, the motorists are displayed an alternating flashing red signal. Motorists may then move forward if the pedestrian or bicyclist has already crossed the road.

Fig. 3.2I. Proposed Stairways




Due to the topography in the city these stairways provide a more direct access route to areas that are difficult for pedestrians to get to.

East End Extension:

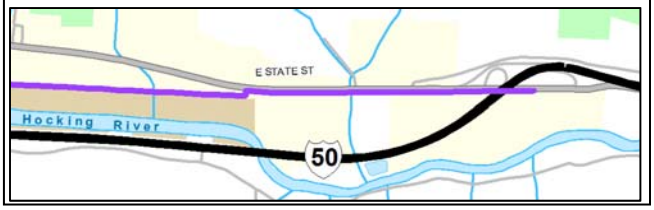
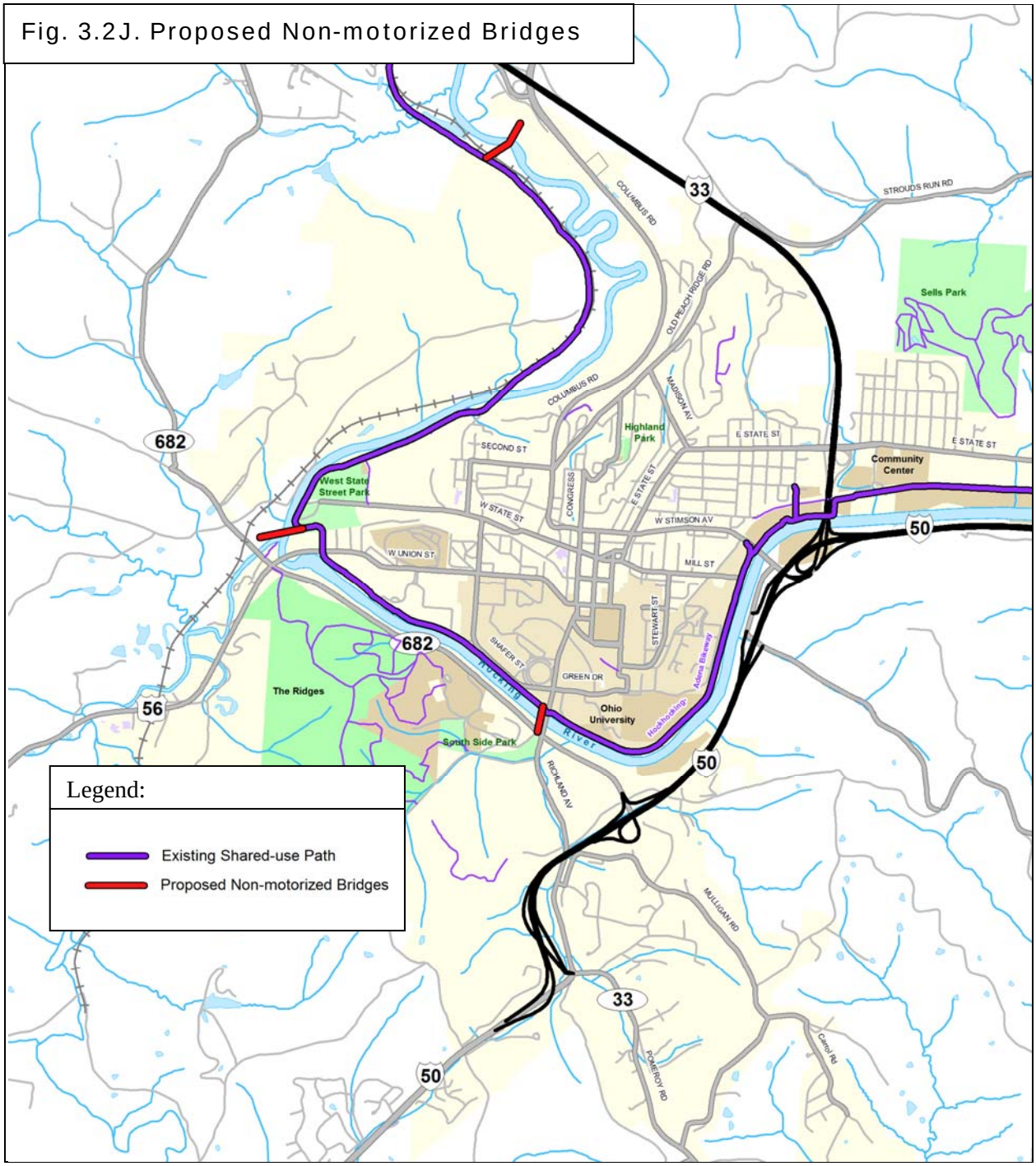


Fig. 3.2J. Proposed Non-motorized Bridges




The Hocking River acts as a natural barrier for pedestrians and bicyclists. Creating new crossing by utilizing old railroad bridges and a newly constructed bridge along Richland Ave will help to make more connection across the river.

East End Extension:

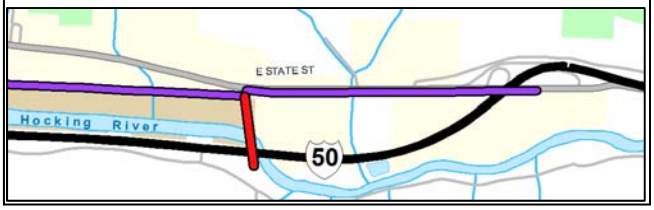
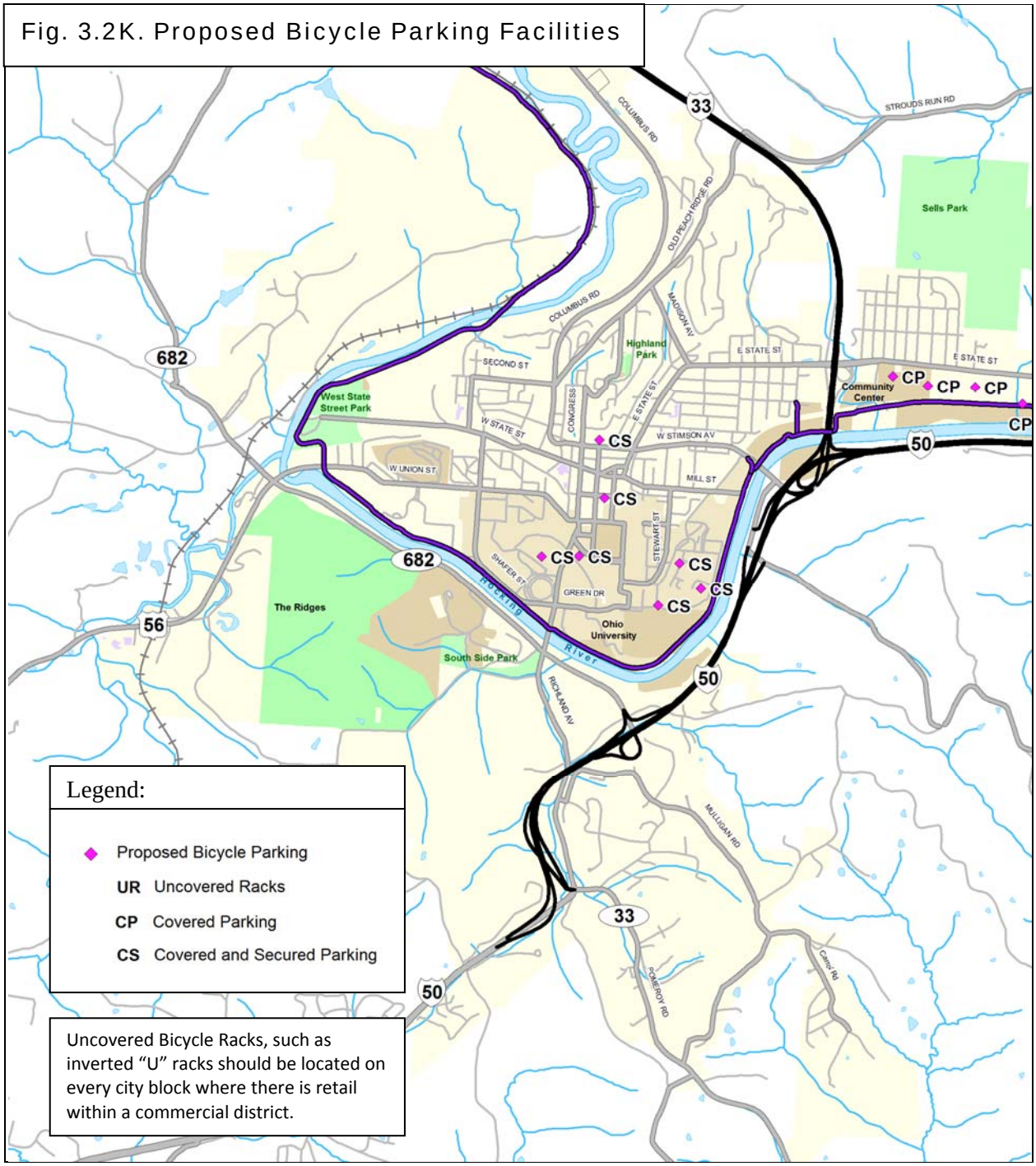
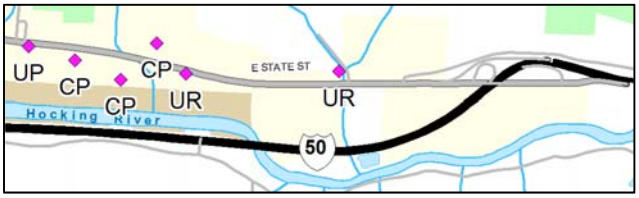


Fig. 3.2K. Proposed Bicycle Parking Facilities




The lack of a secure parking space discourages many people from using their bikes for basic transportation. Bicycle parking needs to be visible, accessible, plentiful and convenient. If any of these criteria are not met, there is a good chance cyclist will not use the facilities and will park their bike wherever they feel it will be safest. For more information refer to section 4.4 Bike Parking.

East End Extension:



## Fig. 3.2L Bicycle Parking Examples

### UNCOVERD BICYCLE RACKS — UR

**General:**
- Generally bicycle racks of the inverted "U" design are considered the best models.
- Alternative designs, such as "Artistic" hoops may be considered as long as they function similar to the "U" design, providing at least two contact points for the bicycle.

**Target User:**
- Intended for areas where people expect to park their bikes for only a few hours (e.g. Restaurant, Retail Store)

**Proposed Policies:**
- Bike Racks should be located on every city block where there is retail within a commercial district and downtown.

### COVERED BICYCLE PARKING — CP

**General:**
- The covering will vary depending on the location. In addition to the roof complete or partial side enclosures may be provided to minimize exposure to wind and snow.
- There is opportunity to incorporate a green roof or solar panels into the roof

**Target User:**
- Intended for areas were people expect to park their bikes for extended periods of time (e.g. Near Work, Apartment Buildings, Large Commercial Centers)

**Proposed Policies:**
- Basic bicycle racks should be placed under an overhang whenever possible and specific covered parking should be created when needed.

### COVERED AND SECURED BICYCLE PARKING — CS

**General:**
- Generally consists of an enclosed room or fenced off-area with-in a parking deck where access is controlled through a doorway.
- Amenities such as compressed air, lockers and vending machines may be available.

**Target User:**
- Intended for areas were people expect to park their bikes for extended periods for time (e.g. Generally within parking structures in populated areas)

**Proposed Policies:**
- Incentives should be provided for nonresidential and multiple unit dwellings for providing covered and secured bicycle parking.

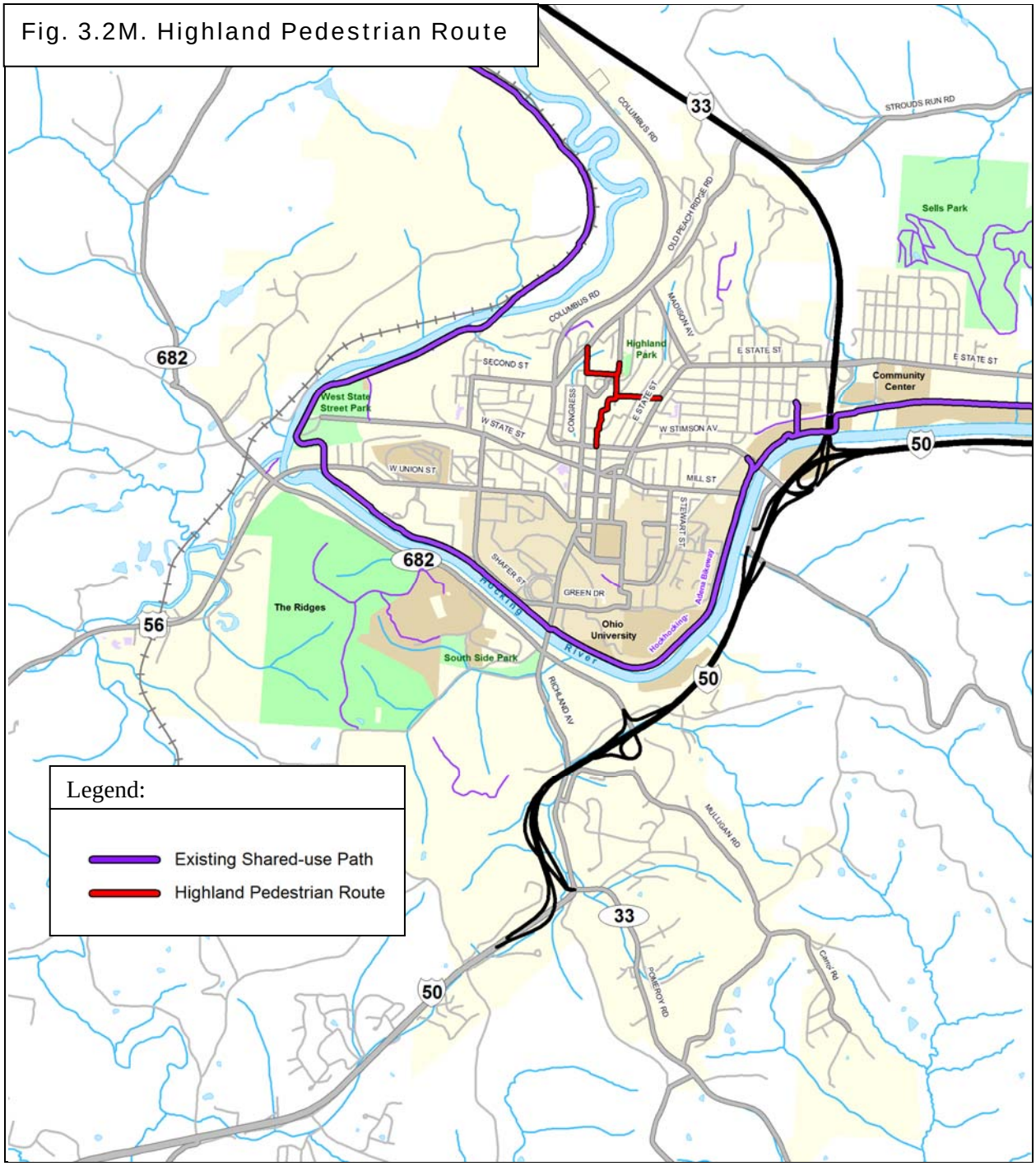
### BICYCLE LOCKER — L

**General:**
- Typically, individual bike lockers have an interior diagonal divider and doors on either end such that they may accommodate two bicycles.
- Given the cost, appearance and space requirements of bike lockers they are only appropriate for limited areas.

**Target User:**
- Intended for remote and low density areas where enclosed and secured bike parking is not available or feasible (e.g. employee at a small office)

**Proposed Policies:**
- Provide when necessary

Fig. 3.2M. Highland Pedestrian Route




The Highland Pedestrian Route can be accessed through existing and proposed stairways. This route creates a stronger connection through the more elevated area of the city and links Highland Park to Uptown.

East End Extension:

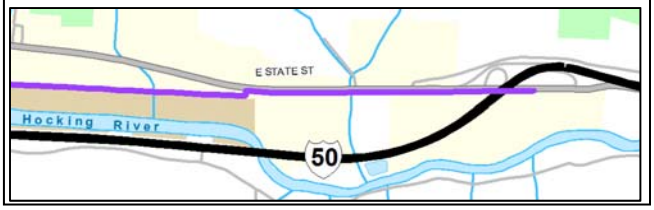
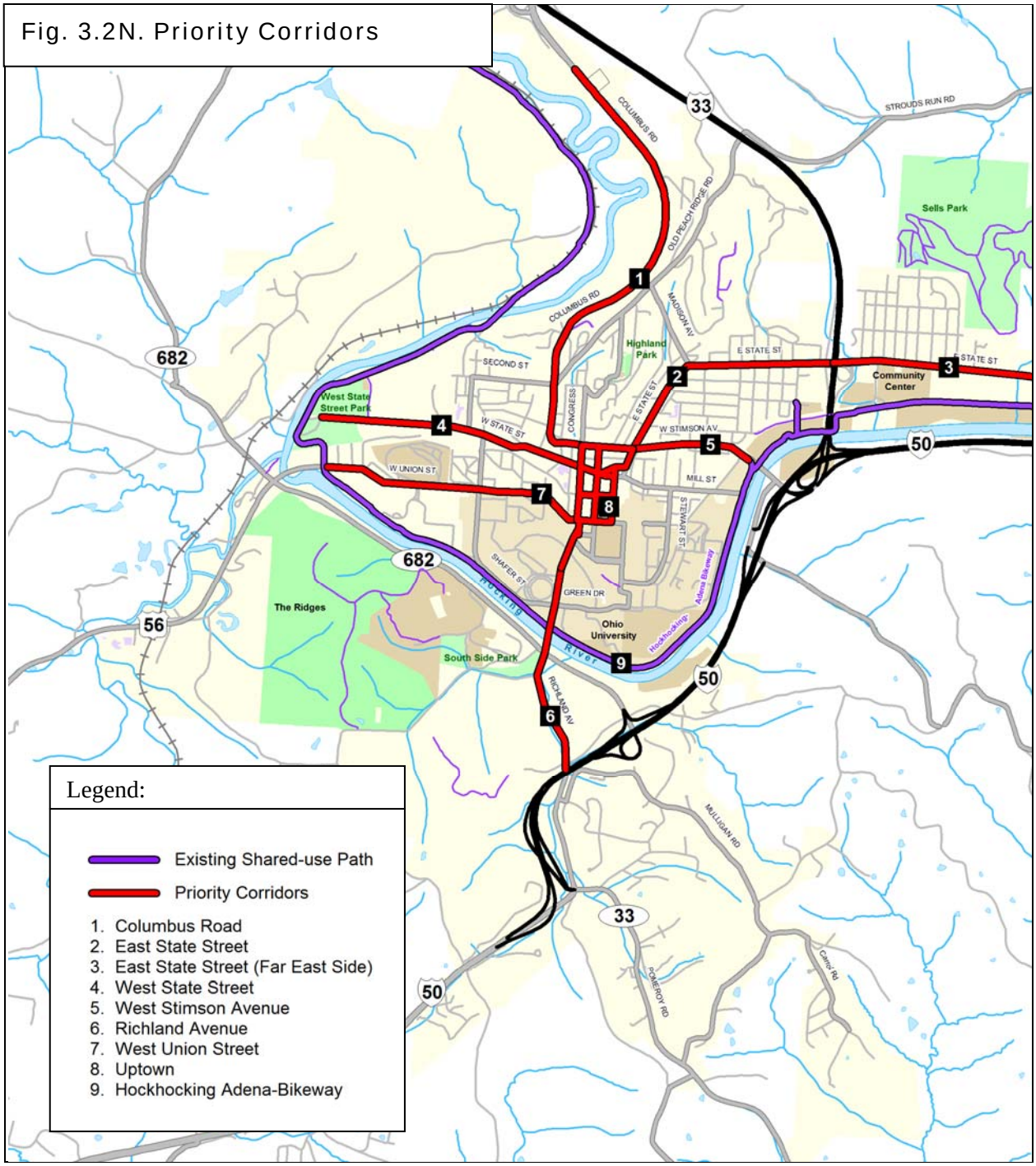
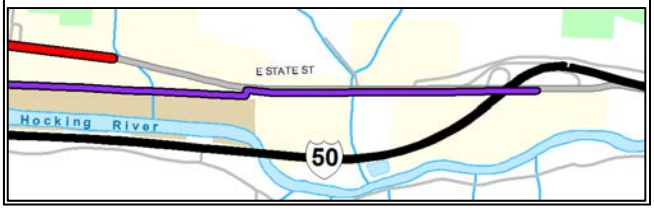


Fig. 3.2N. Priority Corridors




Priority Corridors were selected based on input from the public workshop and online survey. These corridors provide some of the main connections across town and should be implemented first.

East End Extension:



# 3.3 Priority Corridors

The proposed improvements fall into three general categories, near-term, mid-term and long-term opportunities and improvements. Near-term opportunities include improvements that may be accomplished by relatively modest changes to the existing road system. Mid-term opportunities include improvements that may be accomplished in the near future; however they may require some additional construction. Long-term improvements are projects that will be implemented with new development or reconstruction of existing structures.

**Near-term and Mid-term Opportunities**
The near-term and mid-term opportunities recommendations were designed to be cost-effective and easily implemented by minor changes such as re-striping the existing road surface. These simple solutions will enhance bicycle and pedestrian conditions quickly and easily until the road is expanded or major reconstruction is undertaken. Mid-term improvements may require some construction, such as crossing islands or sidewalk extensions. In general, near-term and mid-term opportunities:

- May generally be done within the existing infrastructure, for the most part curbs and drainage structures are not changed.
- May be implemented as soon as funding is available and design work completed.
- Include relatively inexpensive road modifications such as 4 to 3 lane conversions, and moderately expensive improvements such as crossing islands.
- Are in some cases design compromises, where the widths of Bike Lanes, Motor Vehicle Lanes, Buffers, and Sidewalks are less than the ideal desired widths to fit within the existing curb lines and right-of-ways.
- May in many cases be the same as the ultimate long-term solution as existing development and right-of-way restrictions limit the design options.
- May be done independently or as a part of operations, resurfacing, restoration, rehabilitation or minor widening project. In general, if a road is to be resurfaced within the next few years, any road restriping should be incorporated in the resurfacing project.

**Long-term Improvements**
The costs to undertake these non-motorized projects independently of a road reconstruction project would be significant. Thus, in order to maximize the impact of finite resources, the long-term improvements are expected to be implemented as a road is completely reconstructed (not just resurfaced). In general, long-term improvements:

- Are generally implemented when a new road is built or an existing road is completely reconstructed. Reconstruction projects typically include new curb and gutter as well as storm water systems.
- Generally require that a road be widened to accommodate the minimal lane width requirements for all users and may require additional rights-of-way.
- Strive to meet the minimum desired widths for bike lanes, motor vehicle lanes, buffers, and sidewalks to the extent that it is practical given the project's context.

The distinction between the near-term opportunities and the long-term improvements can sometimes be obscure. For many roadways, the near-term opportunities and long-term improvements will be the same. The difference will be primarily qualitative (width of sidewalks, buffers, bike lanes and motor vehicle

lanes). This report does not define the ideal long-term cross section for every primary road in the City. Rather it defines what improvements should be included and provides guidelines for a wide variety of road and right-of-way scenarios which can be found in the Appendix.

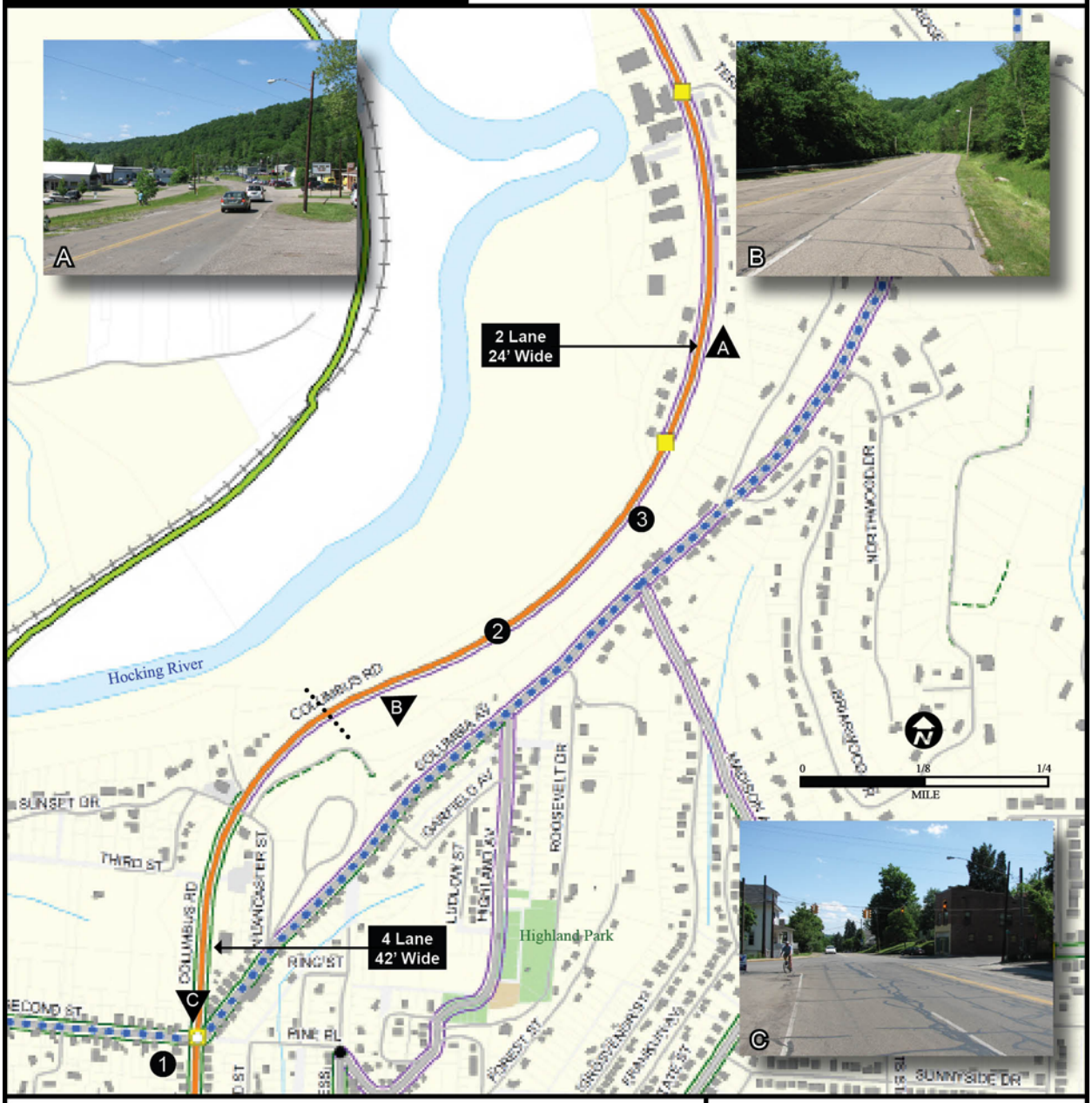
**Priority Corridors**

Nine corridors were identified based on input from the public workshops and online surveys. These corridors provide some of the main connectors across town and pose some the most challenging issues that require more detailed recommendations. As noted above, the Priority Corridor Recommendations are categorized into three groups; Near-term, Mid-term and Long-term implementation phases. Each Corridor Plan describes the existing conditions and the proposed recommendations for that Corridor.

The following maps illustrate the Priority Corridors and their individual implementation plans specifying near-term, mid-term and long term improvements:

- Columbus Road, from Second Street to Terrace Drive
- East State Street, from Carpenter Street to US-33
- East State Street (Far East Side), from US-33 to Farmer's Market
- West State Street, from West State Street Park to Mill Street
- West Stimson Avenue, from Carpenter Street to Rock Riffle Road
- Richland Avenue, from Hooper Street to Existing Bike Lanes
- West Union Street, from 682 to Congress Street
- Hockhocking-Adena Bikeway, from US-33(north) to US-50
- Uptown, Congress Street and Court Street from President Street to Carpenter Street

## EXISTING CONDITIONS: Columbus Rd




### Issues:

**General**

- Difficult to Navigate on Bicycle
- Columbus Road Provides the Primary Link Between the Commercial Area on the North Side of Town and the Rest of Athens. The Alternative Route Via Columbia Ave and Terrace Dr is A Much Steeper Grade.

**Noted**

1. Difficult Intersection for Bicycles
2. No Designated Bicycle Facilities
3. No Sidewalk Either Side of the Street North of Sunset Dr

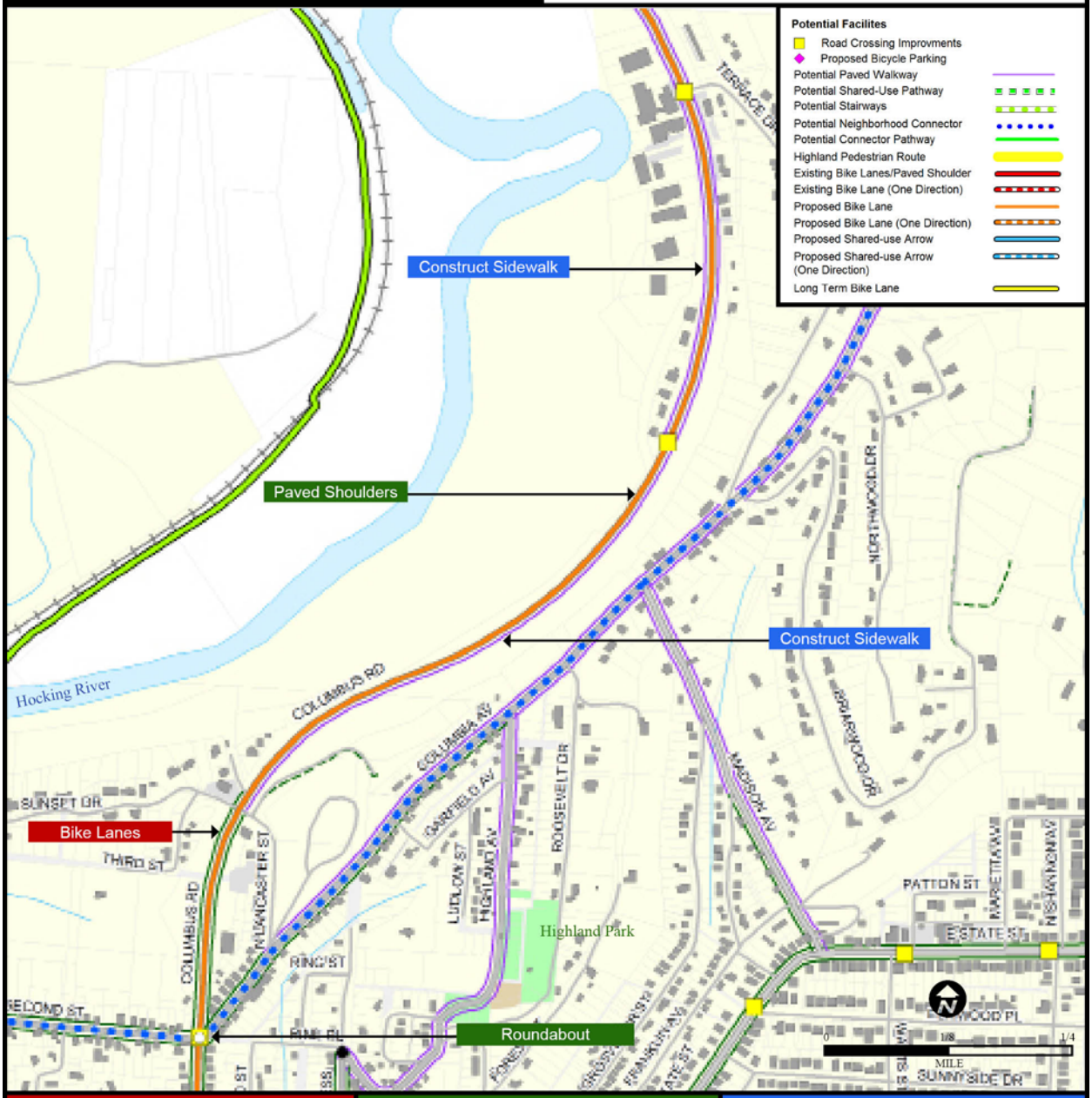
### Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: Columbus Rd




## Near-Term:

- Add Bike Lanes to Four Lane Segment of Columbus Rd Through a 4 to 3 Lane Conversion.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.

## Mid-Term:

- Evaluate Roundabout at the intersection of Columbus Rd, Columbia, N Lancaster St and Second St.
- Wide Paved Shoulder (6'wide).
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scale Lighting and Trees between the Sidewalk and the Roadway where Appropriate.

## Long-Term:

- Construct Sidewalk Along the East Side of Columbus Rd.
- Construct Sidewalks On Both Sides of Columbus Rd beginning a Mile South of Terrace Dr.
- Crossing Improvements in Commercial Area.
- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

# EXISTING CONDITIONS: E State Street


## Issues:

**General**

- Not Very Bicycle or Pedestrian Friendly
- Difficult to Navigate for Both Bicycles and Pedestrians
- Existing Sidewalk Needs Repairs

**Noted**

1. No Designated On-Road Bicycle Facilities
2. Difficult to Cross E State Street near Watt St
3. Difficult to Cross E State Street near Homes St
4. Gaps in the Sidewalk On South Side of Street

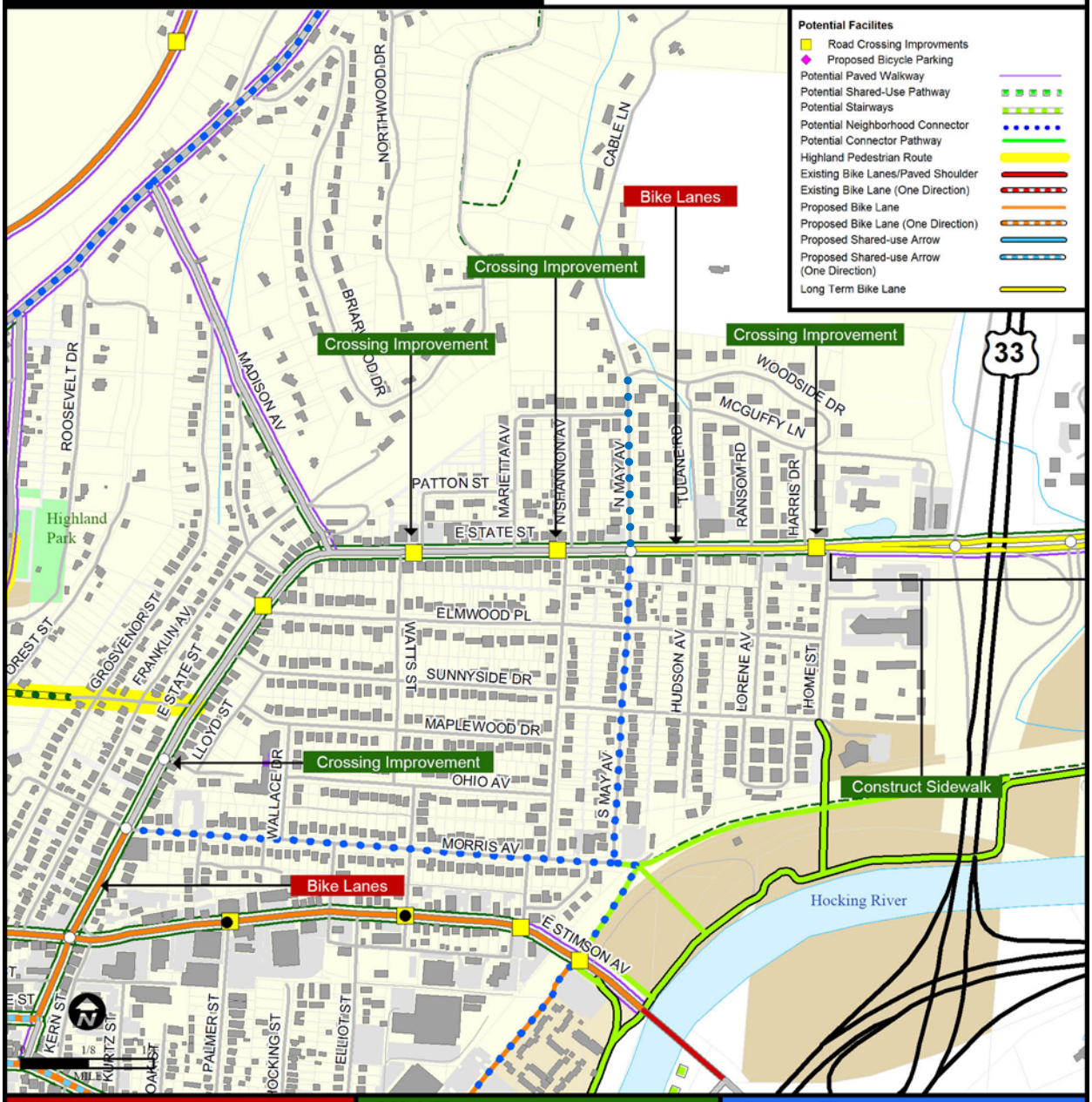
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: E State Street




## Near-Term:

- Repair and Maintain Existing Sidewalks.
- Add Bike Lanes to E State Street Between Carpenter St and Morris Dr through the Lane Narrowing.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.

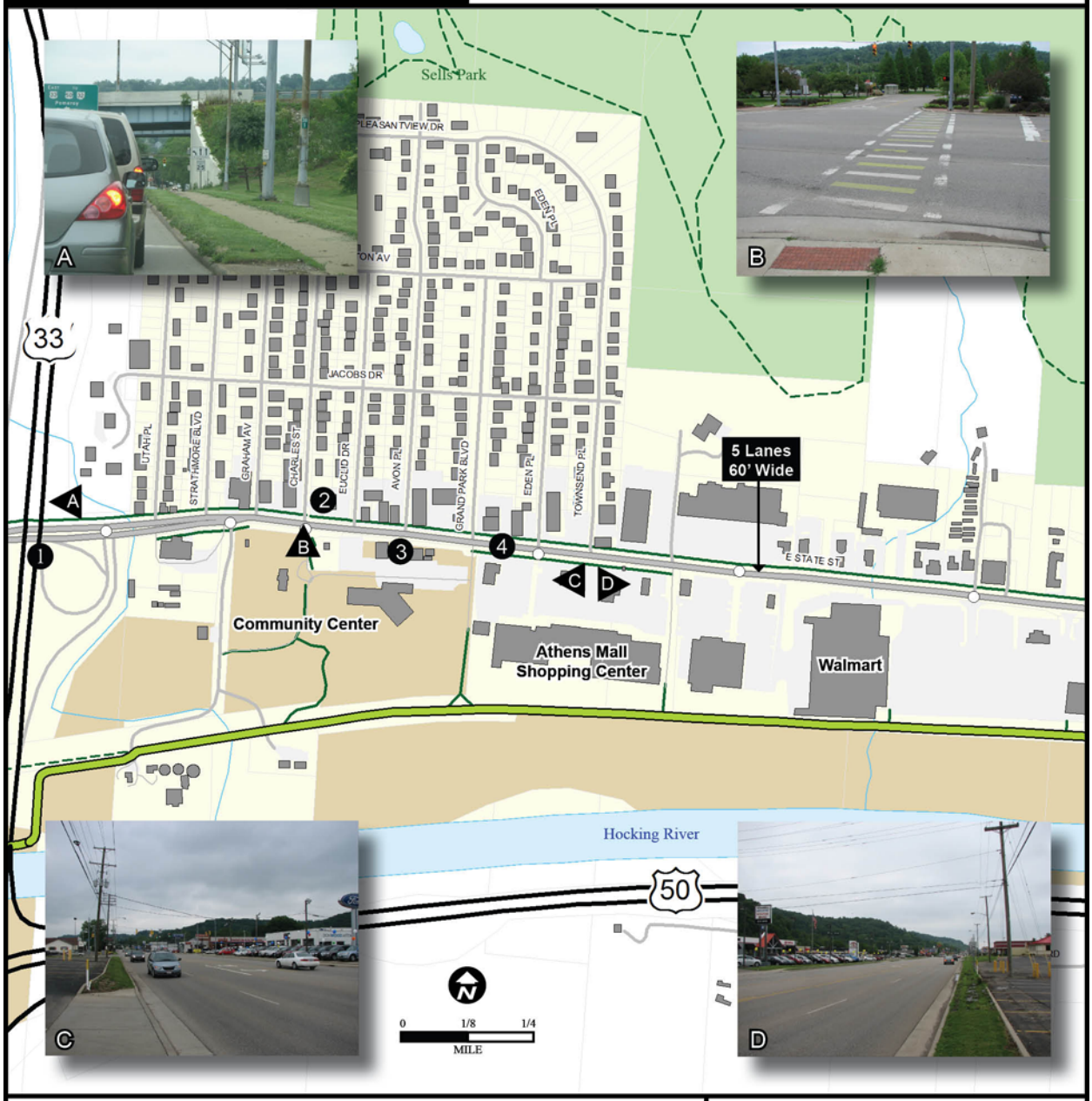
## Mid-Term:

- Complete Sidewalks Gaps on South Side of Road Near US-33.
- Improve Signalized Pedestrian Crossing at Verona St.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scale Lighting and Trees between the Sidewalk and the Roadway where Appropriate.

## Long-Term:

- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

# EXISTING CONDITIONS: E State Street (Far East Side)




## Issues:

**General**

- Not Very Bicycle or Pedestrian Friendly
- Difficult to Navigate for Both Bicycles and Pedestrians
- Existing Sidewalk Needs Repairs

**Noted**

1. No Sidewalk on South Side of Overpass
2. Difficult to Cross E State Street at Community Center
3. Gaps in the Sidewalk On South Side of Street
4. No Designated On-Road Bicycle Facilities

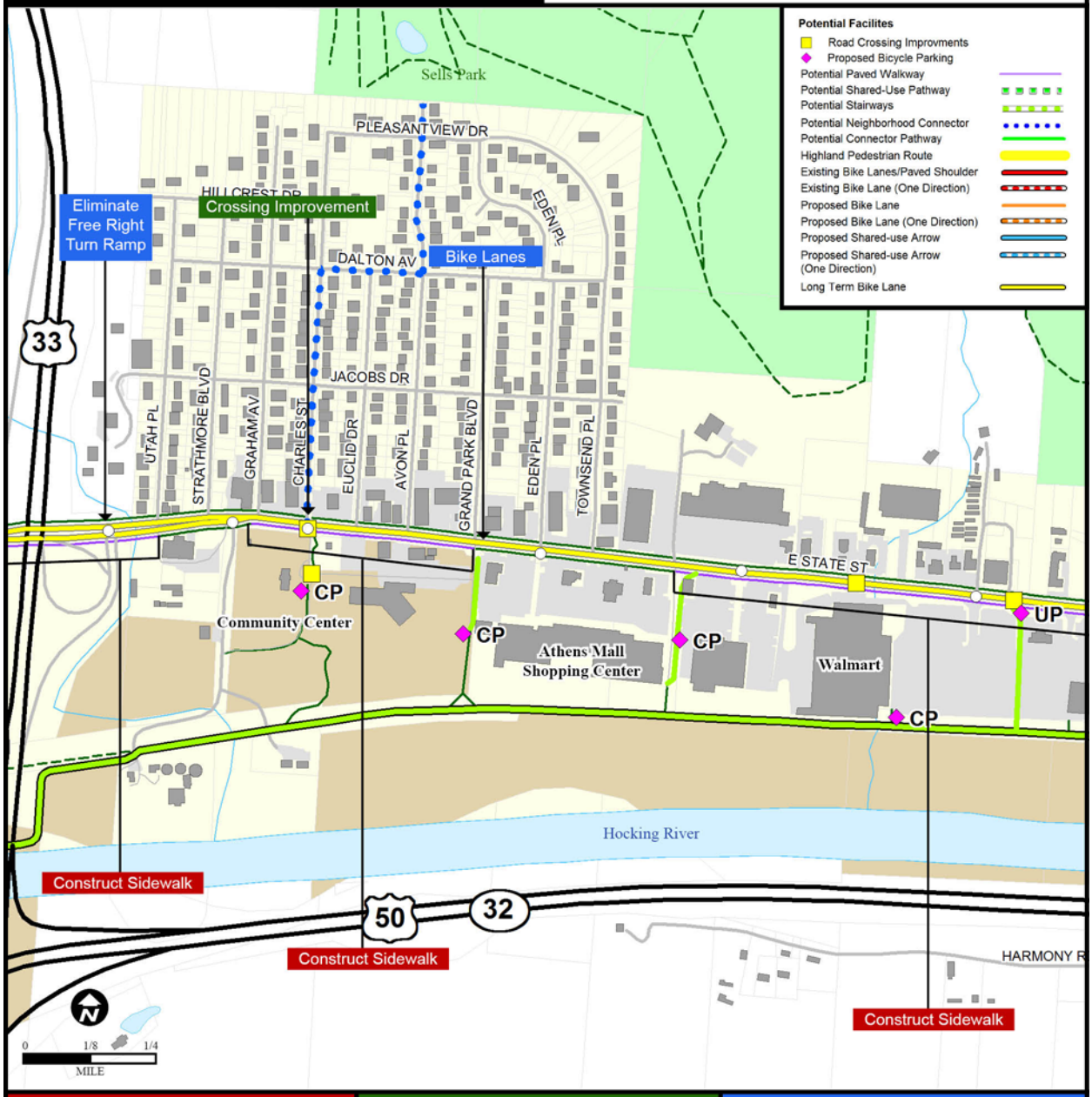
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: E State Street (Far East Side)




## Near-Term:

- Review Zoning Codes to Make Future Development More Pedestrian and Bicycle Friendly. Evaluate Applying Form Based Code Principals and/or Guidelines
- Complete Sidewalk Gaps.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.

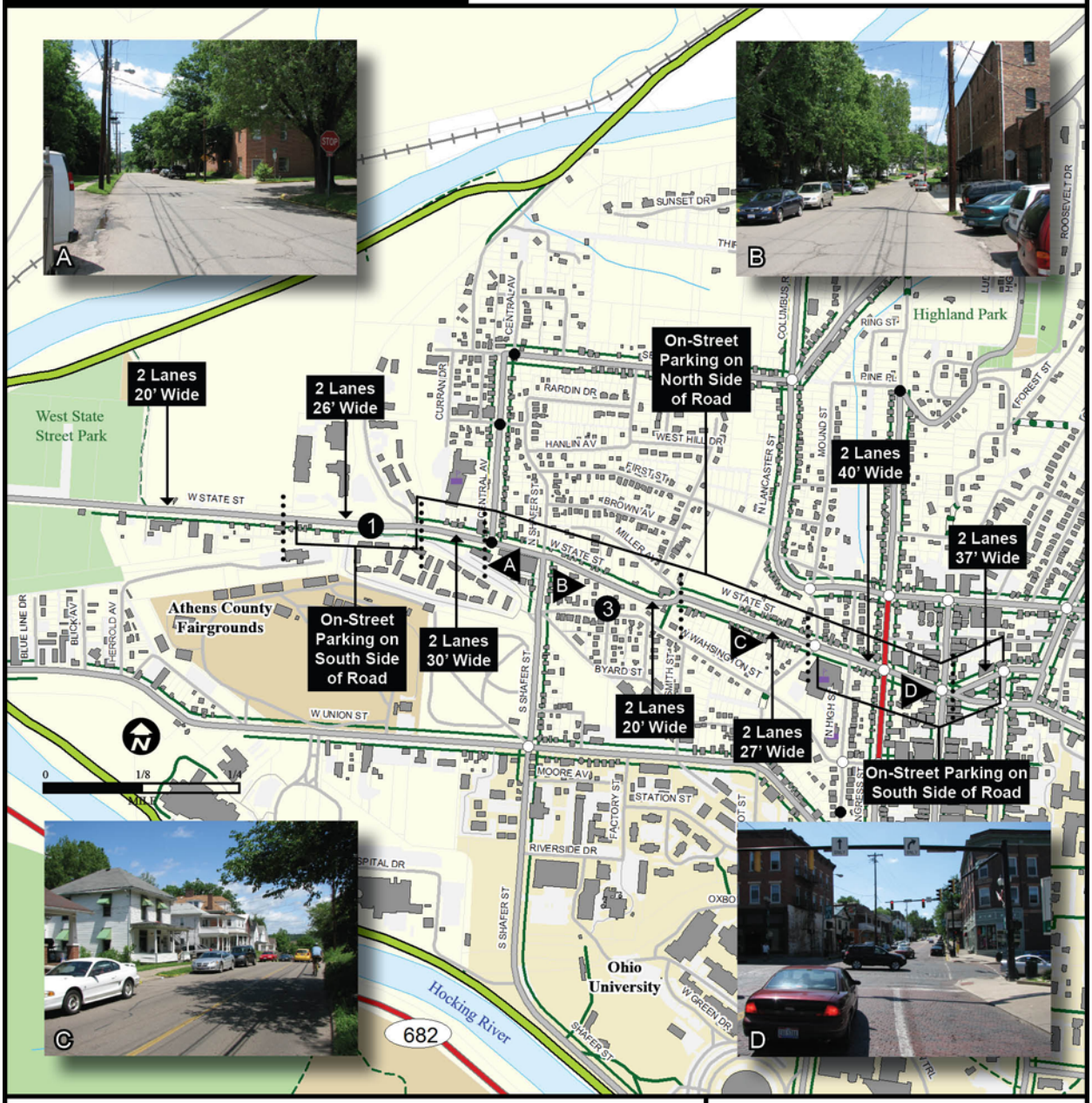
## Mid-Term:

- Add Links Between Sidewalk and Trail.
- Add Bicycle Parking.
- Add Medians Where Left Turn Lanes are Not Needed.
- Road Crossing Improvements.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scale Lighting and Trees between the Sidewalk and the Roadway where Appropriate.

## Long-Term:

- Add Bike Lanes.
- Eliminate Free Right-turn Ramp
- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

# EXISTING CONDITIONS: W. State Street




## Issues:

**General**

- Needs to be More Bicycle/Pedestrian Friendly
- Access to West State Street Park for Bicyclist

**Noted**

1. No Designated On-Road Bicycle Facilities
2. Gaps in Sidewalk

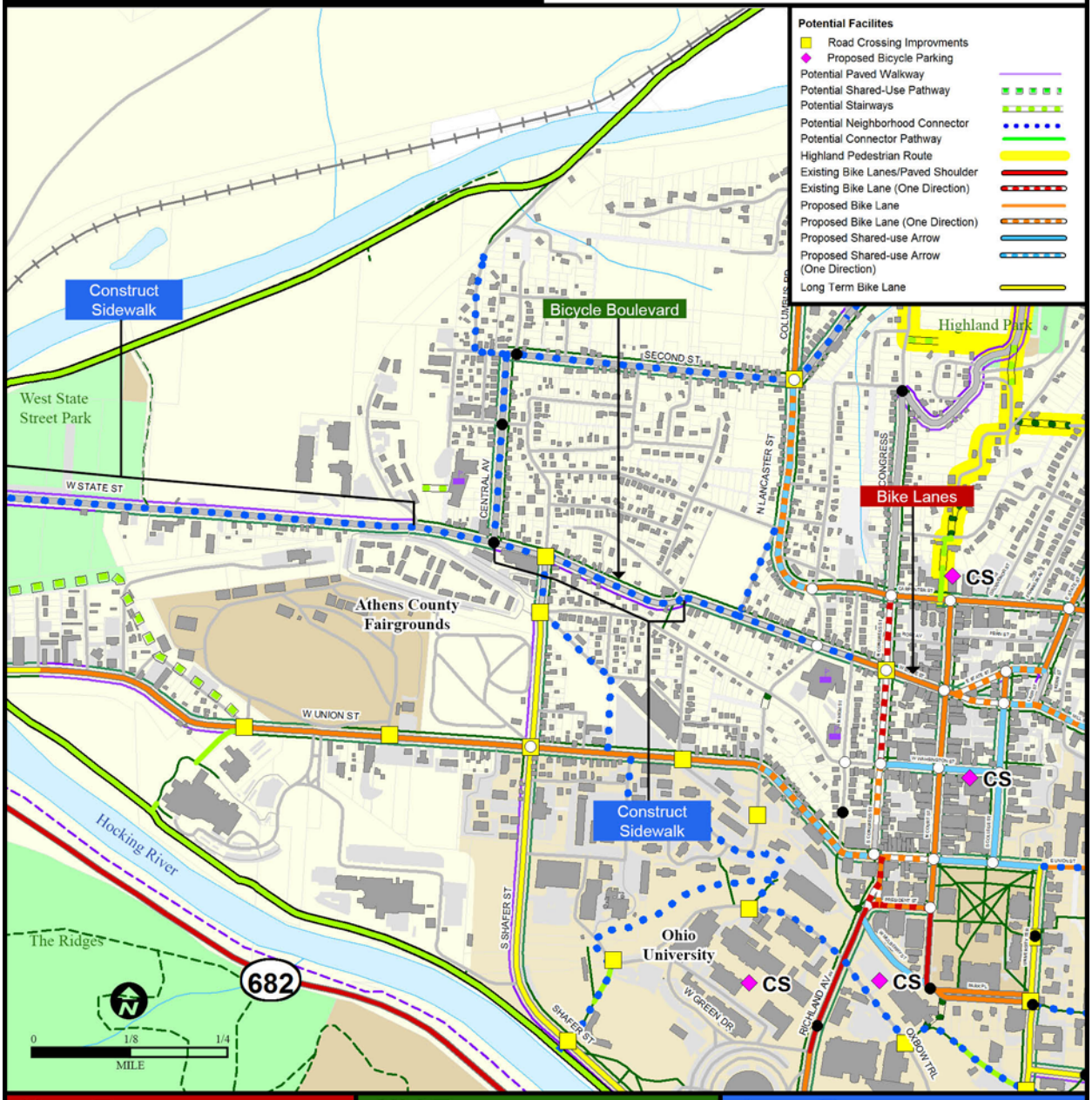
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: W. State Street




## Near-Term:

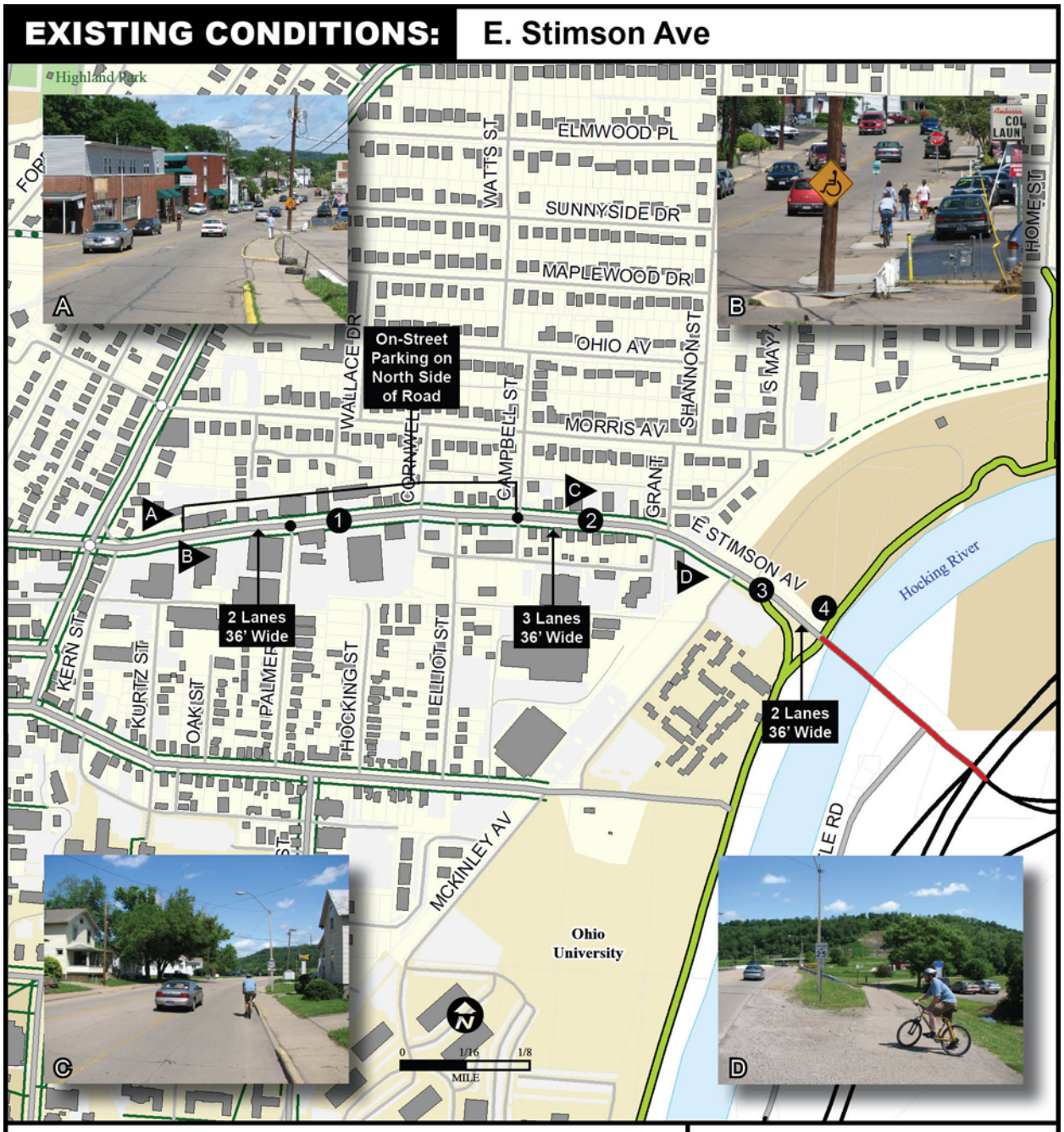
- Add Bike Lane From High St to Court St by Removing On-Street Parking from One Side
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Side-walks and Initiate Remedies.

## Mid-Term:

- Add Bicycle Boulevard Elements from West State Street Park to High Street
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scale Lighting and Trees between the Sidewalk and the Roadway where Appropriate.

## Long-Term:

- Add Sidewalk on South Side of W State St from Central Ave to Miller Ave
- Add Sidewalk to North Side of W State St connecting to West State Street Park
- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.




## Issues:

**General**

- Not Very Bicycle or Pedestrian Friendly
- Difficult to Navigate for Both Bicycles and Pedestrians
- Existing Sidewalk Needs Repairs and is located at edge of Right-of-Way

**Noted**

1. No Designated On-Road Bicycle Facilites on Stimson Ave
2. Difficult to Cross E Stimson Ave between Campbell St and Grant
3. Difficult to Cross E Stimson Ave to Access Bike Path
4. Gap in Sidewalk Over Bridge

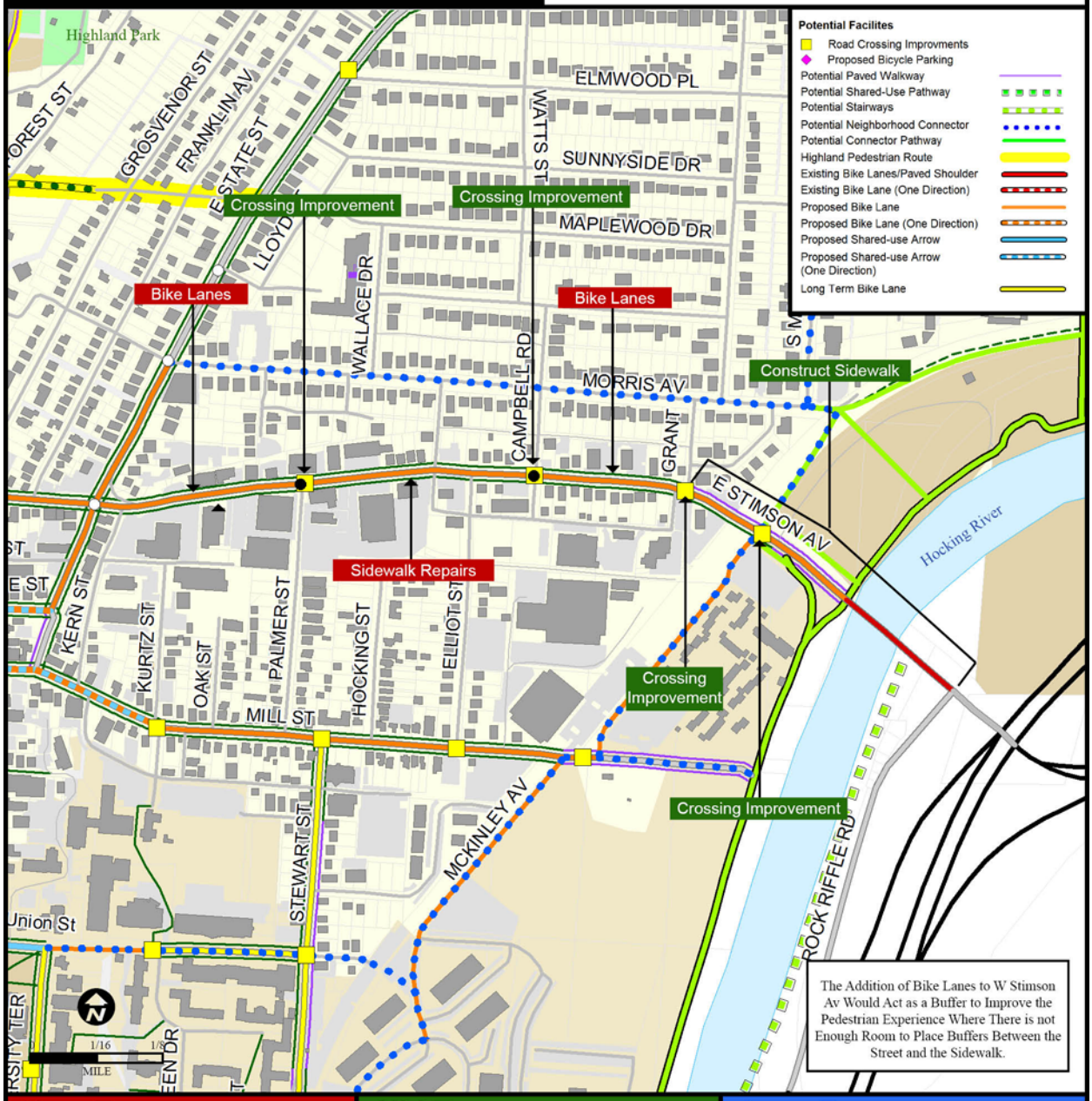
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: E. Stimson Ave




## Near-Term:

- Repair Existing Sidewalks.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.
- Add Bike Lanes from Grant Road to Bridge by Paving the Road Shoulder.

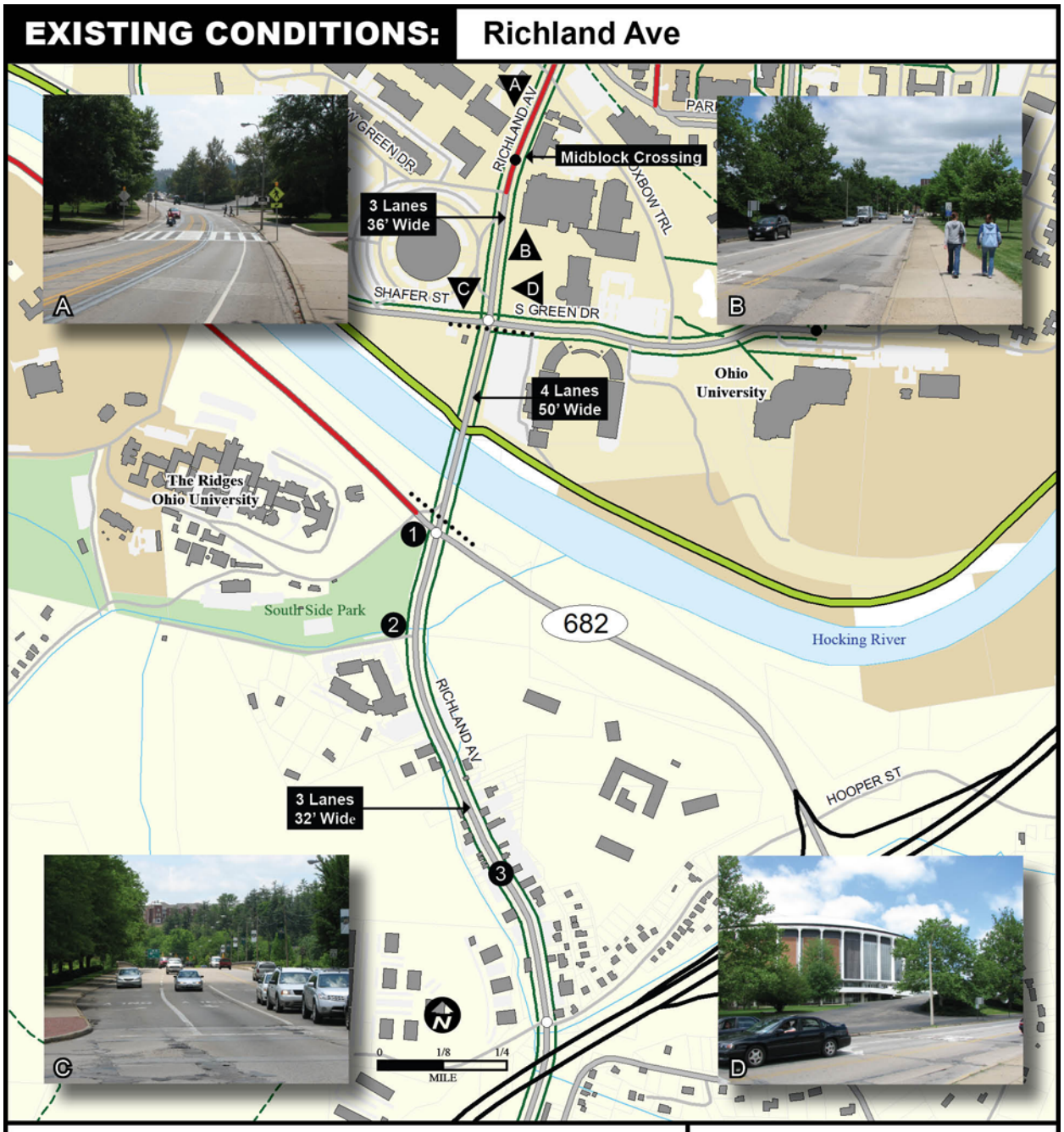
## Mid-Term:

- Complete Sidewalks Gaps.
- Road Crossings Improvements.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalks by Adding Pedestrian Scale Lighting where Appropriate.

## Long-Term:

- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

- Add Bike Lanes Between Campbell Rd and Grant by Removing Center Turn Lane. Alternative to a Bike Lanes, Travel Lanes Could be Narrowed and a Shared-Use Arrow Could be Added.
- Add Bike Lanes Between State Rd and Campbell Rd by Removing On-Street Parking.




## Issues:

**General**

- Difficult to Navigate on and Across for Both Bicycles and Pedestrians (Especially Across the Bridge)

**Noted**

1. Difficult to Cross Richland Ave at 682 Intersection
2. Difficult to Cross Richland Ave at the Enterance of South Side Park
3. No Designated On-Road Bicycle Facilities South of W Green Dr

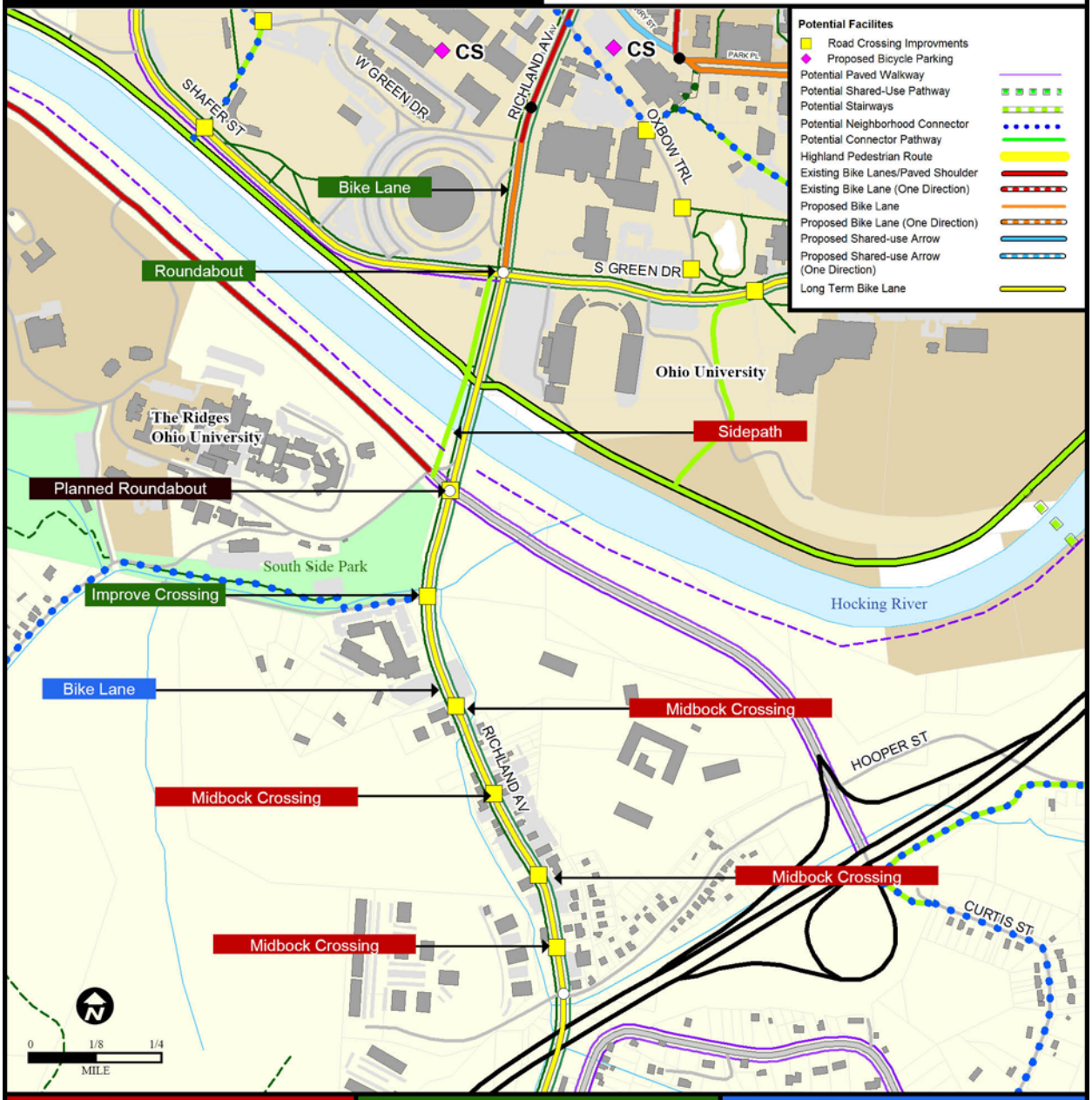
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: Richland Ave




## Near-Term:

- Sidepath Along West Side of Planned Bridge.
- Add Midblock Crossings Along Richland Av Between Dairy Lane and Hooper St.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.

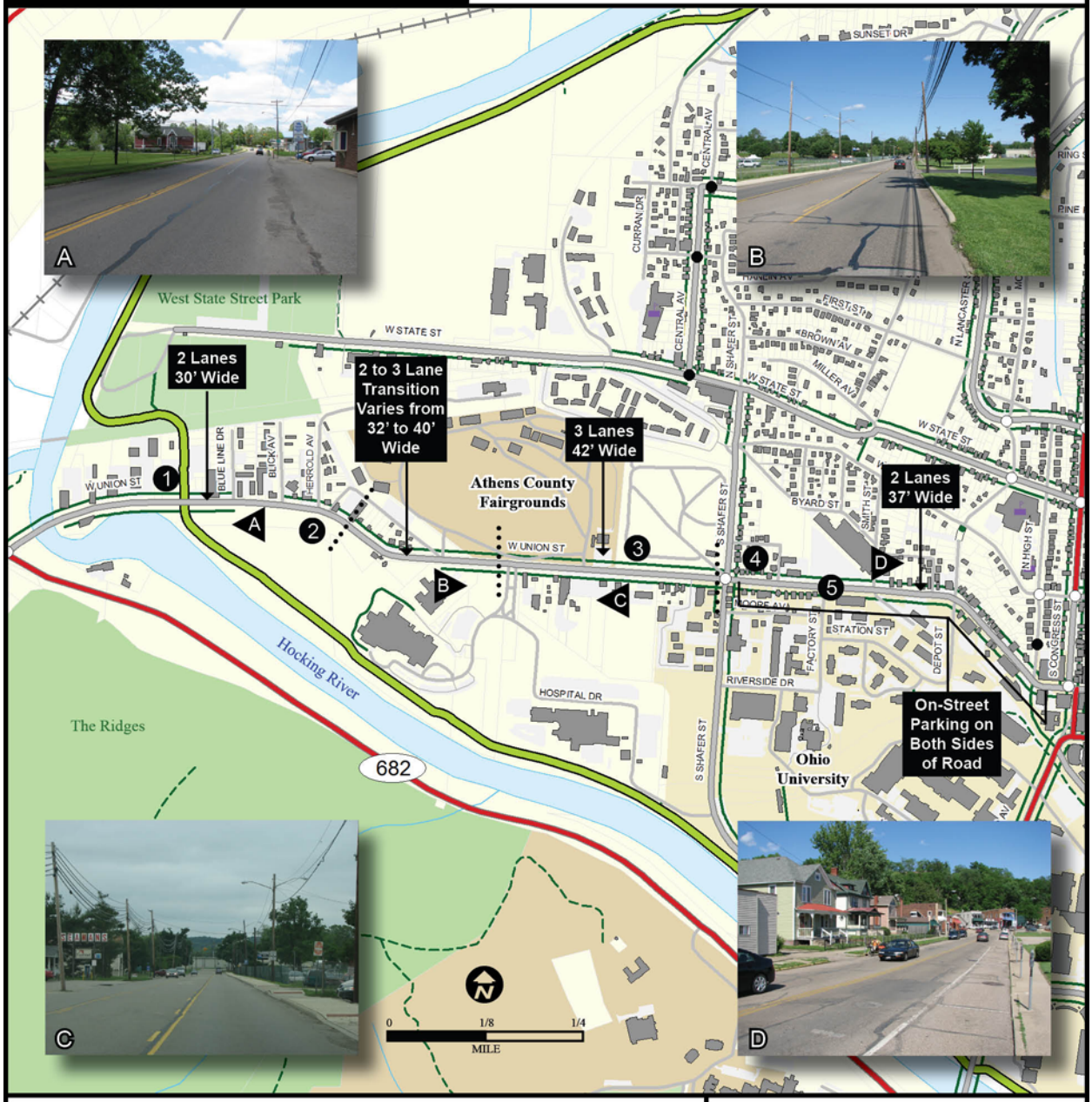
## Mid-Term:

- Road Crossings Improvements.
- Add Bike Lanes to Richland Ave between W Green Dr and S Shafer St through 3 to 2 Lane Conversion. Roundabout Must be in Place to Make this Conversion Work Well.
- Roundabout on Richland Ave at the Intersection of S. Green St and S. Shafer St.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk by Adding Pedestrian Scale Lighting where Appropriate.

## Long-Term:

- Bike Lanes On Richland Ave South of S Shafer St.
- Complete Sidewalk Route Accessibility.
- Enhance the Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

# EXISTING CONDITIONS: W. Union Street




## Issues:

**General**

- Difficult to Navigate for Bicycles
- Difficult to Cross for Bicycles and Pedestrians

**Noted**

1. Difficult to Cross W Union St when on Bike Path
2. Gap in Sidewalk
3. Difficult to Cross W Union St at Athen's County Fairgrounds
4. Difficult to Cross W Union St at S Shafer St
5. No Designated On-Road Bicycle Facilites

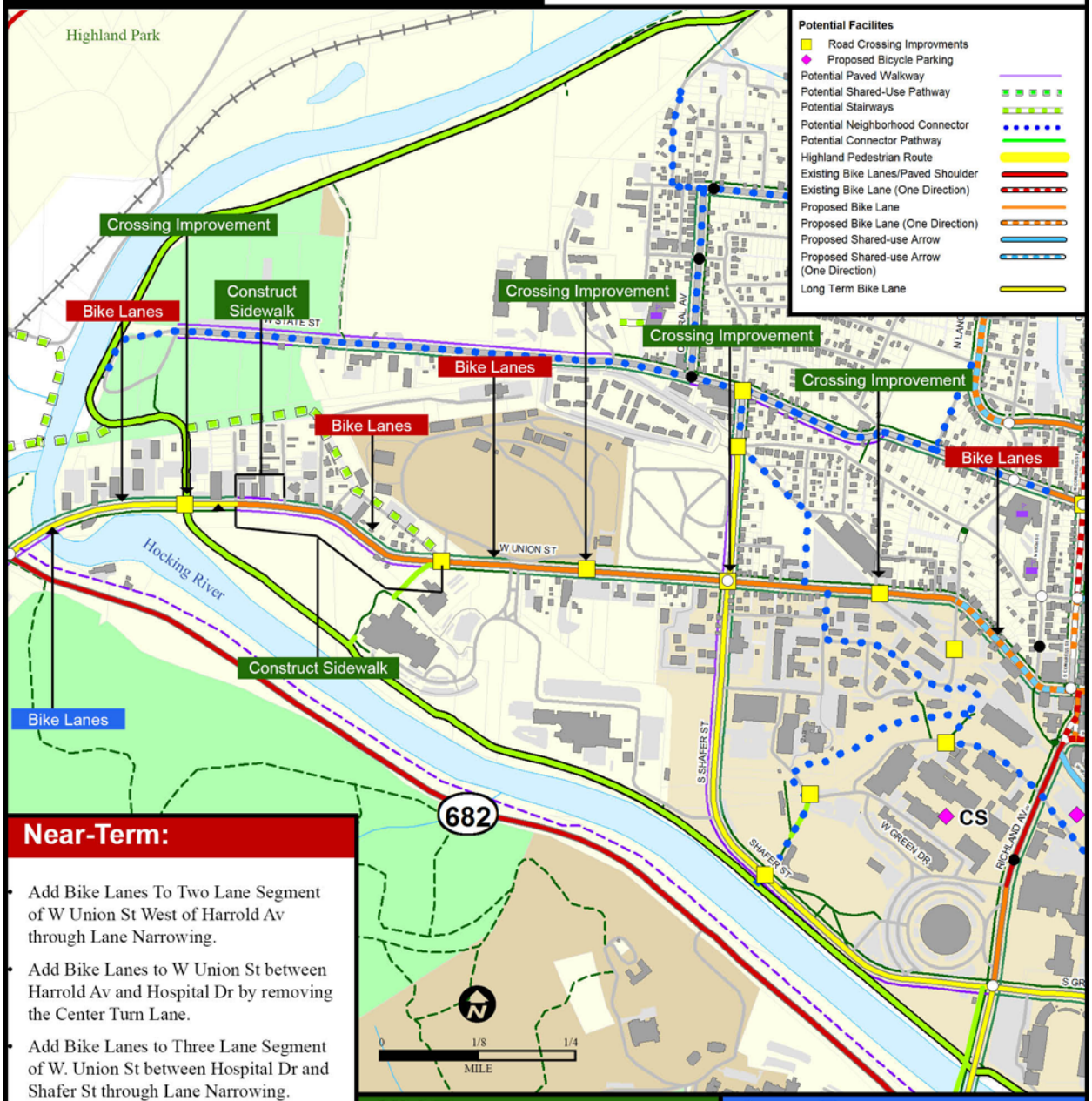
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: W. Union Street




## Near-Term:

- Add Bike Lanes To Two Lane Segment of W Union St West of Harrold Av through Lane Narrowing.
- Add Bike Lanes to W Union St between Harrold Av and Hospital Dr by removing the Center Turn Lane.
- Add Bike Lanes to Three Lane Segment of W. Union St between Hospital Dr and Shafer St through Lane Narrowing.
- Add Bike Lanes to W Union St between S Shafer Street and Depot St by Removing On-Street Parking on One Side.
- Add Bike Lanes to Uphill Slope and Shared-use Arrow to Down hill Slope of W. Union St between Depot St and Congress St by Eliminating Parking on One Side.
- Identify and Remedy Trip Hazards and Failing Pavement on Sidewalks.
- Identify Ramp Deficiencies on Side-walks and Initiate Remedies.

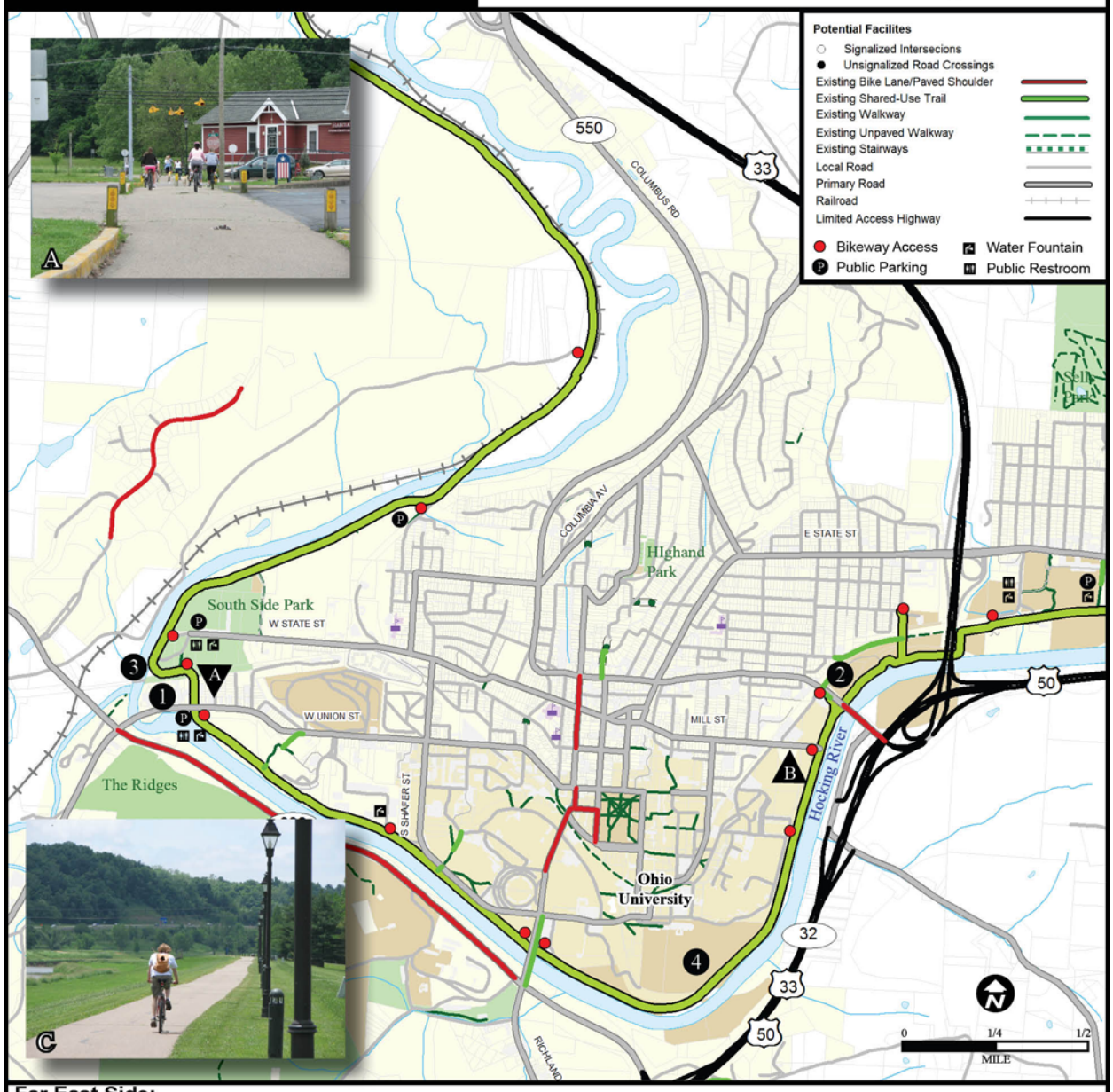
## Mid-Term:

- Complete Sidewalks Gaps.
- Road Crossings Improvements.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scale Lighting and Trees between the Sidewalk and the Roadway where Appropriate.

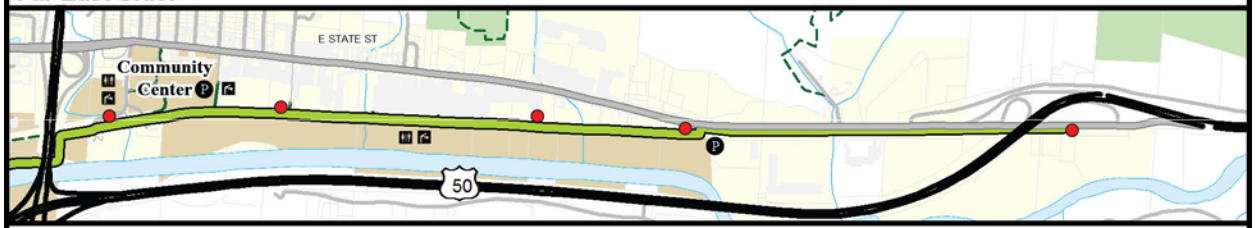
## Long-Term:

- Add Bike Lanes Over Bridge on Union St.
- Complete Sidewalk Route Accessibility.
- Enhance the Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains.

# EXISTING CONDITIONS: Hockhocking-Adena Bikeway




## Far East Side:



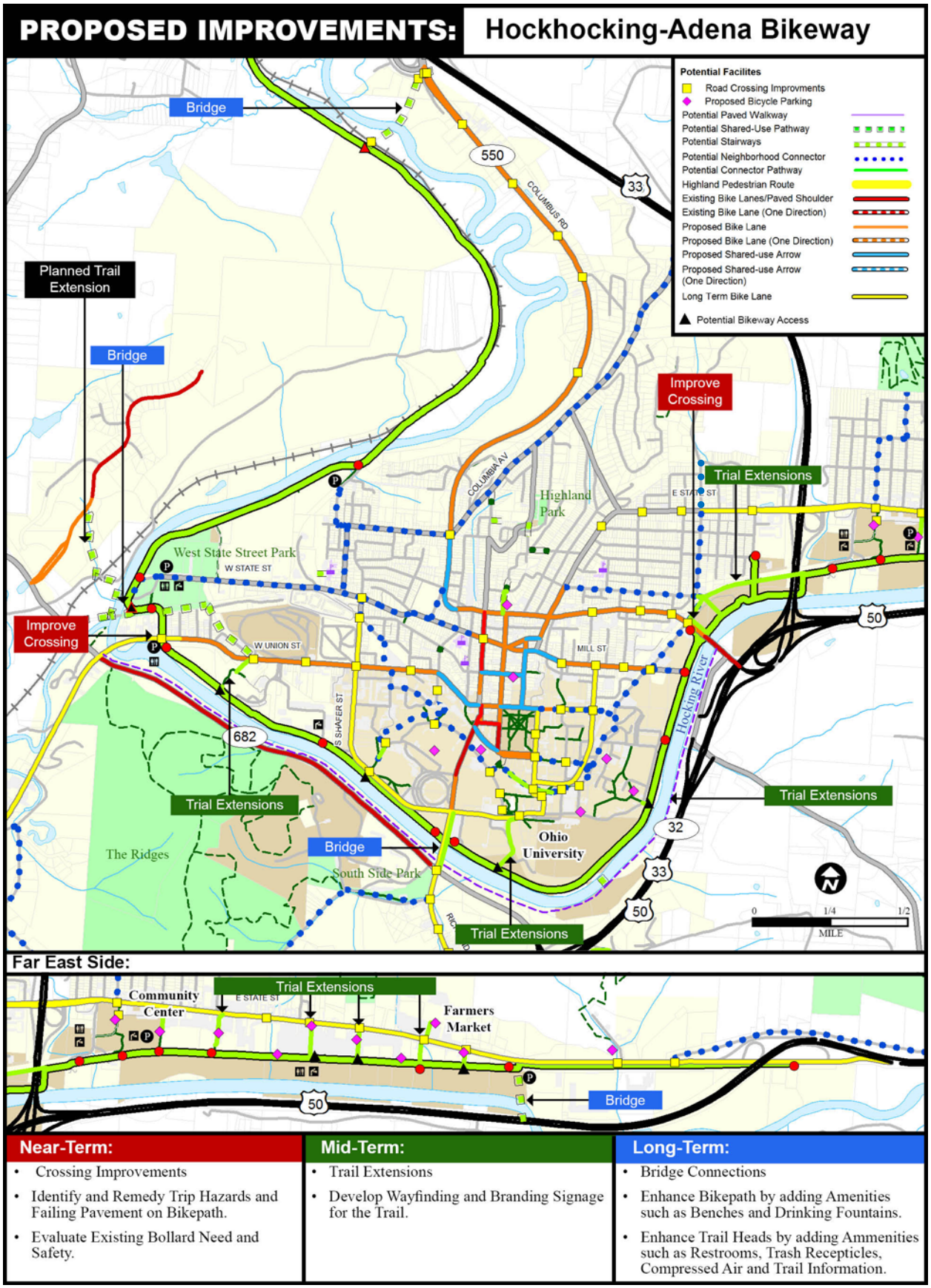

## Issues:

**General**

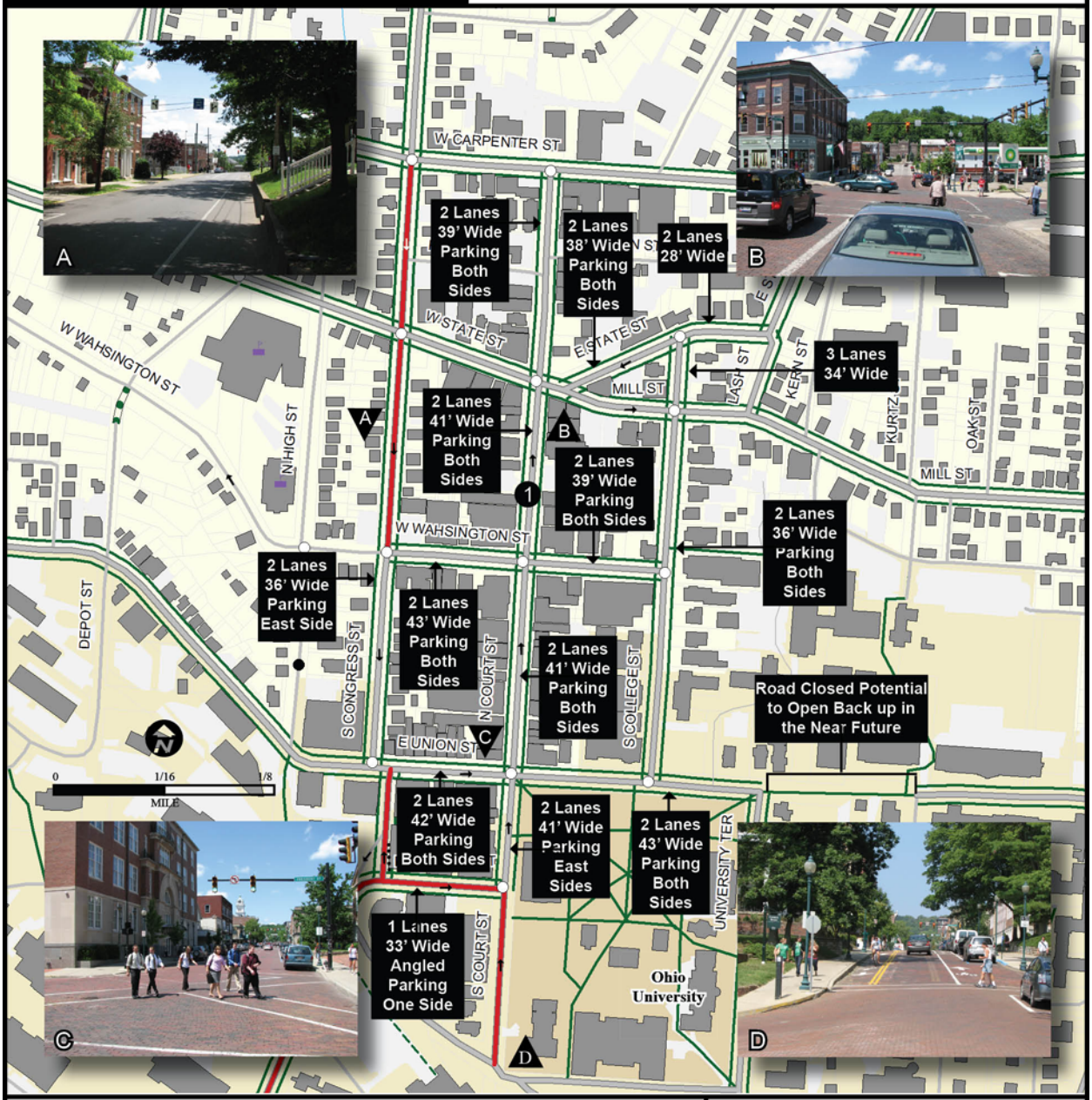
- Expand Bikeway
- More Lights Needed along Bikeway
- Better Connection to Campus
- Some Areas of the Trail Need Repair

**Noted**

1. Difficult to Access Bikeway from Stimson Ave
2. Difficult to Cross W Union St
3. Utilize Old Railroad Bridges as crossings
4. Better Access to Buisnesses on E State St


PROPOSED IMPROVEMENTS: Hockhocking-Adena Bikeway
Potential Facilites
Road Crossing Improvments
Proposed Bicycle Parking
Potential Paved Walkway
Potential Shared-Use Pathway
Potential Stairways
Potential Neighborhood Connector
Potential Connector Pathway
Highland Pedestrian Route
Existing Bike Lanes/Paved Shoulder
Existing Bike Lane (One Direction)
Proposed Bike Lane
Proposed Bike Lane (One Direction)
Proposed Shared-use Arrow
Proposed Shared-use Arrow (One Direction)
Long Term Bike Lane
Potential Bikeway Access
Bridge
Planned Trail Extension
Bridge
Improve Crossing
Trial Extensions
Improve Crossing
Trial Extensions
Trial Extensions
Bridge
Trial Extensions
550
33
COLUMBUS RD
COLUMBIA AV
Highland Park
E STATE ST
West State Street Park
W STATE ST
W UNION ST
MILL ST
S SHAFER ST
682
Hocking River
50
32
33
50
The Ridges
South Side Park
Ohio University
0
1/4
1/2
MILE
Far East Side:
Community Center
Trial Extensions
E STATE ST
Farmers Market
50
Bridge
Near-Term:
Crossing Improvements
Identify and Remedy Trip Hazards and Failing Pavement on Bikepath.
Evaluate Existing Bollard Need and Safety.
Mid-Term:
Trail Extensions
Develop Wayfinding and Branding Signage for the Trail.
Long-Term:
Bridge Connections
Enhance Bikepath by adding Amenities such as Benches and Drinking Fountains.
Enhance Trail Heads by adding Ammenities such as Restrooms, Trash Recepticles, Compressed Air and Trail Information.

# EXISTING CONDITIONS: Uptown




## Issues:

**General**

- Difficult to Navigate through for Both Bicycles and Pedestrians (Particularly Court St.)
- Limited Bike Parking

**Noted**

1. Designated On-Road Bicycle Facilities Needed

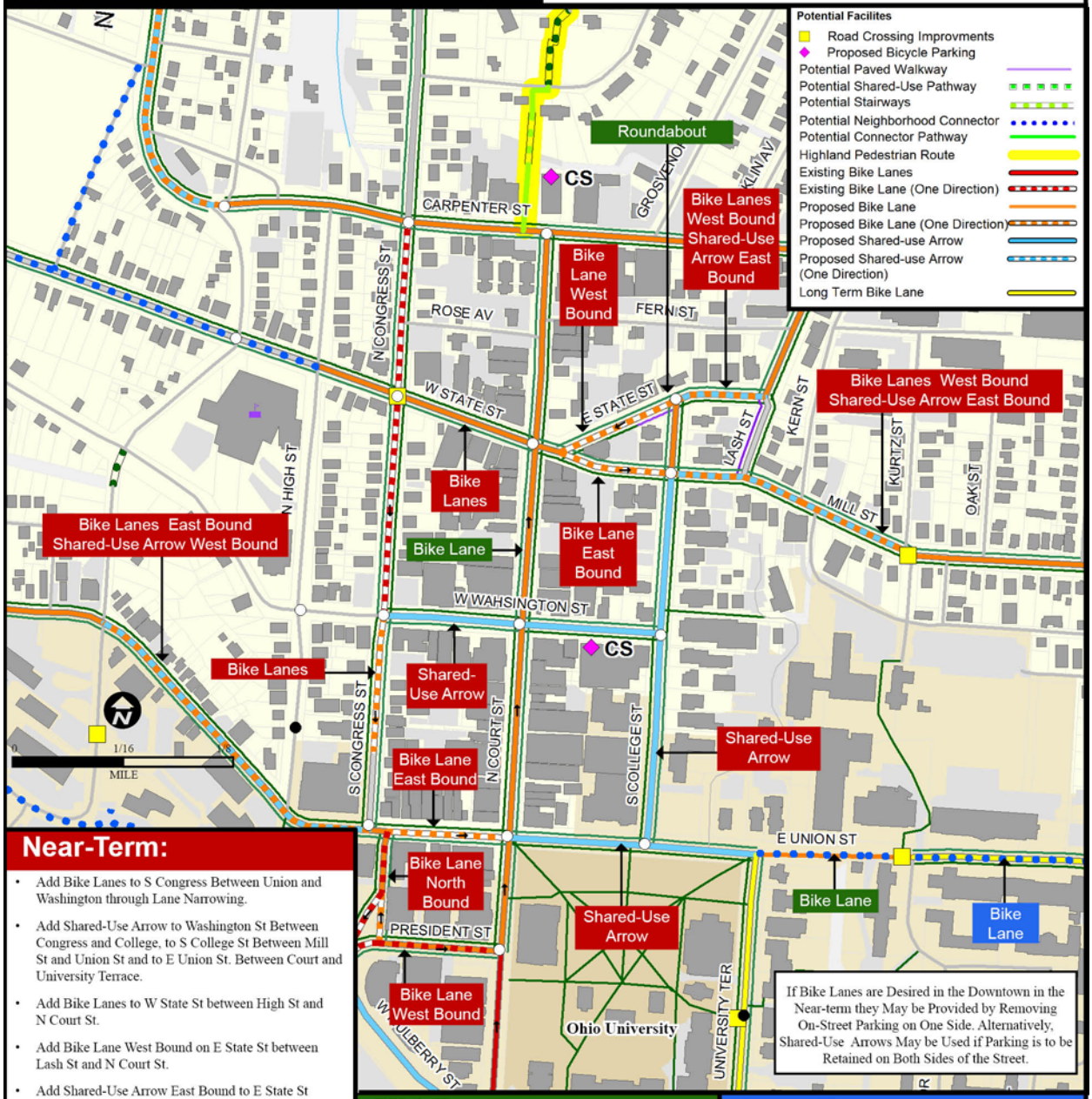
## Legend:

**Potential Facilites**

- Signalized Intersecions
- Unsignalized Road Crossings

Existing Bike Lane/Paved Shoulder
Existing Shared-Use Trail
Existing Walkway
Existing Unpaved Walkway
Existing Stairways
Local Road
Primary Road
Railroad
Limited Access Highway

# PROPOSED IMPROVEMENTS: Uptown




## Near-Term:

- Add Bike Lanes to S Congress Between Union and Washington through Lane Narrowing.
- Add Shared-Use Arrow to Washington St Between Congress and College, to S College St Between Mill St and Union St and to E Union St. Between Court and University Terrace.
- Add Bike Lanes to W State St between High St and N Court St.
- Add Bike Lane West Bound on E State St between Lash St and N Court St.
- Add Shared-Use Arrow East Bound to E State St between Lash St and College St.
- Add Bike Lane East Bound Mill Between Court St and College St.
- Add Bike Lane to West Bound and add Shared-use Arrow to East Bound Mill St between College St and Kurtz St.
- Add Bike Lane to East Bound Union St Between Congress and Court St.
- Add Bike Lane to North Bound Congress between President St and Union St.
- Add Conta-flow Bike Lane to Preseident St between S Congress and N Court St.
- Identify and Remedy Trip Hazards and Failing Pave-ment on Sidewalks.
- Identify Ramp Deficiencies on Sidewalks and Initiate Remedies.

## Mid-Term:

- Multiple Options to Add a Bike Lane and Potentially a Contra-flow Bike Lane to Court St. See Section 3.4 for more details.
- Complete Remedies to Ramp Deficiencies on Sidewalks.
- Improve Sidewalk Buffers by Adding Pedestrian Scaled Lighting between the Sidewalk and the Roadway where Appropriate.
- Roundabout on E State St at the Intersection of College St
- Add Bike Lane to Closed Down Segment of E Union St when road Reopens.
- Add Bike Lanes to College St between E State St and Mill St by Removing the Center Turn Lane. Roundabout Must be in Place to Make this Conversion Work.

## Long-Term:

- Add Bike Lane to E Union St between the closed down segment and Stewart St.
- Complete Sidewalk Route Accessibility.
- Enhance Sidewalks by adding Pedestrian Amenities such as Benches and Drinking Fountains where Appropriate.

# 4. Recommended Policies and Programs

These policies and programs provide the institutional support for the non-motorized system. They provide the necessary support systems for the proposed physical system. They also provide a framework within which new issues related to non-motorized transportation may be addressed.

## Topics:



## Prioritization Process for Policy Recommendations:

The method of prioritization for the following policy recommendations was made by identifying the relative importance of that policy and the ease with which it could be implemented within a given time frame. Some policy items could readily be achievable within a year. Others, due to the process required to put together the necessary items needed to fully implement the policy, may take three to five years. These policies are flexible enough that they can be rearranged as priorities and available resources change.

## Roles and Responsibilities in Implementing Policy Recommendations:

The policy recommendations have not been assigned to particular departments or staff positions in the City. One of the first tasks in implementing these recommendations would be assigning each policy recommendation to a responsible party.

# 4.1 Complete Streets Policy

States, regions, counties and cities around the country have used various complete street policies to unambiguously endorse and define their support for non-motorized transportation. There currently is an effort to get a complete streets policy incorporated into the next federal transportation bill. These are efforts to officially codify the need to make all streets safe and convenient to all users including pedestrians, bicyclists, transit users and motorists.

The first such and most significant effort came in 1999 when the United States Department of Transportation issued a policy statement on integrating bicycling and walking into transportation infrastructure entitled *Design Guidance, Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*. This document indicates the federal government's interpretation on how best to address the non-motorized transportation requirements of the Transportation Equity Act for the 21st Century. It serves as a national policy model for accommodating bicycle and pedestrian travel.

## Federal Highway Model Statement

The following draft policy statement is drawn from the United State Department of Transportation's policy statement with minor edits. The entire document may be found in the Appendix.

1 Bicycle and pedestrian ways shall be established in new construction and reconstruction projects on both sides of a street in all urbanized areas unless one or more of two conditions are met:

   a) bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.

   b) the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty five percent of the cost of the larger transportation project.

2 Where uncurbed road sections are used, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

   a) Rumble strips are not recommended where shoulders are used by bicyclists unless there is a minimum clear path of four feet in which a bicycle may safely operate.

3 Sidewalks, shared use paths, street crossings (including over and undercrossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways shall be designed, constructed, operated and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

4 The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following additional steps:

   a) Plan projects with anticipation for the possibility of facilities in the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities that meet the criteria in item 1 above should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future improvements. For example, a bridge that is likely to remain in place for 50 years, might be built

with sufficient width for safe bicycle and pedestrian use in anticipation that facilities will be available at either end of the bridge even if that is not currently the case.

b) Addressing the need for bicyclists and pedestrians to cross corridors as well as travel along them. Even here, bicyclists and pedestrians may not commonly travel along a particular corridor that is being improved or constructed, but they will likely need to be able to cross that corridor safely and conveniently. Therefore, the design of intersections and interchanges shall accommodate bicyclists and pedestrians in a manner that is safe, accessible and convenient.

c) Getting exceptions approved at an administrator level. Exceptions for the non-inclusion of bikeways and walkways shall be approved by an administrator and be documented with supporting data that indicates the basis for the decision.

d) Designing facilities to the best currently available standards and guidelines. The design of facilities for bicyclists and pedestrians should follow design guidelines and standards that are commonly used, such as the AASHTO Guide for the Development of Bicycle Facilities, AASHTO's Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO's A Policy on Geometric Design of Highways and Streets, and the ITE Recommended Practice "Design and Safety of Pedestrian Facilities". The design of the facilities for bicyclists and pedestrians should also follow the plans and design guidelines set forth in this plan as interpreted on a case-by-case basis.

5 The design of residential, commercial and mixed-use site developments should be in accordance with the best currently available guidelines. The design should incorporate the principals outlined in *The Canadian Guide to Promoting Sustainable Transportation Through Site Design* by the Canadian Institute of Traffic Engineers and other nationally accepted guidelines. Sites should be developed to provide direct pedestrian links between adjacent developments as well as provide for future connections.

### National Complete Streets Coalition Model

Since the FHWA model was developed, The National Complete Streets Coalition has taken the idea further and identified ten elements of a comprehensive Complete Streets policy:

1. A vision for how and why the community wants to complete its streets. Specifies that all users includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.
2. Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities; as well as trucks, buses and automobiles.
3. Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
4. Is adoptable by all agencies to cover all roads.
5. Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
6. Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
7. Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
8. Directs that complete streets solutions will complement the context of the community.
9. Establishes performance standards with measurable outcomes.

10. Includes specific next steps for implementation of the policy.

The adoption of this plan addresses most of the elements. In addition, an official resolution based on the federal highway model would help cement Athens's support for complete streets.

## Policy Recommendations for Complete Streets:

**Within One Year:**

- Adopt the Non-motorized Transportation Plan
- Draft and Enact a Complete Streets Policy

# 4.2 ADA and Transition Plan

Title II of the Americans with Disabilities Act of 1990 (ADA) requires local governments to make their activities, programs and services accessible to persons with disabilities. In the area of non-motorized transportation, the City is required to use accessible design standards for newly constructed and reconstructed sidewalks and shared use paths to the maximum extent feasible and make altered facilities readily accessible. In addition, the City is required to bring non-compliant curb ramps into compliance throughout the City as part of a transition plan.

Four recent publications address accessibility of non-motorized facilities. They are:

1. *Designing Sidewalks and Trails for Access Part 2 – Best Practices Design Guide* (FHWA, Publication # FHWA-EP-01-027)
2. *Building a True Community – Final Report of the Public Rights-of-Way Access Advisory Committee*, November, 2005 (Public Rights-of-Way Access Advisory Committee)
3. *Draft Guidelines for Accessible Rights-of-Way*, November 23, 2005 (FHWA, Pub. # FHWA-SA-03-019, based in part on the preceding publication)
4. *Accessible Public Rights-of-Way, Planning and Designing for Alternations*, July 2007 (Public Rights-of-Way Access Advisory Committee)

Together these documents define current best practices for accommodating pedestrians with disabilities for sidewalks and shared-use paths, intersections, crosswalks, and signalization. Until public rights-of-way standards are adopted by the Department of Justice and the U.S. Department of Transportation, the DOT has identified the 2005 draft PROWAG as the current best practice in accessible pedestrian design.

## Transition Plan

Title II requires that public entities with 50 or more employees create and regularly update an ADA Transition Plan and make this plan available to the public. The transition plan should at a minimum identify physical barriers and provide a detailed outline to remove those barriers. An ADA coordinator must be designated to coordinate compliance efforts. The following outlines the key elements of a transition plan.

**Identification of Physical Barriers**

The identification of physical barriers may take place on a number of levels:

- **Complaint-Based** – At the most basic level, there should be a process in place for citizens to register a complaint and for that complaint to receive appropriate evaluation and action.
- **Inventory Based** – More commonly, existing facilities receive a base line documentation that may be accomplished with simple tools such as a smart level, digital camera and a standard recording form. For example, the inventory of sidewalk curb ramps would identify issues such as the presence of a ramp, ramp slope and cross slope and the presence, type and condition of a detectable warning strip. The goal of this inventory is to identify the geographic location, type and severity of barriers. Often this survey would be done using a Global Positioning System and the data stored in a Geographic Information System. This inventory would be completed over time with the most heavily traveled areas completed first and then covering other, less traveled areas in a systematic approach.

- **Survey Based** – In a few cases where there is a high degree of controversy regarding a specific area or facility type, trained surveyors will take detailed field measurements and elevations of the facilities and translate them into survey drawings. This is by far the most expensive identification approach but may be appropriate if construction to remedy the solution is considered likely to occur in the near future.

**Outline of Methods to Remove Barriers**
A systematic approach for removing barriers should be established.

- **New and Altered Facilities Policy** – There should be in place a policy for how accessibility is achieved for new construction and alterations. This should include addressing how areas adjacent to new construction or alternation projects may be incorporated into a project. For example, when a new construction or alternation project is undertaken, the inventory of physical barriers for the immediate surrounding areas should be consulted to see if limited targeted improvements in adjacent areas would make a much larger area accessible. If so, those changes should be incorporated into the project.
- **Prioritization of Routes** – As it will be many years before new construction and alterations will provide accessible routes along all public right-of-ways, a process should be established to identify which routes should be upgraded independent of new or altered facilities. This would be based on the inventory of the physical barriers, citizen complaints and relative demand. This way, key routes such as those in the downtown, near schools and public buildings may be targeted improvements independently of new construction or alternation projects.

**Schedule for Implementation**
After the routes are prioritized, general costs of removing the barriers should be determined. Then using those costs, the removal of barriers should be integrated into the city's capital improvement plan.

## Policy Recommendations for ADA Compliance:

**Within One Year:**

- Establish an interim transition complaint based transition plan.
- Designate an ADA coordinator.

**Within Three Years:**

- Have an inventory based transition plan in place.
- Integrate the transition plan into the capital improvement plan.

**Within Five Years:**

- Complete the inventory of physical barriers.
- Have made substantial progress in removing barriers in the most highly traveled corridors.

# 4.3 Safe Routes to Schools

The challenges to getting more children to walk and or bike to school are significant. Approximately half of all children in the United States are driven to school in a private vehicle and only 13% walk or bike to school.[2] The number of children walking or biking to school has dropped 37% in 20 years.[3] This drop in the number of children walking and bicycling to school can be attributed to many factors that have changed over the past 20 years:

- Increase in availability of before and after-school programs.
- Increase in the number of schools of choice, private schools and charter schools.
- Increase in the number of grade-based elementary schools.
- Increase in the number of children bused to school who live within walking distance due to real or perceived safety concerns.
- Fewer children living in each home.

These factors have combined to simultaneously reduce the total number of children who attend their neighborhood school, reduce the number of kids who walk and spread out the times children arrive at and depart from school. The result is a loss of the critical mass of children walking to school and the perceived safety in numbers.

These factors are combined with the fact that there is also an increase in the number of two-wage earner families where both wage-earners are leaving for work in the morning. This makes dropping a child off at school on the way to work the easy and seemingly logical choice. We have now entered a period in time where choosing to have a child walk to school is considered a political statement or some act tantamount to child neglect rather than the default choice.

While the challenges to getting more children to walk and bicycle to school are significant, the consequences of doing nothing are even more challenging. The Center for Disease Control states that 13% of children in the United States are overweight, and the number of overweight teens has tripled since 1980. Many children in the United States do not get the hour of daily physical activity recommended by the Surgeon General. Decreased participation in physical activities, and fewer students walking or riding their bikes to school may be contributing to the rise in childhood obesity.

For many children who live very far away from school, walking or biking is not a feasible option. However, the CDC estimates that only 31% of the children living a mile away or less walk or bike to school. Often times, schools and their surrounding areas lack safe road crossings, preventing children from having safe access to school on foot. Parents and caregivers cite perceived traffic danger as the second most common barrier to children walking and biking to school, preventing as many as 20 million children from walking or biking to school nationwide.[4] The amount of people driving their children to school in private automobiles not only represents a missed opportunity for physical activity, but also increases traffic congestion and puts a huge strain on existing road systems during peak travel times. In one city examined, 20-25% of morning traffic consisted of students being driven to school and 50% percent of children hit near schools were hit by parents of other students.[5]

[2] Center for Disease Control. *MMWR Weekly*. August 16, 2002. 51(32);701-704
[3] Michigan Governor's Council on Physical Fitness, Health and Sports.
[4] Center for Disease Control. *MMWR Weekly*. August 16, 2002. 51(32);701-704
[5] Center for Disease Control, 1995.

In an effort to reverse these alarming trends, the CDC announced a national health objective to increase the proportion of walking and biking trips to school for children living a mile or less from 31% to 50% by the year 2010. Communities, school groups, and local officials all over the country are responding to this challenge by mobilizing children to walk to school, addressing traffic safety concerns, mapping safe routes to school, and by measuring and taking account of their neighborhoods' walkability.

## Safe Routes to School (SRTS)

Safe Routes to School is a national program funded by National Highway Traffic Safety Administration devoted to identifying the best routes for children to walk to school, based on safe facilities and street crossings. In some areas this has led to on-going efforts to create better routes by building and repairing of sidewalks, hiring crossing guards, and improving crosswalks.

Typically, the program provides education, engineering and technical assistance to increase safety. AASHTO's *Guide for the Planning, Design, and Operation of Pedestrian Facilities* lists the following procedures for developing safe routes to school:

- Form and support a safety advisory committee.
- Prepare base maps for the area around the school.
- Inventory existing walking conditions and traffic characteristics- checklists are available from the www.walktoschool.org website for use in auditing a community's walkability.
- Design the walk routes.
- Identify improvement areas.
- Get approval of route maps from all necessary parties.
- Implement improvements.
- Distribute maps and educate students and parents.
- Evaluate the effectiveness of the program.

## Ohio's Safe Routes to School

Ohio has a Safe Routes to School program that is managed by the Ohio Department of Transportation (ODOT). Ohio's SRTS program's website can be found at http://www.dot.state.oh.us/Divisions/TransSysDev/ProgramMgt/Projects/SafeRoutes and has extensive information on how a school may start a SRTS program.

The website provides information on how to develop a School Travel Plan (STP) and run a SRTS Program. ODOT's SRTS funds can be used for two types of projects in 5 categories. These categories are considered the 5 E's of SRTS. These include:

**Infrastructure Projects**

1. Engineering

**Non-Infrastructure Projects**

2. Education
3. Encouragement

4. Enforcement
5. Evaluation

### The City's Role in SRTS Programs

The City of Athens is a key partner in any Safe Routes to School Program. SRTS school teams typically include a local law enforcement official or officer and a representative from the local road authority. These officials provide the technical expertise to help the team implement some of the programs and physical improvements.

A typical SRTS program addresses issues such as the education of parents and students as well as improvements to the physical conditions on the school grounds. But much of the SRTS physical improvements take place on facilities outside of the school's jurisdiction and must be undertaken in partnership. Likewise the city's non-motorized network may identify key routes that transverse school grounds. Thus, both entities must work together in order to meet their shared goals.

Athens's transportation policy should include a system of accountability for responding to and remedying safety concerns along children's routes to school. The City should work with the Athens City School District to evaluate how best to spend transportation dollars, looking at bussing, facility improvements, and the addition of adult supervisors for children walking to school.

Ensuring safety in the school zone must be a combined effort of traffic engineers, local officials, law enforcement, school officials, parents and children. In addition to promotional and educational programs, a variety of roadway improvements can be used to increase safety in school zones and for children on their routes to school. Some important safety design guidelines for school zones include[6]:

- Reduced speed zones.
- Marked crosswalks.
- Signalized crossings at intersections with pedestrian activation.
- Pedestrian crossing islands and bulb outs where needed.
- Special crosswalk striping, painted according to state standards, and "School Crossing" signage where appropriate.

Police enforcement of yielding and speeding in school zones, and the utilization of adult crossing guards at difficult intersections can also increase safety in the school zone.

Individual school policies as well as district wide policies should be evaluated to make sure that they promote bicycling and walking.

In conclusion, increasing the number of children who are able to safely walk and bike to school is part of a national goal that will address childhood obesity, enhance neighborhood walkability, and help alleviate traffic congestion problems.

[6] San Diego's Regional Planning Agency. Model Guidelines for the San Diego Region. April 2002. p. 105.

## Key Programs to Continue for School Transportation

The City of Athens has some good existing policies and programs that support the non-motorized system. The following policies and programs should be reinforced and continued.

- The Athens City School District currently has an active Safe Routes to School Travel Plan at three elementary schools (Morrison, West and East) and at one middle school (Athens Middle School). This program should continue to be implemented and executed according to the plan.

## Policy Recommendations for School Transportation

The City of Athens and the Athens City School District should jointly explore the following options.

**Within One Year:**

- The City should increase enforcement of speeding in school zones and yielding to pedestrians in the crosswalks within school safety zones.
- The City should work within the Safe Routes to School Travel Plan to ensure that within school safety zones, all safety design guidelines are in place and current with national safety guidelines.
- The City and the School District should develop a cost-share policy for the construction and maintenance on pathways that are part of the Bike Route System and traverse school property.
- Encourage the Athens City School District to consider the safest route to school for children when adjusting school boundaries.

**Within Three Years:**

- The City and School District should continue to enhance a system of accountability for responding to and correcting safety concerns along routes to school and other problems identified through these programs.
- The City should continue to promote and initiate with the school system and parents Walk-to-School Day events, “walking school bus” programs, “Safe Routes to School” programs, and walkability audits in conjunction with the state-wide program.
- Athens City School District should continue to encourage walking and bicycling to school as a part of the physical education and well being of the students.
- The City should work with the School District to eliminate the need for all “Safety Bussing” by remedying the hazards that currently warrant the safety bussing.

**Within Five Years:**

- Athens City School District should evaluate all individual school and district wide policies regarding bicycling to school and amend policies that discourage bicycling.
- Encourage residential infill projects within walking distance of schools.

# 4.4 Bike Parking

The lack of a secure parking space discourages many people from using their bikes for basic transportation. When sufficient bike parking is not provided, theft becomes a concern and it leads to bikes being locked up to sign post, benches and other street furniture. When bicycles are parked in these spaces, they often disrupt pedestrian flow because the bikes impede the walkway. Bicycles also get impounded by local enforcement when parked in these areas causing an even greater deterrent to bicycle use. Bicycle parking needs to be visible, accessible, plentiful and convenient. If any of these criteria are not met, there is a good chance cyclists will not use the facilities and will park their bikes wherever they feel it will be safest.

Definition of a Bicycle Parking Space- A bicycle parking space is an area two feet by six feet or the area occupied by a bicycle when using a bicycle parking device as designed.

Short-Term Bicycle Parking - Short-term bicycle parking is defined as a rack to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. This type of parking is appropriate for short term parking at locations such as shopping areas, libraries, restaurants and other places where typical parking duration is less than two hours.

Long-Term Bicycle Parking- A long-term bicycle parking space is defined as protecting the entire bicycle and its components from inclement weather and theft or vandalism. It is to be located where it will serve the needs of cyclist who need to leave their bicycles unattended for extended periods of time, such as employees, tenants or residents.

## Uncovered Bicycle Racks

Uncovered Bicycle Racks are the primary bike parking approach for areas where people are expected to park their bikes for only a few hours.

**Design**-Generally, bicycle racks of the inverted "U" design are considered the best models. Alternative designs may be considered for special situations, although they should function similar to the inverted "U" design, providing at least two contact points for a bicycle and be a shape and size that would permit locking of a bicycle through the frame and one wheel with a standard U-Lock or cable.

**Location-** Bicycle racks should be located on every city block where there is retail within a commercial district. The hoops should be placed on a hard surface with ample lighting and high visibility (e.g. in front of a store window) to discourage theft and vandalism. Racks should be placed to avoid conflicts with pedestrians, usually installed near the curb and away from building entrances and crosswalks. When racks are installed in public spaces there needs to be at least 5 feet of clear sidewalk space in order to allow for pedestrian flow.

## Covered Bicycle Parking

Covered Bike Parking is desirable for both long-term and short-term bicycle storage. Basic bicycle racks should be placed under an overhang whenever possible, and specific covered bicycle parking should be created when needed. Covered Bicycle Parking should be available in areas where bikes are kept for an extended period of time, such as apartment buildings or at large commercial centers where employees and customers will utilize the covered spaces.

**Design-** The covering for bicycle parking will vary depending on the location. In addition to a roof, complete or partial side enclosures should be provided to minimize exposure to windblown rain and snow. The design of the racks is the same as for the basic uncovered bicycle hoops. When creating covered parking, there is also the opportunity to incorporate a green roof or solar panels into the rooftop to add to the functionality of the structure.

**Location-** Covered Bike Parking should be incorporated whenever there is opportunity to do so. Long-term covered bike parking should be located within 400' of the building it is intended to serve. Centralized locations further than 400' are also acceptable.

### Enclosed and Secured Bicycle Parking

Enclosed and Secured Bicycle Parking is best for areas where bikes are kept for extended periods of time, such as apartment buildings and near places of employment. These types of facilities are usually placed within existing parking structures and come with extra bicycle parking amenities.

**Design-** Enclosed and Secured Bicycle Parking generally consists of an enclosed room or fenced off-area within a parking deck where access is controlled through a doorway. The configuration of the bike racks will vary based on the space, but in general they are designed to maximize the number of bicycles that may be fit in the space. Double tier bike racks and hanging bike racks are used to provide the majority of the bike storage. A few standard inverted "U' hoops should be provided and reserved for atypical bicycle designs that may not be accommodated by the other racks.

When bike racks are located within a parking deck there should be a safe means of egress to the parking area. If bicycles must access the space via a gate controlled access point, care should be taken to minimize conflicts with the gate arm. The gate arm should be shortened to allow a 4' wide pathway for bicycles. The end of the gate arm should be rounded and covered with foam. The pathway for bicycles should be clearly marked on the pavement. This pathway should be 3' wide and be located at least one foot from the end of the gate. Users of enclosed secured bike parking that is accessed via gate control should be provided instruction on how to safely navigate around the gate.

**Access Control-** Is by identification badge reader and for a specific location only.

**Location-** Generally within parking decks.

**Amenities-** Will vary by site. Ideally these include compressed air, lockers, a bench and a vending machine that dispenses basic bicycle supplies such as tubes and repair kits.

**User Costs-** Generally $60 to $80 per year rental plus $20 account set-up fee.

The parking garage at East Washington and College streets would be a good place for an enclosed and secured bicycle parking facility since it is in a centralized location and near the Athens Transit bus stop. The facility could be placed on the first floor of the parking garage near the attendant's office giving cyclists and easy access to the facility from the roadway. Additional amenities such as lockers and compressed air could be available at this site. If successful, amenities such as showers and changing rooms could be incorporated in the future making it more of a bike station.

### Bike Station

Bike Stations are premium secured bike parking and maintenance facilities intended for transit stations located in high density areas. They are intended primarily to serve transit riders who will disembark and then retrieve their bike and continue onto their final destination. They will also serve as a centralized bike parking solution for bicyclists who are not using the transit station but whose final destination is near the bike station.

**Amount of Parking-** Based on the expected number of transit users and a survey of potential users.

**Design-** The bike parking and maintenance areas are restricted to employees only.

**Access Control-** The bike station is opened and attended while the transit station is open.

**Location-** Generally within parking decks.

**Amenities-** Compressed air, lockers, benches, changing room, showers and bicycle repair shop. The changing room and showers may be omitted if most of the users are expected to arrive via transit.

**User Costs-** Generally $60 to $80 per year rental plus $20 account set-up fee or an hourly charge for parking. Repair cost at market rate.

### Bike Lockers

Bike Lockers are individual premium bike parking solution intended for remote and lower density areas where enclosed and secured bike parking is not available or feasible. Given the cost, appearance and space requirements of bike lockers they are only appropriate for limited locations.

**Design-** There is substantial variability in the designs of the bike lockers. Typically, individual bike lockers have an interior diagonal divider and doors on either end such that they may accommodate two bicycles. Bike Lockers may be arranged in row, in a circular pattern and stacked.

**Access Control-** Typically via a key.

**User Costs-** Generally around $60 per year rental plus a $20 key deposit.

### On-Street Bicycle Parking

On-Street Bicycle Parking consists of movable bike racks that take the place of on-street motor vehicle parking. These racks are temporary and can be experimented with and moved as needed. They can also be used on a seasonal basis and can be removed during the winter.

**Design-** On-Street Bicycle Parking Racks are the size of a standard vehicle parking space and hold about 12 bicycles. These Racks are bolted into the pavement and can be removed when needed.

**Location-** These racks should be placed in active areas where it is difficult to accommodate sidewalk bicycle parking due to the competing demand for café tables and pedestrian walking space within the sidewalk area.

## Bicycle Parking Requirements

The City currently does not have any requirements for bicycle parking. The city code should be revised and updated as necessary to address bicycle parking issues. The following is a list of general guidelines that could be adapted to the city's code. These guidelines provide a good starting point.

- Require a minimum of 4 bicycle parking spaces at each commercial development or multi-family dwelling.
- Require hoops on every block with retail in the Uptown Area.
- For each nonresidential and class A and B multiple dwelling require half of the bicycle parking spaces to be covered if the site is required to have 16 or more spaces based on the existing code description.
- Incentives should be provided to nonresidential and multi-family dwellings for providing covered and secured bicycle parking (e.g. Reduction of vehicular parking and/or density bonus could be offered).
- Incentives should be provided to nonresidential and multi-family dwellings for providing covered bicycle parking over uncovered bicycle parking when not required to by code (e.g. Reduction of vehicular parking and/or density bonus could be offered).
- Explore the idea of required bicycle parking facilities being credited toward provision of motor vehicle parking. Each ten required bicycle parking spaces, or fraction thereof, may be substituted for one code required motor vehicle parking space.
- Provide or reference graphical design guidelines with information on the specifics of bicycle rack design and placement. The Association of Pedestrian and Bicycle Professionals recently published the 2nd Edition of Bicycle Parking Guidelines; these serve as a good model or may be referenced. The report may be found at http://www.apbp.org/resource/resmgr/publications/bicycle_parking_guidelines.pdf

## Policy Recommendations for Bicycle Parking:

**Within One Year:**

- Establish a committee to update the City code based on the recommendations within this report.

**Within Three Years:**

- Amend the City Code to encourage non-motorized travel.
- Implement the bicycle parking requirements.

# 4.5 Maintenance of Non-motorized Facilities

The success of the City's non-motorized transportation system ultimately depends on thorough and timely maintenance of all its facilities. Typical problems that can occur on pedestrian and bike facilities include cracked pavement, standing water, obstructions in the clear zone such as sidewalk furniture, overgrown trees and shrubs, construction equipment and signs, and road debris. Without proper maintenance and removal of these problems, people are not encouraged or able to use non-motorized modes of transportation.

## General Maintenance of Sidewalks

Regular and consistent maintenance of sidewalks, particularly along arterials and collectors, is important for non-motorized modes of travel. Conditions such as cracks, heaving from tree roots and surface spalling create trip hazards for pedestrians. Inadequate maintenance of sidewalks is not only dangerous, but can complicate any travel by pedestrians who are elderly or have mobility impairments.

The City of Athens Code requires that property owners maintain the sidewalk adjacent to their property. Currently the city relies on a complaint-based process to identify sidewalks in need of repair. This process corrects some problems, but may leave others untouched. It is recommended that the city develop a citywide inspection program to identify and cite hazardous sidewalks. The program should evaluate different areas of the city each year and property owners should be notified if their sidewalk is not in compliance with city regulations. If a property owner does not make the required repairs, the City should make the repairs and assess the property for the cost

For asphalt shared use paths in City parks, an asset management system should be created to track condition and repairs. The surface should be inspected every other year to make sure the surface is appropriate for all users.

In addition to the sidewalk and path surface evaluation programs, a systematic tree and brush trimming program for sidewalks along major streets and shared use paths in City parks should be undertaken. Overhanging vegetation can greatly reduce the usable width of a walkway, cause injury to users and obstruct views.

## Snow Removal

People who rely on non-motorized transportation as a means of travel are often at the mercy of the weather, especially in the winter. The practices of snow removal on sidewalks, curb cuts and crossing islands need to be continued in the City allowing mobility during all times of the year.

Many northern cities around the globe maintain excellent facilities for non-motorized travel in the winter. For example, Boulder, Colorado and Madison, Wisconsin, cities that both have considerable more amounts of annual snow than Athens, have bicycle mode-shares significantly higher than Athens. Both Minneapolis and Madison have higher bicycle commuting rates than San Diego[7].

The City currently has a sidewalk snow removal policy in place that should be continued and built upon. City policy should treat the removal of snow from sidewalks and key off-road pathways with equal importance as the removal of snow from streets. Areas of special concern are curb ramps at intersections and pedestrian crossing islands. Crossing islands are not the responsibility of an adjacent property

[7] Federal Highway Administration. Publication FHWA-PD-041. Case Study No.1:Reasons Why Bicycling and Walking Are Not Being Used More Extensively as Travel Modes.

owner, so they require clearing by City staff. Shared Use Trails should also be included in snow removal because they provide a non-motorized route of travel.

### Crosswalks

While motorists can tolerate bumpy roads, uneven pavement surfaces at intersection crosswalks can be hazardous for pedestrians. The City should develop criteria to identify those pedestrian crossings that are in need of resurfacing. In addition to a smooth pavement surface, crosswalks need markings that provide good contrast for motorists and a non-slip surface for pedestrians.

### Bicycle Lane Striping and Sweeping

Motor vehicles tend to sweep debris into bicycle lanes filling them with debris quicker than the motor vehicle lanes. If debris is left in place it becomes a hazard for cyclists and some cyclists will no longer ride in the bicycle lanes. To avoid this problem, bicycle lanes should receive more frequent sweeping. This has the added benefit of reducing the amount of sediment washed into the storm sewer system and some communities have increased the frequency of street cleaning solely for that purpose.

Maintaining visibility and reflectivity of bicycle lane pavement markings and symbols are important to nighttime cycling safety, especially when raining or snowing. The City should repaint its pavement markings on all roadways, including bike lanes and crosswalks on a yearly basis. This type of maintenance is important to retain high contrast and visibility. Materials used for bicycle markings should be non-slip.

When snow is removed, it is critical that the entire bicycle lane be cleared since many cyclists use their bicycle year round. Any loss of bicycle lane width means cyclists are more likely to use the motor vehicle lanes.

The City should also undertake a public awareness campaign on the value of keeping bicycle lanes and curbs in general free of debris to promote bicycle safety and water quality. Citizens should be encouraged to sweep bicycle lanes and curb areas to supplement scheduled maintenance.

### Signalized Intersections

Bicyclists and Pedestrians in many cases, cross the road in very different fashions. Bicyclists in the roadway most likely will treat the intersection the same as a vehicle, merging across lanes and making a left turn from the center turn lane. Their restrictions to crossing the road are primarily based on their comfort level of riding with traffic and the volumes, speed and gaps that exist. Since many bicycles function similar to vehicles at intersections it is important that signals are able to detect bicycles even when no motor vehicles are present. The City should develop a system to identify and replace the signals that do not identify bicycles at an intersection.

### Problem Identification and Prioritization

Encouraging the community to identify non-motorized facility problems and maintenance issues can save City staff both time and resources. Public participation also allows citizens to feel that the City is responding to their needs and concerns. The City of Portland, Oregon uses a phone hotline, web pages and postcard/comment cards to aid citizens in reporting maintenance issues. Problems may include malfunctioning pedestrian signals, gaps in the sidewalk system, maintenance of crosswalk or bicycle lane markings, or debris in bicycle lanes. In addition to providing comment cards at locations such as bicycle stores and public buildings, the City should set up web-based forms that allow tracking of service requests and direct the request to the appropriate person.

One area that demands particular attention is pedestrian-activated crosswalk signals that are not functioning properly. By the time pedestrians have completed their trip, they may not remember or do not know how to report the problem. Posting a phone number on the post, along with the fixture number, could allow those with cell phones to call in a report.

### Key Programs to Continue for Maintenance of Non-motorized Facilities

The City of Athens has many good existing policies and programs that support the non-motorized system. The following policies and programs should be reinforced and continued.

- The City should continue enforcing the street sweeping policy to keep the bike lanes clear of debris.
- The City has a sidewalk snow removal policy in place. Residents are responsible for the snow removal on their property and the policy is enforced through warnings and citations when snow is not removed within 4 hours after daylight, after it snowed. This policy should be continued.
- The City should continue to refresh pavement marking on all roadways, including bike lanes and crosswalks, yearly to maintain high contrast and visibility.

## Policy Recommendations on Maintenance of Non-motorized Facilities

**Within One Year:**

- The City should develop a multi-year maintenance schedule as part of the annual striping program for updating signs and refreshing pavement markings on Trails and Bike Routes to maintain high contrast and visibility and help bicyclist and pedestrians navigate.
- The City should develop a citywide inspection program to identify and cite hazardous sidewalks.
- Establish a dedicated website form for non-motorized service requests.
- Develop an educational campaign encouraging property owners to clear curb ramps and bus stops when shoveling their sidewalks.
- Establish a policy for maintenance and snow removal of crossing islands.
- Establish a policy to integrate all of the non-motorized facilities that are part of the Network Plan Bike Route System into the current snow removal program.

**Within Three Years:**

- Initiate a program that provides maintenance contact information, either on stickers or signs, to be placed on pedestrian signals.
- The City should assess the effectiveness of the efforts of the code compliance staff to enforce the existing snow removal ordinance on privately owned hard surfaced sidewalks and pathways, specifically on local roads and private drives. If necessary, the City should develop a program to assure snow removal from privately owned sidewalks and pathways along Arterials and Collectors.
- The City should designate staff and assign responsibility for clearing and maintaining crossing islands, the Hockhocking-Adena Bikeway and key connector pathways of snow and ice.
- The City should develop a program that monitors the condition of sidewalks along Arterials and Collectors on a yearly basis.

**Within Five Years:**

- Establish a maintenance hot-line and website for non-motorized issues (this may be integrated with other maintenance hot-lines) and place a sticker with this hotline number and website address at locations around town including at all pedestrian activated signals.

# 4.6 Education and Enforcement

## Professional Staff Education

For Public Services, Planning, Police and Parks and Recreation Staff involved in the planning, design and implementation on non-motorized transportation, there are a number of on-line resources and standard texts that are exceptionally helpful.

**FHWA Course on Bicycle and Pedestrian Transportation**
http://safety.fhwa.dot.gov/ped_bike/univcourse/instrtoc.htm

The following is the outline of the online course.
Lesson 1: The Need for Bicycle and Pedestrian Mobility
Lesson 2: Bicycling and Walking in the United States Today

Planning Section
Lesson 3: Bicycle and Pedestrian Planning Overview
Lesson 4: Pedestrian and Bicycle Crash Types
Lesson 5: Adapting Suburban Communities for Bicycle and Pedestrian Travel
Lesson 6: Neo-Traditional Neighborhood Design
Lesson 7: Using Land-Use Regulations to Encourage Non-Motorized Travel
Lesson 8: Tort Liability and Risk Management
Lesson 9: Bicycle and Pedestrian Connections to Transit
Lesson 10: Off-Road Trails
Lesson 11: Traffic Calming
Lesson 12: Pedestrian and Bicycle Facilities in Work Zones

Pedestrian Facility Design
Lesson 13: Walkways, Sidewalks and Public Spaces
Lesson 14: Pedestrian Signing and Pavement Markings
Lesson 15: Pedestrian Accommodations at Intersections
Lesson 16: Mid-Block Crossings
Lesson 17: Pedestrians With Disabilities

Bicycle Facility Design
Lesson 18: Shared Roadways
Lesson 19: Bike Lanes
Lesson 20: Restriping Existing Roads With Bike Lanes
Lesson 21: Bicycle Facility Maintenance
Lesson 22: Bicycle Parking and Storage
Lesson 23: European Approaches to Bicycle and Pedestrian Facility Design
Lesson 24: Education, Encouragement, and Enforcement

**Association of Pedestrian and Bicycle Professionals (APBP)**
http://www.apbp.org
This organization is the only organization that focuses specifically on bicycle and pedestrian issues.
Some of the benefits of membership include:
Newsletter with latest resources and studies
Members Only List Serve – best source for peer review
In-depth Training Seminars

**Pedestrian and Bicycle Information Center**
http://www.pedbikeinfo.org
This is the single best clearing house of information on bicycles and pedestrians on the web.
It includes:

- Including Safe routes to school information.
- Extensive image library.
- Links to existing studies.

**Pro-Walk/Pro-Bike Biannual Conference**
This conference is a large gathering of bicycle and pedestrian advocates and professionals from around the US and Canada. It is an excellent way to learn a great deal in a short period of time.

- Presentations and workshops on the latest issues and technologies.
- Networking with others involved in non-motorized facilities.

**ITE Transportation Planning Handbook, Chapter 16 Bicycle and Pedestrian Facilities**
Chapter 16 is a good introduction to the bicycle and pedestrian planning and design issues.

**AASHTO Guide for the Development of Bicycle Facilities**
Incorporated by reference into AASHTO's *A Policy on Geometric Design of Highways and Streets*. Most public and private funding sources require projects to be in compliance with this guide.

**AASHTO Guide for the Planning, Design, and Operation of Pedestrian Faculties**
Incorporated by reference into AASHTO's *A Policy on Geometric Design of Highways and Streets*. Most public and private funding sources require projects to be in compliance with this guide.

**Florida Bicycle Law Enforcement Guide**
This brief pocket size document is indented as "A review of Florida's Bicycle Safety Laws to help with warnings, citations and crash reports." While not specific to Ohio or Athens, it can serve as a model for the creation of a similar document that could be used by City police officers.

## Public Education and Enforcement Programs

On a few key issues there is not a uniform understanding of the existing laws. A public awareness and education campaign should be undertaken followed by stepped up enforcement of the issues. The key issues are:

**Bicycle Laws**

Bicyclists need to understand their rights and responsibilities in the roadway. A simple approach such as used by the League of Michigan Bicyclists uses the slogan "Same Road, Same Rights, Same Rules". This is trademarked phrase by Probicyle.com but public and non-profit entities are typically granted permission to use the phrase without charge.

The following are the top four legal issues that should be addressed in a public education program.

- Obey all traffic controls
- Yield to Pedestrians in crosswalks, on sidewalks and walk you bike where posted
- Signal turns
- Having required lights and reflectors when riding at night

**Bicycle Operation**

In addition to laws there are some basic safe bicycling techniques that should be promoted.

- Options on how to make left turns
- When to use the entire lane
- Riding in a straight line where on street parking exists
- Avoiding opening car doors
- Improving nighttime visibility
- Riding with Buses and Bus Bike Racks
- Yielding to pedestrians on sidewalks and pathways and riding close to walking speed when on a sidewalk

**Pedestrian rights and responsibilities in a crosswalk**

Pedestrian issues are focused on signalized and unsignalized crosswalks.

- Understanding pedestrian signals, especially the meaning of the flashing "Don't Walk" or flashing red hand clearance interval
- Pedestrians' rights and responsibilities in an unsignalized mid-block crosswalk.
- Accessible pedestrian signals

**Motorists Responsibilities**

Many bicyclists report being harassed by motorists. A public awareness campaign should focus on the following issues related to bicyclists:

- Expecting and respecting bicyclists in the road
- Keeping a safe distance from cyclists when passing them
- Watching for bicyclists when opening car doors of parallel parked cars

- Understanding why a bicyclist may be positioned somewhere other than the far right side of the road

Pedestrians also experience difficulty with motorists who do not understand pedestrian's rights. The top issues are:

- Not passing a stopped vehicle at a crosswalk
- Not blocking crosswalks when turning right-on-red
- Yielding to pedestrians when turning right and left
- White cane laws
- Stopping at stop bars and yield bars and not crowding crosswalks

### Enforcement Programs

One enforcement approach that has been utilized successfully in other university towns is an optional bicycle education class in lieu of a fine. Upon receiving a ticket the offender has three options: pay the ticket, contest the ticket, or attend a class on bicycle safety that is given periodically. This option is typically only available for the first offense.

Bicycle theft can be a deterrent to bicycle use, especially to users with more expensive bicycles. One program that has been used to track down bicycle theft rings is a sting operation using a homing device. An attractive bicycle with a homing device placed in the frame is placed in a location where numerous bicycles have been stolen with minimal protection. The bicycle once stolen can be tracked.

Weather protected bicycle storage is in great demand around town especially near campus. Parking that is intended for daily users are frequently taken up by long-term storage of bicycles. Signage and active enforcement should be used to limit the number of hours a bicycle may be parked in such an area to 72 hours.

### Public Education Programs for New Facilities

On-going community education and awareness programs are an important component of a successful non-motorized transportation plan. Coupling public education campaigns with the development of new facilities is a timely and effective way to raise awareness of the new facilities and non-motorized transportation issues in general. Effective public awareness campaigns should include transitional signage at the new facility location as well as posters, flyers, and newspaper articles. Especially important are changes to existing facilities that may not be readily perceptible to users such as the change in curb cut locations.

### Bikeway Map

Cycle Path, a local bicycle shop, has prepared an excellent bike map of the city and the surrounding area. However, due to the large number of near-term opportunities and potential additions to the system, it is recommended that the city prepare and continually update a bike map. The updated bike map may also contain valuable information such as useful phone numbers and bike safety tips. This is a great way to provide basic information on bicycle safety. When the map is updated, efforts should be made to increase its distribution including to incoming university students. Also, ways to integrate the pathways system into the city's on-line mapping system should be evaluated as well as other ways to provide the information such as Google Map's new bike routing feature.

## Policy Recommendations on Education and Enforcement Programs

**Within One Year:**

- Establish a plan that addresses which staff should receive advance training on non-motorized issues and which staff should receive baseline training.
- Coordinate public awareness/education and enforcement campaigns regarding pedestrian's rights and responsibilities in crosswalks and bicycles rights and responsibilities in the road.

**Within Three Years:**

- Provide advance and baseline training on non-motorized planning, design and enforcement issues to staff based on the plan developed in the first year.
- Encourage anti-theft programs.
- Consider providing the option of a bicycle safety and law class for first time bicycle law offenders.
- Reevaluate the format and update the bike map.

**Within Five Years:**

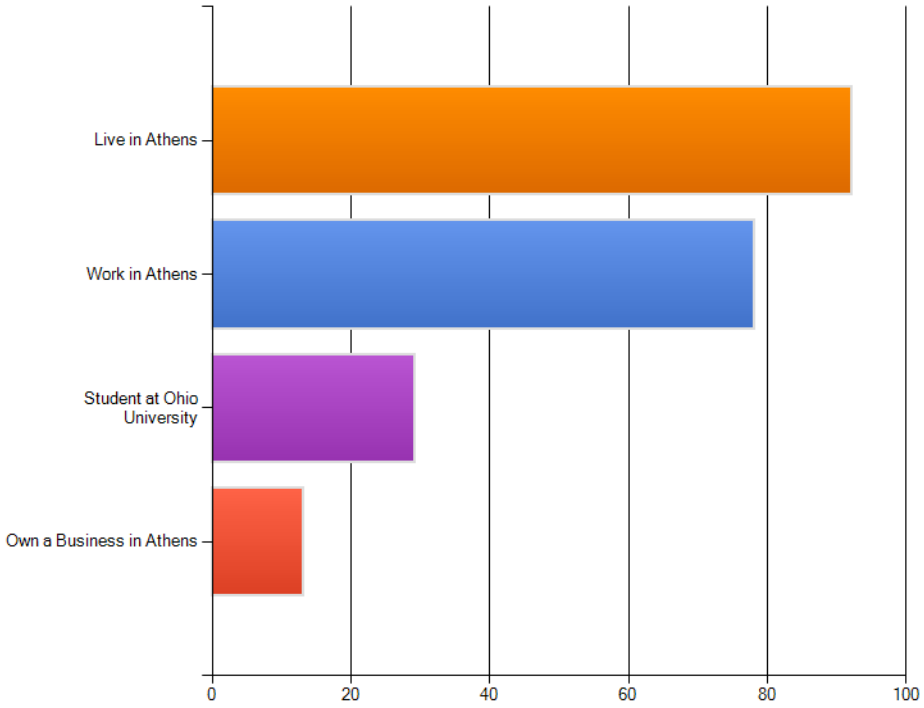
- Create and use a guide similar to Florida's Bicycle Law Enforcement Guide.
- Provide education on new bicycle facilities and transitional signage/markings where facilities are changed.
- Restrict the use of weather protected parking areas to 72 hours maximum and actively enforce the issue to free-up prime bicycle parking facilities.

# 5. Appendix

Topics:

# 5.1 Survey Summary of Results

A survey was available online through the month of September in which 108 people participated. The majority of participants were residents (86%). 72.9% work in the city, 12.1% owned a business in the city and 27.1% were students.




The survey consisted of ten questions that addressed the following:

- Desired Project Outcomes
- Places of Concern
- Participant's Pedestrian Travel Patterns
- Participant's Bicycle Travel Patterns
- Bicycle Issues

The survey concluded with an optional general information questionnaire and an additional comment section.

## Top Eight Specific Places of Concern

The Online Survey asked participants to identify three specific areas that they thought this project should address. Listed Below are the top eight most common responses from the survey.

| Location | Issue |
|---|---|
| Richland Ave | Difficult to navigate on and across for both bicycles and pedestrians |
| E State Street | Not very bicycle or pedestrian friendly. Difficult to navigate for both bicyclists and pedestrians. |
| Stimson Ave | Difficult to navigate on and across for both bicycles and pedestrians |
| Court Street | Difficult to navigate by bicycle, heavy vehicular and pedestrian traffic, needs bike lanes |
| Columbus Road | Difficult to navigate by bicycle, needs bike lanes |
| Union Street | Difficult to navigate by bicycle, needs bike lanes |
| Uptown | Difficult to navigate around the area by bicycle, crowded streets and limited bike parking |
| Parks and Recreation Areas | Being able to safely get to and access parks and recreational areas by bicycle. |

## Top Ten Desired Outcomes

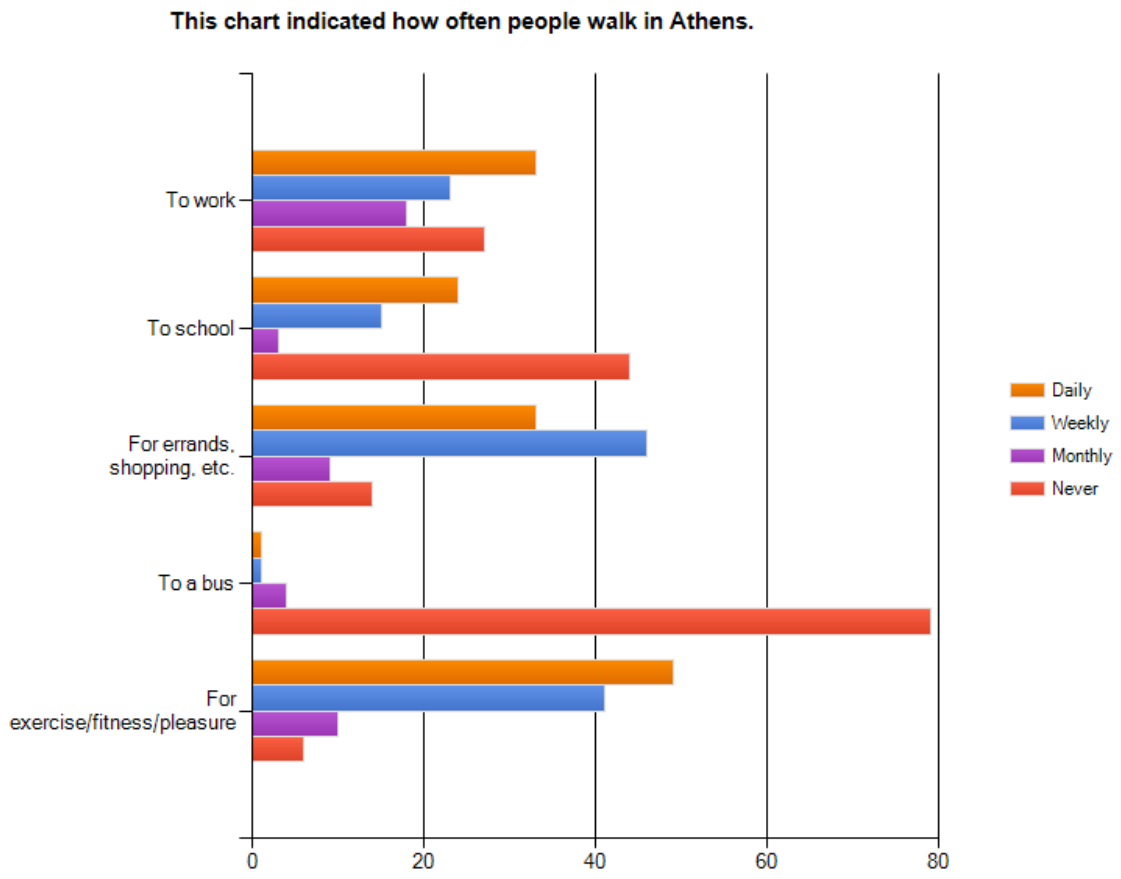
The Online Survey asked participants to list their top three desired outcomes of the Non-motorized Plan based on their vision of the future. Listed Below are the top ten most common responses from the survey.

| Issue |
|---|
| Easy, safe and useable non-motorized facilities. |
| More bike lanes, especially on major roads. |
| Better education efforts to create cooperation between drivers and bikers with consideration for both parties. |
| More off-road facilities for bicyclist, including mountain biking trails. |
| Bicycle and pedestrian connectivity throughout the city. |
| Increase number of people who use non-motorized transportation in the city. |
| More bike parking, including safe, secured and covered facilities. |
| Well maintained and connected sidewalk system. |
| Improve bicycle access throughout town, especially to bike path and commercial areas. |
| In general, the city becomes more bicycle and pedestrian friendly. |

# Travel Pattern Summary

The following data is a based on the response received from the survey:

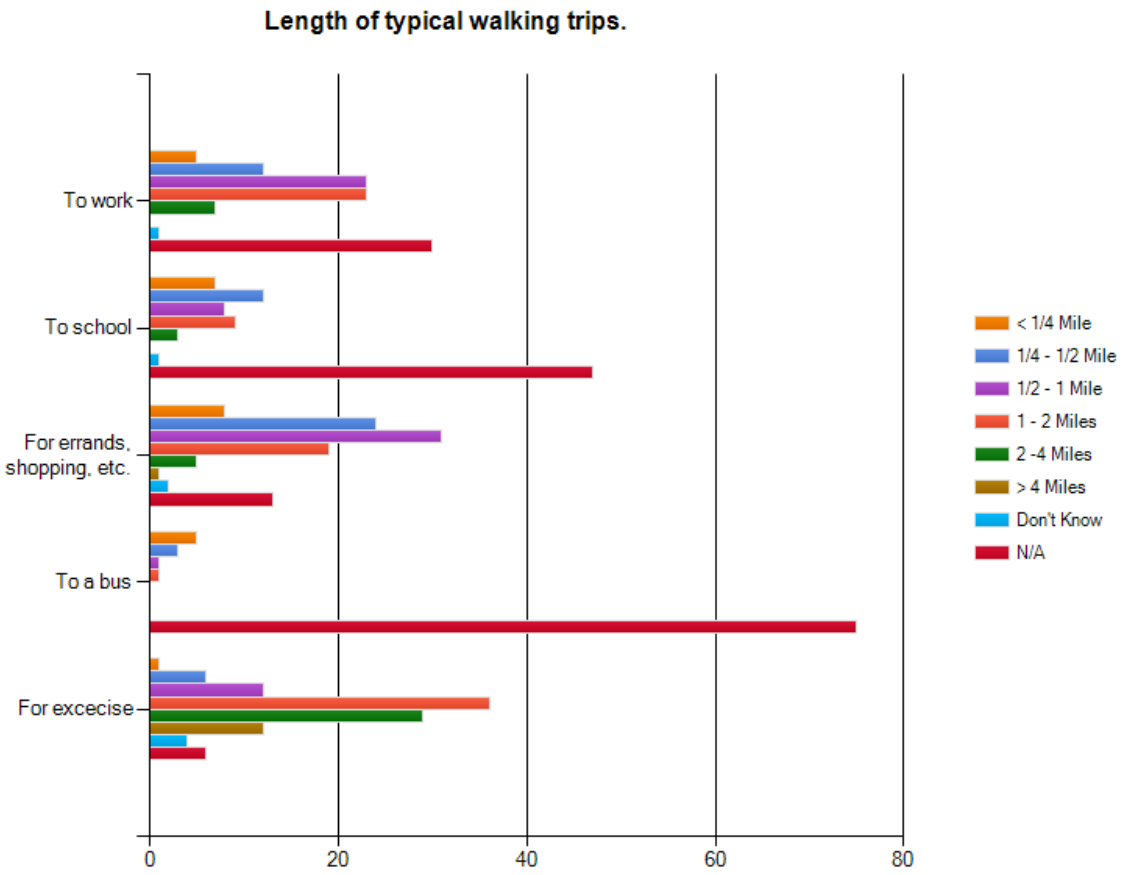
## Pedestrian Travel Data – Walking Frequency




**Key Findings:**

- About 75% of the respondents walk to work
- Over 55% walk daily or weekly to work
- Over 30% walk daily for errands, and over 45% walk weekly for errands
- Over 45% walk daily for exercise

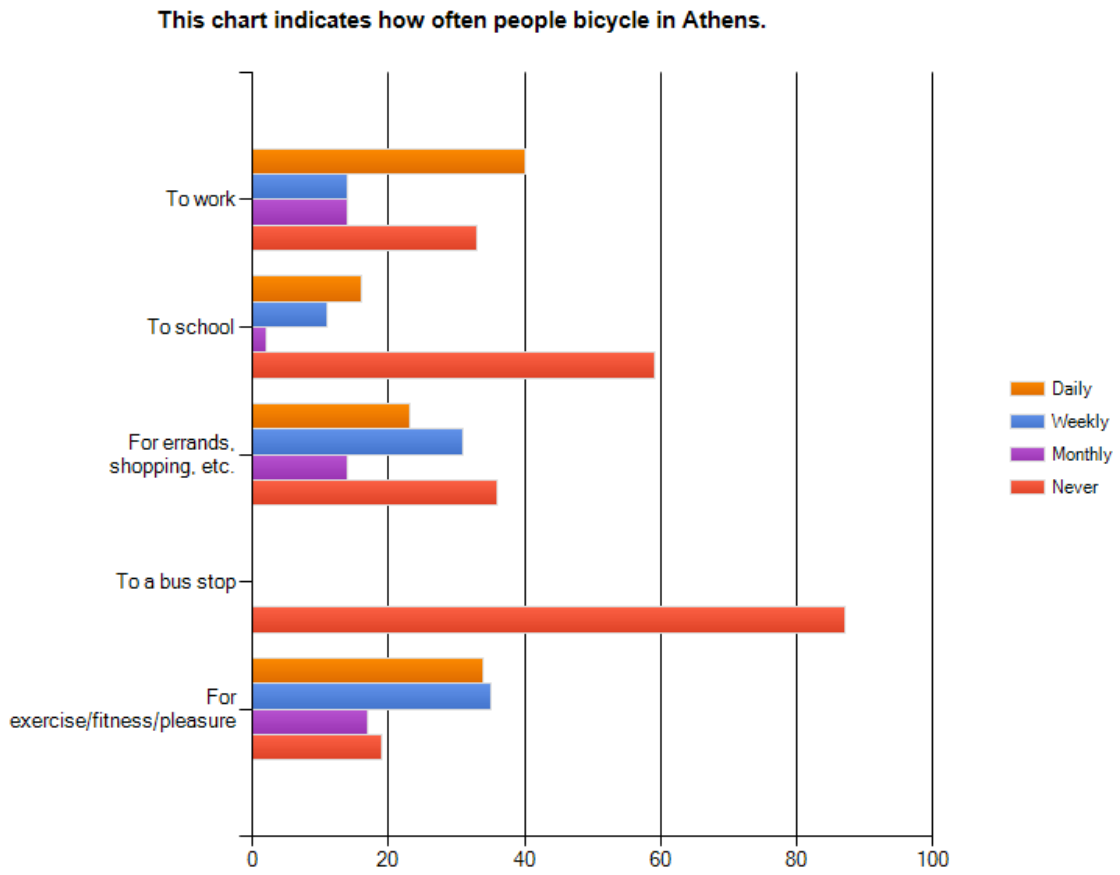
## Pedestrian Travel Data – Walking Distance




**Key Findings:**

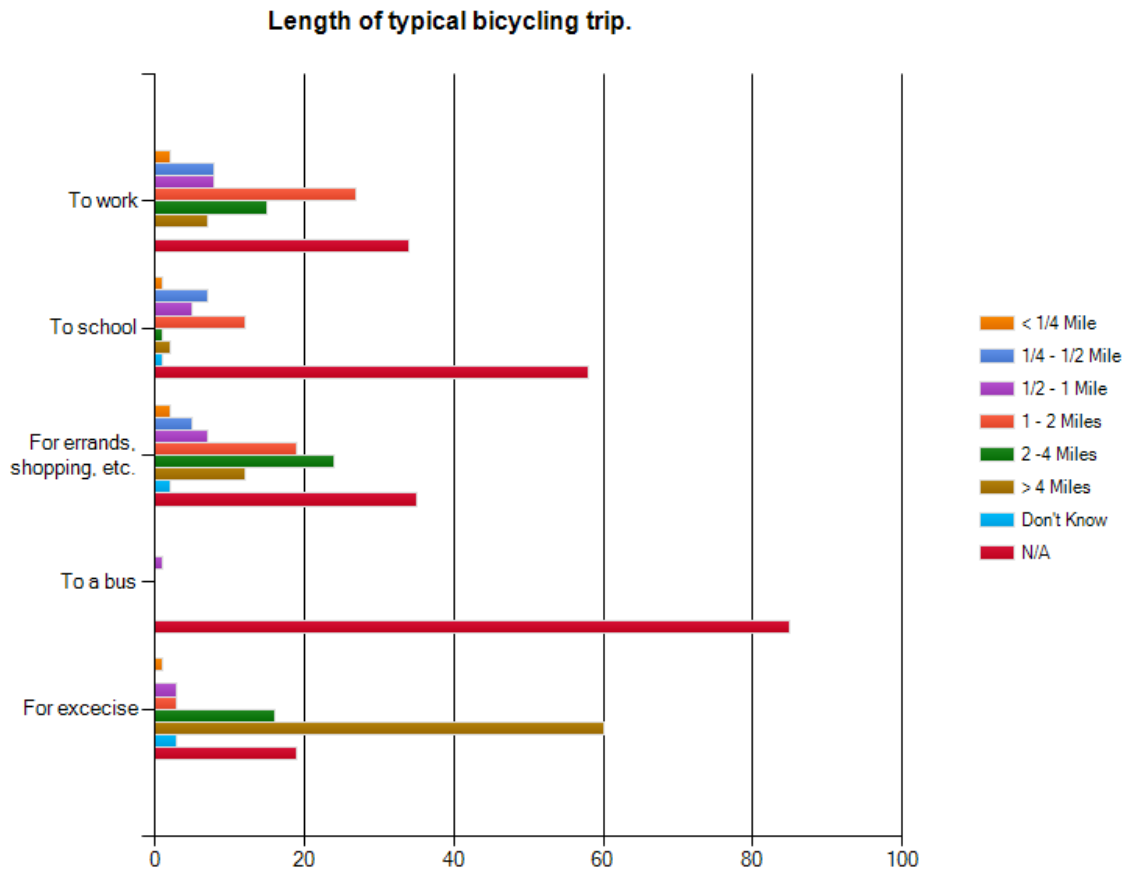
- Most work trips are a little over 1 mile
- Most errand and shopping trips are ¼ to 1 mile
- Most exercise trips are 1 to 2 miles although a significant number of exercise trips are longer than 2 miles

## Bicycle Travel Data – Bicycling Frequency



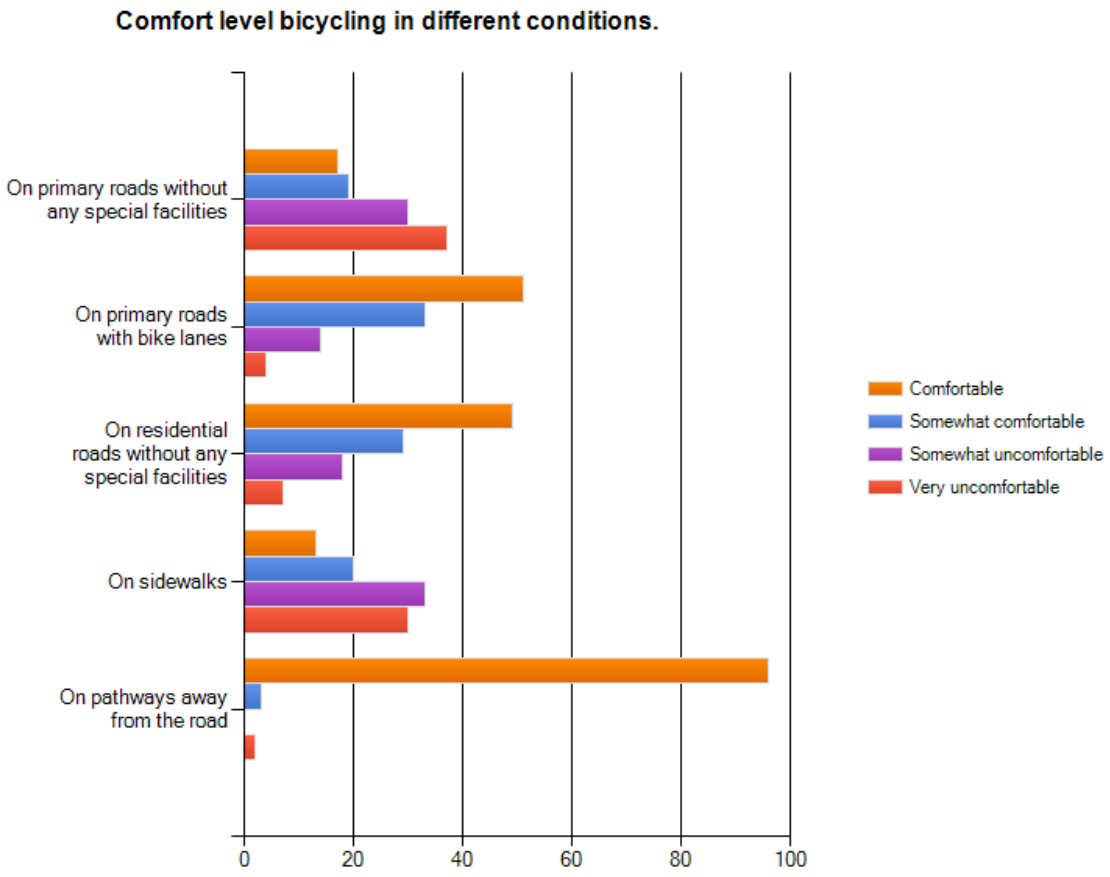

- 40% ride their bicycle to work daily, an additional 35% ride weekly
- Over 50% ride their bicycle for errands and shopping daily or weekly
- Over 60% ride their bicycle for exercise/fitness/pleasure daily or weekly

## Bicycle Travel Data – Bicycling Distance



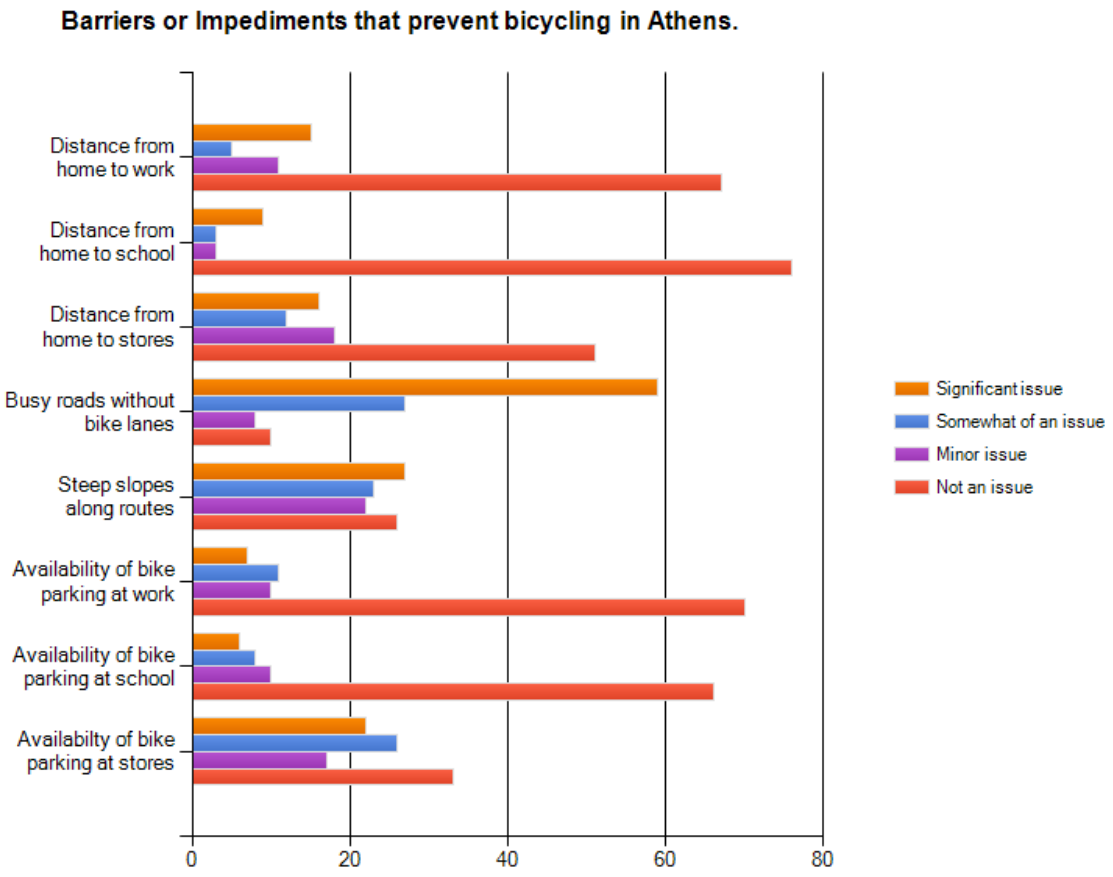

- Most common distance to work around 2 miles
- Nearly 60% travel over 4 miles for exercise
- Over 40% travel 1 to 4 Miles for errands and shopping

## Bicycle Issues – Comfort Level




- Majority are comfortable or somewhat comfortable on primary roads with bike lanes and residential roads without any special facilities.
- Almost everyone is comfortable on a pathway away from a road
- Majority are somewhat uncomfortable or very uncomfortable on sidewalks
- Majority are somewhat uncomfortable or very uncomfortable on primary roads without any special facilities.

## Bicycle Issues – Barriers or Impediments




- Busy roads without bike lanes is the biggest issue
- Steep slopes and the availability of parking are also major issues.

# 5.2 Public Workshop Input

Two Public Workshops were held to get input from the community. The Issues and Opportunities Workshop was held in the September and the Preliminary Plan Workshop in November. During the workshops participants indentified and prioritized areas in the community where different types of non-motorized elements would fit.

## Issues and Opportunities Workshop

**Public Input**

A Public Workshop was held on September 17, 2009 for the City of Athens Bicycle and Pedestrian Plan. Fifty-eight people attended. During the public workshop, participants were given the opportunity to provide input. Each Participant was asked to record on a worksheet, their top desired outcomes of the Non-motorized Plan along with specific areas of concern that this project should address. The participants were provided with two worksheets that listed the top Desired Outcomes and Places of Concern from the online survey. The participants were also encouraged to mark the specific areas of concern on maps.

- Desired Outcomes
- Places of Concern
- Map Notes

**Public Input Maps**

The following maps document the places of concern that where noted on the workshop maps.

- Road Crossings and Intersections
- Pathway Facilities
- Bike Facilities
- Non-motorized Priorities

## Desired Project Outcomes

Participants were asked to list and then vote on their top three desired outcomes of the Bicycle Pedestrian Plan based on their vision of the Future. Documented below is a list of top 3 most common responses collected from the entire group. The responses are listed in order of their frequency, with the most common response at the beginning.

1. More Bike Lanes, Especially on Major Roads
2. Better Education Efforts to Create Cooperation Between Drivers and Bikers with Consideration for Both Parties
3. Bicycle and Pedestrian Connectivity throughout the City

## Places of Concern

Participants were asked to identify specific areas that they thought this project should address and then vote on the top three within the group. Documented below is a list of the top ten most popular responses. The responses are listed in order of their frequency, with the most common response at the beginning.

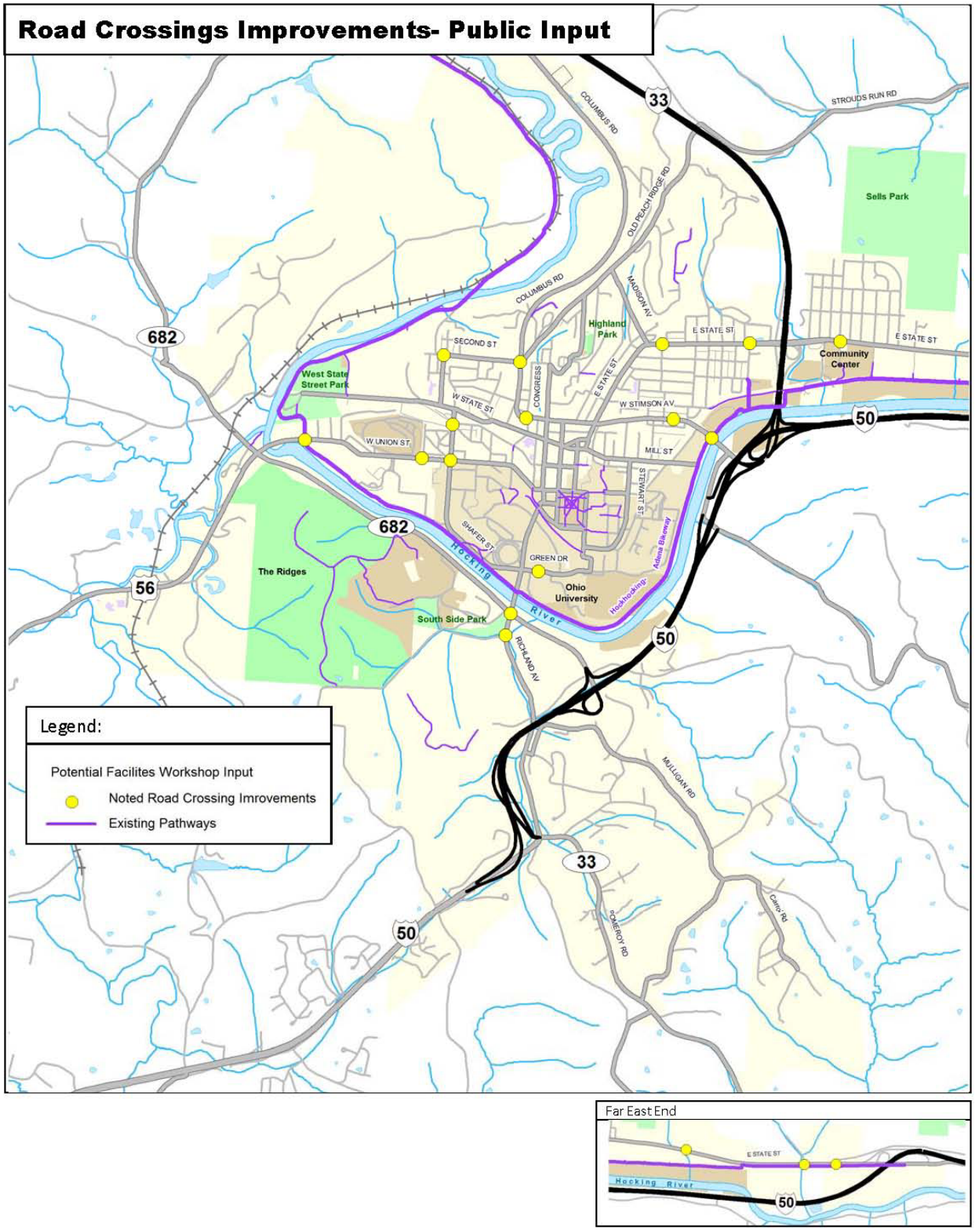
1. Richland Ave is Difficult to navigate on and across for both bicycles and pedestrians.
2. E State Street is not very bicycle or pedestrian friendly. It is Difficult to navigate for both bicyclist and pedestrians.
3. Court Street is difficult to navigate by bicycle; it has heavy vehicular and pedestrian traffic and needs bike lanes.
4. Stimson Ave is difficult to navigate on and across for both bicycles and pedestrians.
5. Pedestrian safety and traffic calming is needed near school intersections.
6. Columbus Road is difficult to navigate on by bicycle and needs bike lanes.
7. Crowded Streets and Limited Bike Parking make it difficult to navigate by bicycle and pedestrian through the Uptown area.
8. Better access is needed from the Bike Path to Businesses on East State Street.
9. Being able to safely get to and access parks and recreational areas by bicycle.
10. E State Street (in front of Athens Book Center) pavement surface needs to be repaired.

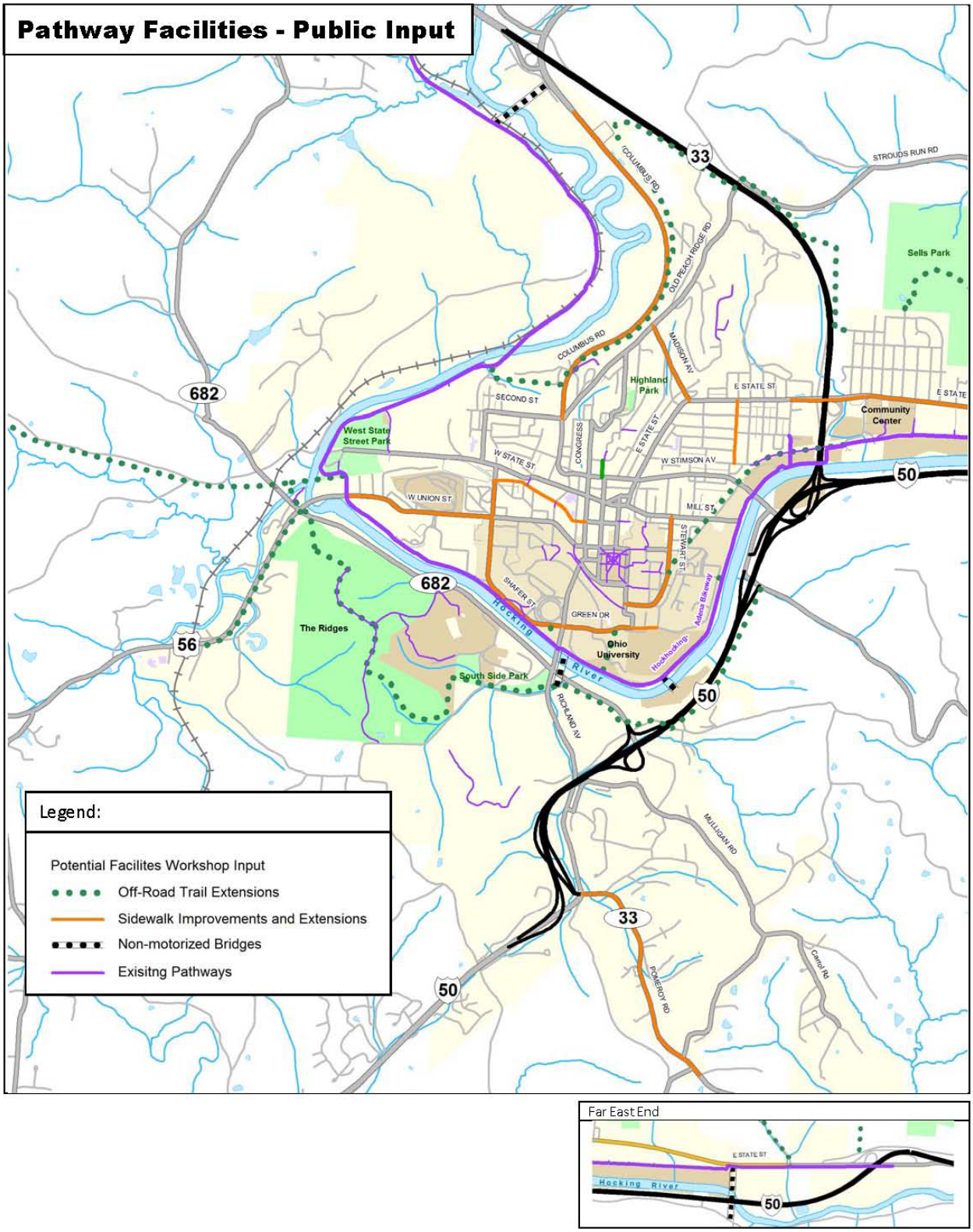
## Map Notes

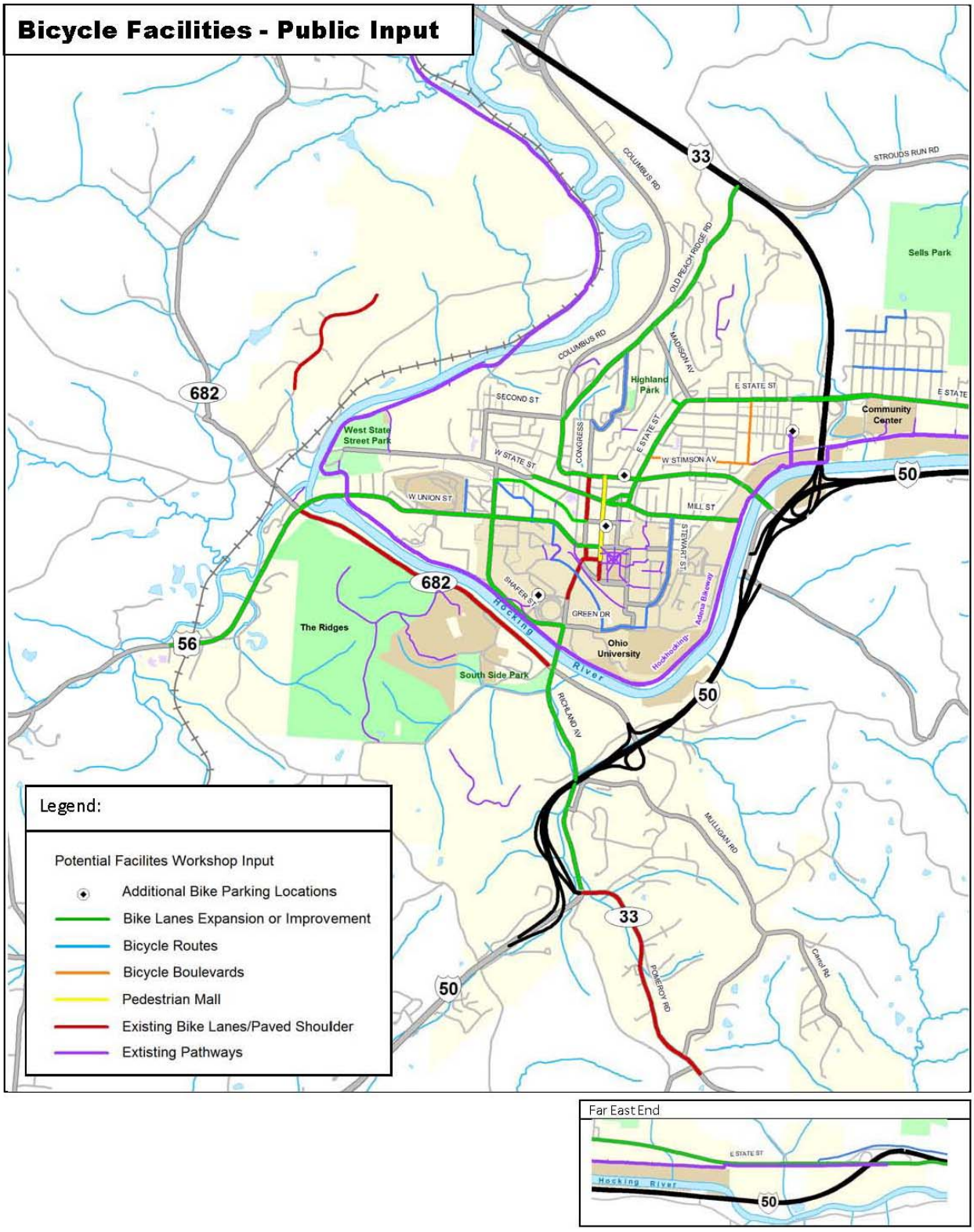
During the workshop participants were encouraged to note additional areas of concern and recommendations on the workshop maps. Documented below is a list of these additional comments.

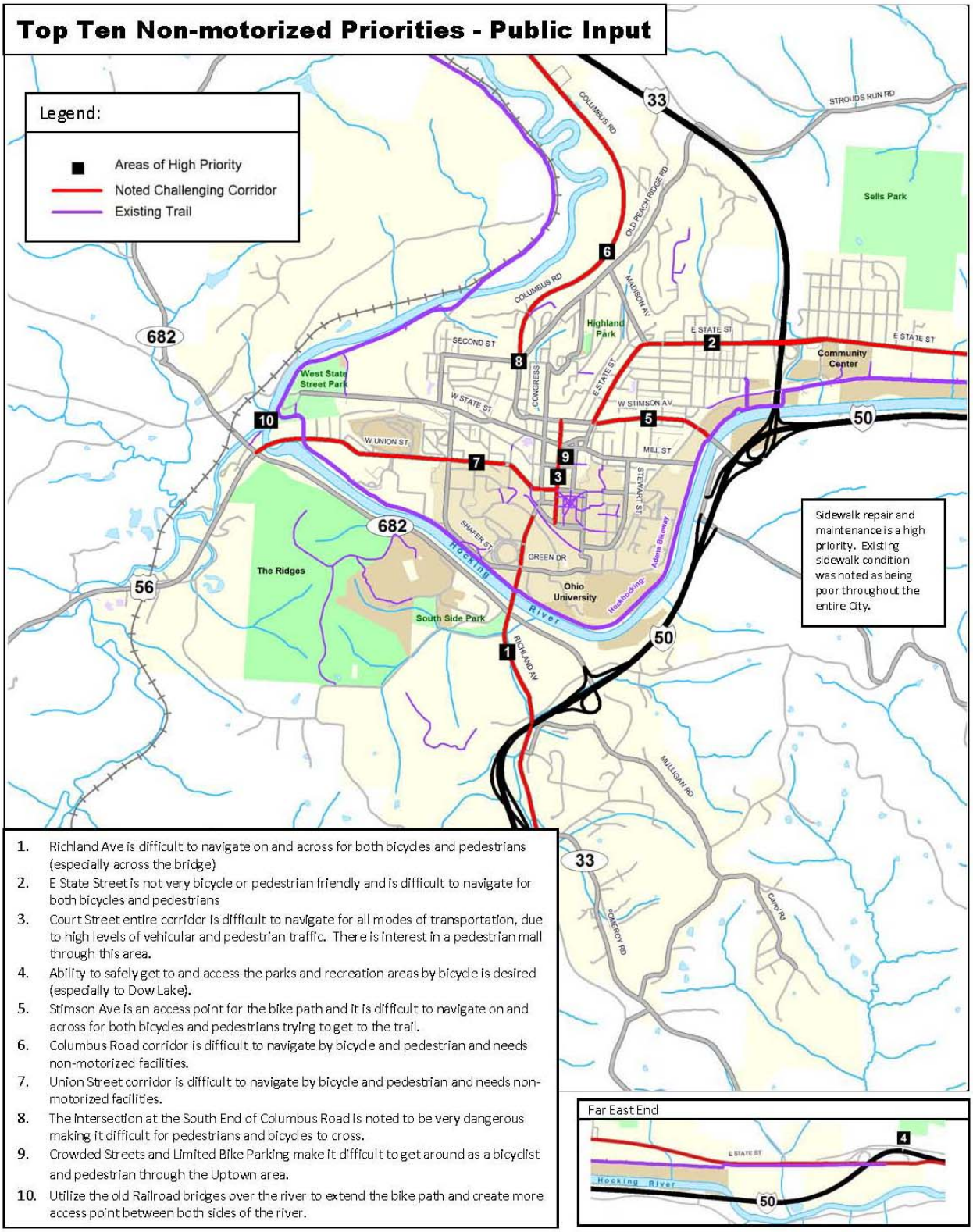
1. Expand Bike Path to Lake Hope
2. Expand Trails, including Mountain Bike Trails
3. Implement Solar Street Lights
4. Crosswalk Improvements needed at the Intersection of Richland Ave and Dairy Ln
5. Crosswalk Improvements needed at W Union St and S Shafer St
6. Crossing Improvements in the form of Hybrid Pedestrian Signal/Rapid Flash Beacon are needed on W Union St between Blue Line Dr and the Hocking River.
7. Crossing Improvements needed at W Carpenter St and Depot St Intersection.
8. Crossing Improvements needed at the Intersection of Columbus Rd, Columbia Av, Lancaster St and Second St.
9. Highland Ave has Potential to become Bike Route
10. Bike Lanes needed on entire length of E State Street
11. Potential for Bike Blvd on Morris Av and S May Av
12. Potential to close Court St to vehicular traffic or create a contra-flow bike lane.
13. Lights needed on Bike Path
14. Crossing Improvements at the Intersection of E State Street and Home St
15. Sidewalks needed along Columbus Road
16. Sidewalks needed along W Union Street between Blue Line Dr and Athens County Fairgrounds
17. Bike Lanes needed on Richland Ave
18. Pedestrian Way needed along Highway 50.
19. Bike Racks or Covered Secured Bike Parking needed on Carpenter St near E State St
20. Sidewalk needed along Madison Ave
21. Crosswalk Improvements at the intersection of E State St and Watts St
22. Covered Secured Bike Parking wanted at south end of Home St near Bike Path Connection
23. Connect Bike Path to S Green Dr on Campus Properly
24. Crossing Improvements needed at W Stimson at the Bike Path, a Rapid Flash Beacon was suggested
25. Crossing Improvements needed on S Green Dr between Richland Av and University Ter, a Rapid Flash Beacon was suggested.
26. Sidewalk needs improvement along Green Dr on Campus including street lighting.
27. Extend Bike Path to Dow Lake
28. Use Della Dr as an alternative bike route to Dow Lake with a crossing improvement at Della Dr and E State St Intersection, a Rapid Flash Beacon suggested.
29. Basic Crossing Improvement suggested on E State St in Commercial District
30. An extension of the existing bike path as a loop around the city is suggested.
31. A new connection across an old railroad bridge is suggested at the west end of West State Street Park to get across the river.
32. A separate Bridge or Tunnel is suggested at Richland Ave across the river to connect the bike path to the south side of Hocking River.
33. A new connection across an old railroad bridge is suggested at the north end of the City to get across the river and connect from the existing bike path over to Columbus Rd.

34. A New Bridge is suggested at the Far East end of town to get across the river and Highway 50 to connect the bike path along E State Street south to Harmony Rd.
35. Crossing Islands are needed along E State St, especially in the commercial areas.
36. It was noted that Morris Ave, S May Ave, and Second Street need traffic calming measures.
37. A Bike Path was suggested for along the East side of W Union St south of 682.
38. Sidewalks should be added on McKinley Ave where there currently are none.
39. Better Access to Bike Path is needed to/from campus
40. Allow access across existing golf course bridge to get across river from the south end of campus.
41. Suggestion for a Shared Use Arrow along Court Street and on Richland Ave
42. Inconsistent sidewalks along S Shannon Ave
43. Add Bike Route through Campus, connecting to Bike Path in the East and ending near the intersection of Shafer St and State St.
44. Crossing Island needed at Shafer St and Byard St Intersection.
45. Crossing Improvements needed on W Union St near the County Fairgrounds.
46. Add sidewalks on the South side of Pomeroy Rd.
47. Improve Crosswalk at Richland Ave and 682 Intersection, A Rapid Flash Beacon is suggested.
48. Add Bike Lanes to Mill St
49. Add Covered and Secured Parking near Court St and Washington St.
50. Add Bike Lanes to Washington St
51. Add Sidewalk to south side of E State St where there currently are none, including the bridge overpass
52. Bike Route signage in the area between E State St, E Stimson, and the Expressway.
53. Add steps between Carpenter Rd and Fort Street as a pedestrian shortcut.
54. Sidewalk Improvement needed along the south side of Washington St
55. Sidewalks need to be added to the west side of Shafer St north of W Union.
56. The intersection of Second St and Central Av is Dangerous.
57. Better Snow and Ice Removal is needed on Washington St and North and South Congress.
58. Signs needed all over town to direct cyclist to bike path.
59. Add connector paths on the east and west side of Richland Ave to connect Green Dr with the Bike Path.
60. Add connector path between Bike Route and Morrison Ave
61. Add connector path between the Bike path and the west side of Shafer St before it heads north.
62. Add Bike Lanes to Stimson Ave
63. Add Crosswalk to Stimson Ave between Campbell St and Grant.
64. Improve Crosswalk on State Street at the Community Center.
65. Contra-flow bike lane along Evens Street.
66. Add Contra-flow bike lane on W Union St between Congress and Court.
67. Add Bike Lanes to Columbus Rd between Second St and Congress.
68. Add Shared Use arrow to W State Street Between Court and Miller Ave
69. Add Bike Lanes to the Entire stretch of W Union.
70. Add Bike lanes to Carpenter Road
71. Add Bike Lanes to Shafer St between Washington and W Union.
72. Make Court Street a Bicycle Boulevard.
73. Add bike lanes to Columbia Ave all the way to the Expressway.
74. Add Bike lanes to Stimson Ave Bridge over the River.


Road Crossings Improvements- Public Input
Legend:
Potential Facilites Workshop Input
Noted Road Crossing Imrovements
Existing Pathways
Far East End
Sells Park
Highland Park
West State Street Park
Community Center
The Ridges
South Side Park
Ohio University
Hocking River
Athens Bikeway
Hockhocking
COLUMBUS RD
STROUDS RUN RD
OLD PEACH RIDGE RD
MADISON AV
SECOND ST
E STATE ST
W STATE ST
CONGRESS
W STIMSON AV
W UNION ST
MILL ST
STEWART ST
SHAFER ST
GREEN DR
RICHLAND AV
MULLIGAN RD
POMEROY RD
Camp Rd
33
682
50
56


Pathway Facilities - Public Input
Legend:
Potential Facilites Workshop Input
Off-Road Trail Extensions
Sidewalk Improvements and Extensions
Non-motorized Bridges
Exisitng Pathways
Far East End
33
682
50
56
COLUMBUS RD
STROUDS RUN RD
OLD PEACH RIDGE RD
MADISON AV
SECOND ST
E STATE ST
W STATE ST
W STIMSON AV
W UNION ST
MILL ST
CONGRESS
STEWART ST
SHAFER ST
GREEN DR
RICHLAND AV
MULLIGAN RD
POMEROY RD
Canal Rd
Hocking River
Sells Park
Highland Park
West State Street Park
Community Center
The Ridges
South Side Park
Ohio University
Hocking River
Adena Bikeway
Hockhocking


Bicycle Facilities - Public Input
Legend:
Potential Facilites Workshop Input
Additional Bike Parking Locations
Bike Lanes Expansion or Improvement
Bicycle Routes
Bicycle Boulevards
Pedestrian Mall
Existing Bike Lanes/Paved Shoulder
Extisting Pathways
Far East End
E STATE ST
Hocking River
50
33
682
56
COLUMBUS RD
STROUDS RUN RD
OLD PEACH RIDGE RD
MADISON AV
SECOND ST
Highland Park
Sells Park
Community Center
West State Street Park
W STATE ST
CONGRESS
E STATE ST
W STIMSON AV
W UNION ST
MILL ST
STEWART ST
SHAFER ST
GREEN DR
The Ridges
Ohio University
South Side Park
Hocking River
Hockhocking Adena Bikeway
RICHLAND AV
MILLIGAN RD
POMEROY RD
Canal Rd


Top Ten Non-motorized Priorities - Public Input
Legend:
Areas of High Priority
Noted Challenging Corridor
Existing Trail
Sidewalk repair and maintenance is a high priority. Existing sidewalk condition was noted as being poor throughout the entire City.
1. Richland Ave is difficult to navigate on and across for both bicycles and pedestrians (especially across the bridge)
2. E State Street is not very bicycle or pedestrian friendly and is difficult to navigate for both bicycles and pedestrians
3. Court Street entire corridor is difficult to navigate for all modes of transportation, due to high levels of vehicular and pedestrian traffic. There is interest in a pedestrian mall through this area.
4. Ability to safely get to and access the parks and recreation areas by bicycle is desired (especially to Dow Lake).
5. Stimson Ave is an access point for the bike path and it is difficult to navigate on and across for both bicycles and pedestrians trying to get to the trail.
6. Columbus Road corridor is difficult to navigate by bicycle and pedestrian and needs non-motorized facilities.
7. Union Street corridor is difficult to navigate by bicycle and pedestrian and needs non-motorized facilities.
8. The intersection at the South End of Columbus Road is noted to be very dangerous making it difficult for pedestrians and bicycles to cross.
9. Crowded Streets and Limited Bike Parking make it difficult to get around as a bicyclist and pedestrian through the Uptown area.
10. Utilize the old Railroad bridges over the river to extend the bike path and create more access point between both sides of the river.
Far East End
Sells Park
Community Center
Highland Park
West State Street Park
The Ridges
South Side Park
Ohio University
Hocking River
COLUMBUS RD
OLD PEACH RIDGE RD
STROUDS RUN RD
MADISON AV
SECOND ST
CONGRESS
E STATE ST
W STATE ST
W STIMSON AV
W UNION ST
MILL ST
STEWART ST
SHAFER ST
GREEN DR
RICHLAND AV
MULLIGAN RD
CAMP RD
SOMERBOY RD
33
682
50
56

# Preliminary Plan Workshop

**Public Input**

A Public Workshop was held on November 12, 2009 for the City of Athens Bicycle and Pedestrian Plan. Twenty-eight people attended. During the public workshop, participants were asked to evaluate and comment on the specifics of the proposed improvements of the preliminary plan. Nine different workstations with detailed maps of the key corridors were placed around the room and were available for participants to review and comment on at their own pace. There were also two large overview maps of the plan available. Participants also had the opportunity to mark if they agreed or disagreed with another participants comment. Listed below are the nine different focus areas where specific recommendations were given:

- **Columbus Road**, from Second Street to Terrace Drive
- **East State Street**, from Carpenter Street to US-33
- **East State Street (Far East Side)**, from I-33 to Farmer's Market
- **West State Street**, from West State Street Park to Mill Street
- **West Stimson Avenue**, from Carpenter Street to Rock Riffle Road
- **Richland Avenue**, from Hooper Street to Existing Bike Lanes
- **West Union Street**, from 682 to Congress Street
- **Hockhocking-Adena Bikeway**, from US-33 (north) to US-50 including existing and proposed connectors/extensions
- **Uptown**, Congress Street and Court Street from President Street to Carpenter Street

**Public Input Prioritization**

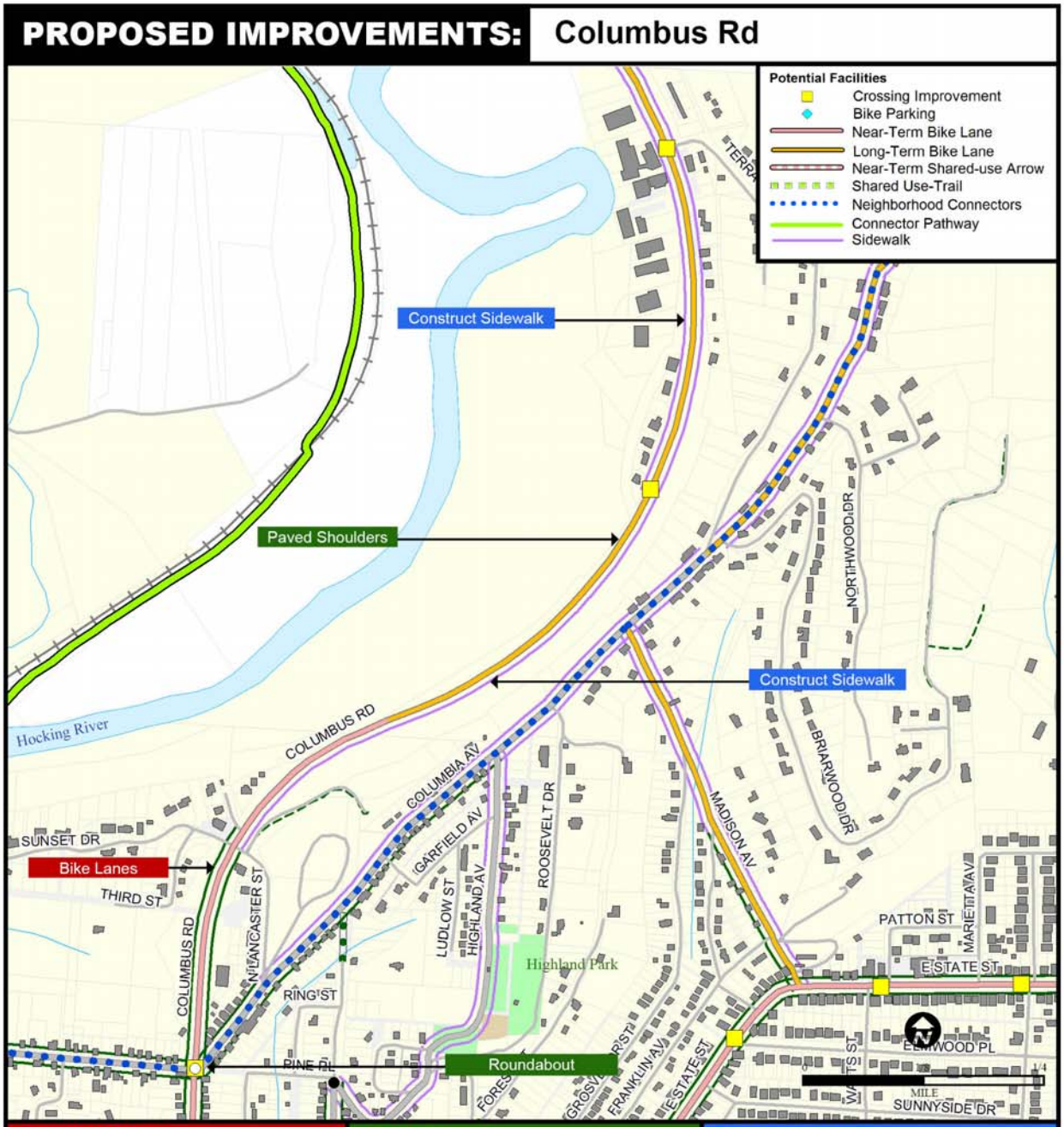
At the end of the Workshop session, participants were asked to select three of the ten focus areas that they felt had the highest priority.

## Columbus Road

There is a desire to place sidewalks on both sides of the Columbus Rd along with paved shoulder, or a wide pathway for two-way traffic on just one side of the road. There's also a suggestion to reclaim old trolley line grade as separate bike facility.

Map Comments:

1. Columbus Road top to bottom should be a one-phase project. Develop "sidewalk" as a dual purpose path both directions; one side of road only is adequate.
2. Sidewalk desired on Columbus Rd and Paved Shoulders kept free of glass and debris. (Agree - 7)
3. Bicycle Boulevard all along Columbus Road. There is no reason why cars need a straight blow. (Agree – 1)
4. Reclaim old trolley line grade as separate bike lane, all the way to 33. (Agree – 1)
5. Please add near-term crosswalk at 2nd/Lancaster/Columbus Intersection. (Agree – 2)
6. Utilize Old Railroad Bridge to connect Trail to Columbus Rd. (Agree – 2)
7. Stair system to connect Briarwood Dr neighborhood with town and provide access to ridge. (Agree – 1)
8. In regards to E State St west of Madison Av, look for other alternatives for bike lanes.
9. Sidewalks desired on both sides of Columbus Rd. (Agree – 1)



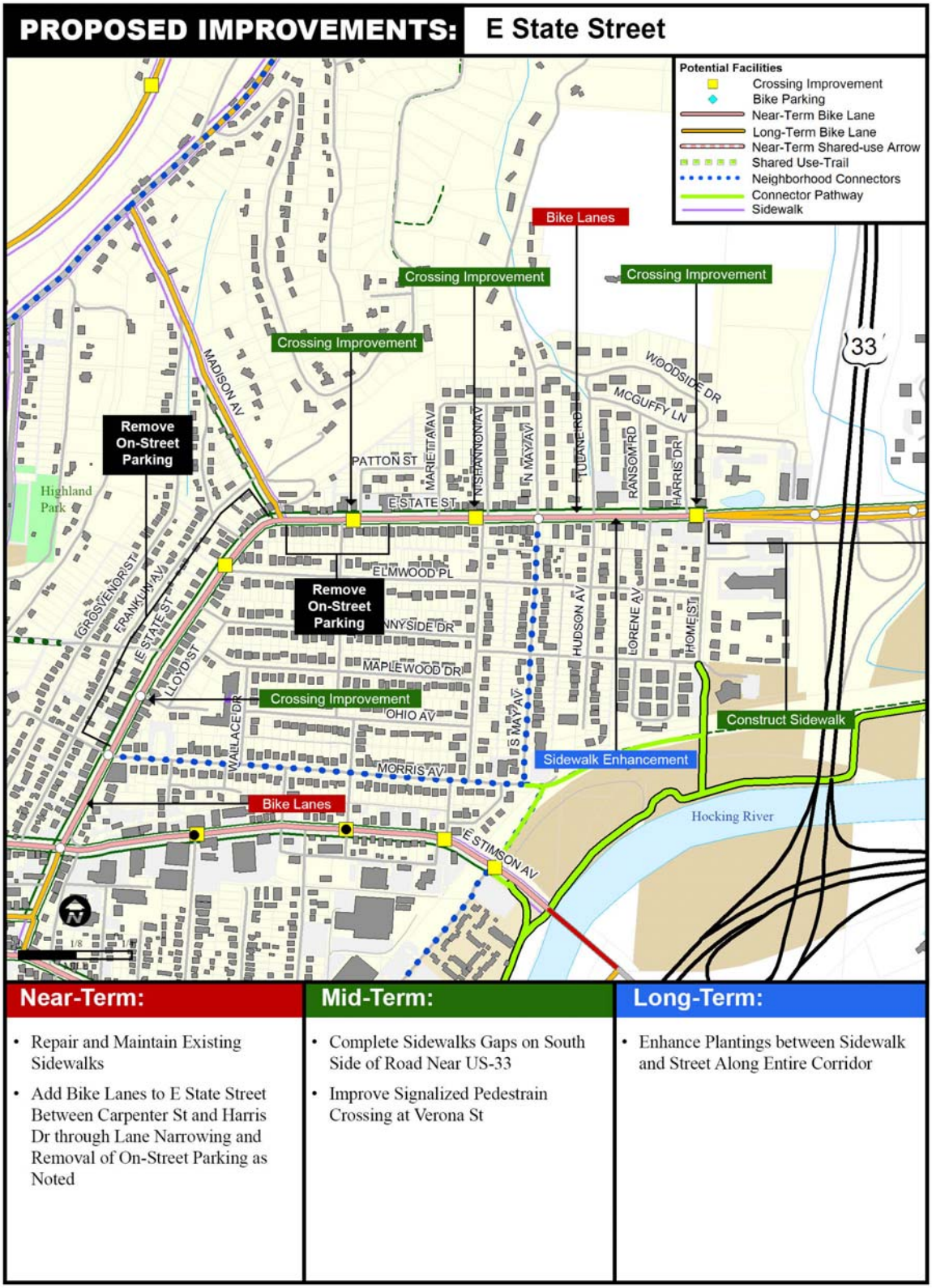

| Near-Term: | Mid-Term: | Long-Term: |
|---|---|---|
| • Add Bike Lanes to Four Lane Segment of Columbus Rd Through a 4 to 3 Lane Conversion | • Evaluate Roundabout at the intersection of Columbus Rd, Columbia, N Lancaster St and Second St<br>• Wide Paved Shoulder (6'wide) | • Sidewalk Along the East Side of Columbus Rd<br>• Sidewalks On Both Sides of Columbus Rd begining a Mile South of Terrace Dr<br>• Crossing Improvements in Commercial Area |

## East State Street

There is a strong desire to keep the on-street parking along E State Street. Since bike lanes can only be added to E State Street in the near-term by removing on-street parking, it is recommended that on-street parking remain and some of the local roadways, such as Morris Ave and S May St become the alternative route for bicycles. There is also desire to have more improved road crossings.

### Map Comments:

76. Approve Parking eliminations to place bike lanes on E State Street; at least on Upper E State St. (Agree – 1)
77. Shared-use Arrows could be placed on E State Street in place of removing parking. (Agree – 1)
78. Agree with proposed crossing improvement on E State St at Watt St. Visibility is a high priority and elimination of nearby on-street parking could help. (Agree – 1)
79. Existing Street Crossing at the intersection of May Av and E State St does not recognized bicycle on the street. Currently, bicycles need to get off of their bike to press the 'walk' signal button. (Agree – 2)
80. We REALLY need crossing help at Harris Av and E State St. An on-demand push button light would be best. (Agree – 1)
81. Agree to remove on-street parking between Madison and Maretta on E State Street to allow for Bike Lanes. However, do not agree to removing on-street parking between Madison Av and Morris Av. (Agree – 2)
82. A possible alternative to Bike Lanes on E State St between Morris Av and Harris Dr would be to use Morris Av to May or Shannon Rd. (Agree – 1)
83. Desire to have bike lanes paved smoothly on brick roads; throughout entire city. (Agree – 1)
84. Similar to comment #5, crossing Improvement needed at intersection of E State Street at Home St and Harris Dr for public library. (Agree – 1)
85. Agree with Connection between Bike Path and Morris Drive.
86. Leave E State St (from Stimson to May) for cars but make Morris and May Bicycle Boulevards.
87. An important thing that should influence what streets are chosen as Bicycle Boulevards is whether the street is paved or brick.

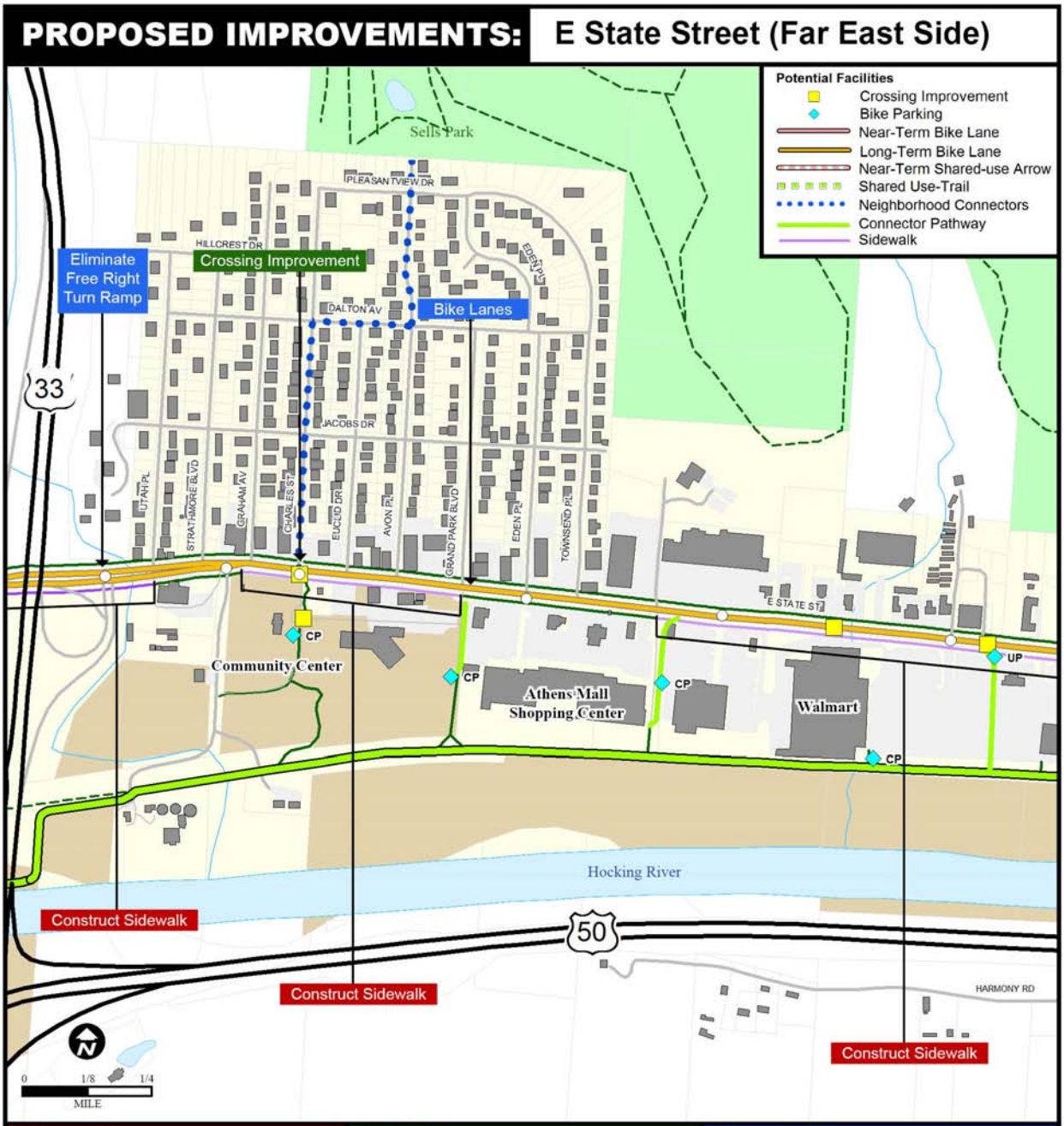

PROPOSED IMPROVEMENTS: E State Street
Potential Facilities
Crossing Improvement
Bike Parking
Near-Term Bike Lane
Long-Term Bike Lane
Near-Term Shared-use Arrow
Shared Use-Trail
Neighborhood Connectors
Connector Pathway
Sidewalk
Bike Lanes
Crossing Improvement
Crossing Improvement
Crossing Improvement
Remove On-Street Parking
Remove On-Street Parking
Crossing Improvement
Bike Lanes
Sidewalk Enhancement
Construct Sidewalk
MADISON AV
PATTON ST
E STATE ST
MARIETTA AV
N SHANNON AV
N MAY AV
TULANE RD
RANSOM RD
HARRIS DR
WOODSIDE DR
MCGUFFY LN
33
Highland Park
GROSVENOR ST
FRANKLIN AV
E STATE ST
LLOYD ST
ELMWOOD PL
SUNNYSIDE DR
MAPLEWOOD DR
OHIO AV
WALLACE DR
S MAY AV
HUDSON AV
LORENE AV
HOME ST
MORRIS AV
E STIMSON AV
Hocking River
Near-Term:
Repair and Maintain Existing Sidewalks
Add Bike Lanes to E State Street Between Carpenter St and Harris Dr through Lane Narrowing and Removal of On-Street Parking as Noted
Mid-Term:
Complete Sidewalks Gaps on South Side of Road Near US-33
Improve Signalized Pedestrain Crossing at Verona St
Long-Term:
Enhance Plantings between Sidewalk and Street Along Entire Corridor

## East State Street (Far East Side)

There is a strong desire to connect the bicycle path to the shopping area, along with more and improved road crossings.

Map Comments:

1. Agree to construct sidewalk to get to shopping mall. (Agree – 4)
2. Agree to Add Pedestrian Crossings along E State Street especially at Lowes, Walmart and Kroger. (Agree – 5)
3. Agree with connection between bike path and shopping center on the east side of Athens Mall Shopping Center. (Agree – 2)
4. Improve bicycle and pedestrian facilities on Jacobs Dr. (Agree – 1)
5. Improve crossing at the intersection of E State Street and Euclid Dr. (Agree – 1)
6. Improve crossing to Farmers Market. (Agree – 4)
7. Agree with crossing improvement at the intersection of E State Street and Charles St. Also, more frequent trigger for walker with a faster response time is desired. (Agree – 2)
8. Longer Crossing time at crosswalks.
9. A way to safely cross E State Street at Avon Pl for pedestrians and bicyclist. (Agree – 4)
10. Desire for covered bike shelters near farmers market. (Agree – 1)




## Near-Term:

- Review Zoning Codes to Make Future Development More Pedestrian and Bicycle Friendly. Evaluate Applying Form Based Code Principals and/or Guidelines
- Complete Sidewalk Gaps

## Mid-Term:

- Add Links Between Sidewalk and Trail
- Add Bicycle Parking
- Add Medians Where Left Turn Lanes are Not Needed
- Road Crossing Improvements

## Long-Term:

- Add Bike Lanes
- Enhance Corridor with Street Trees, Sidewalks and Pedestrian Scale Lighting between Sidewalk and Street.

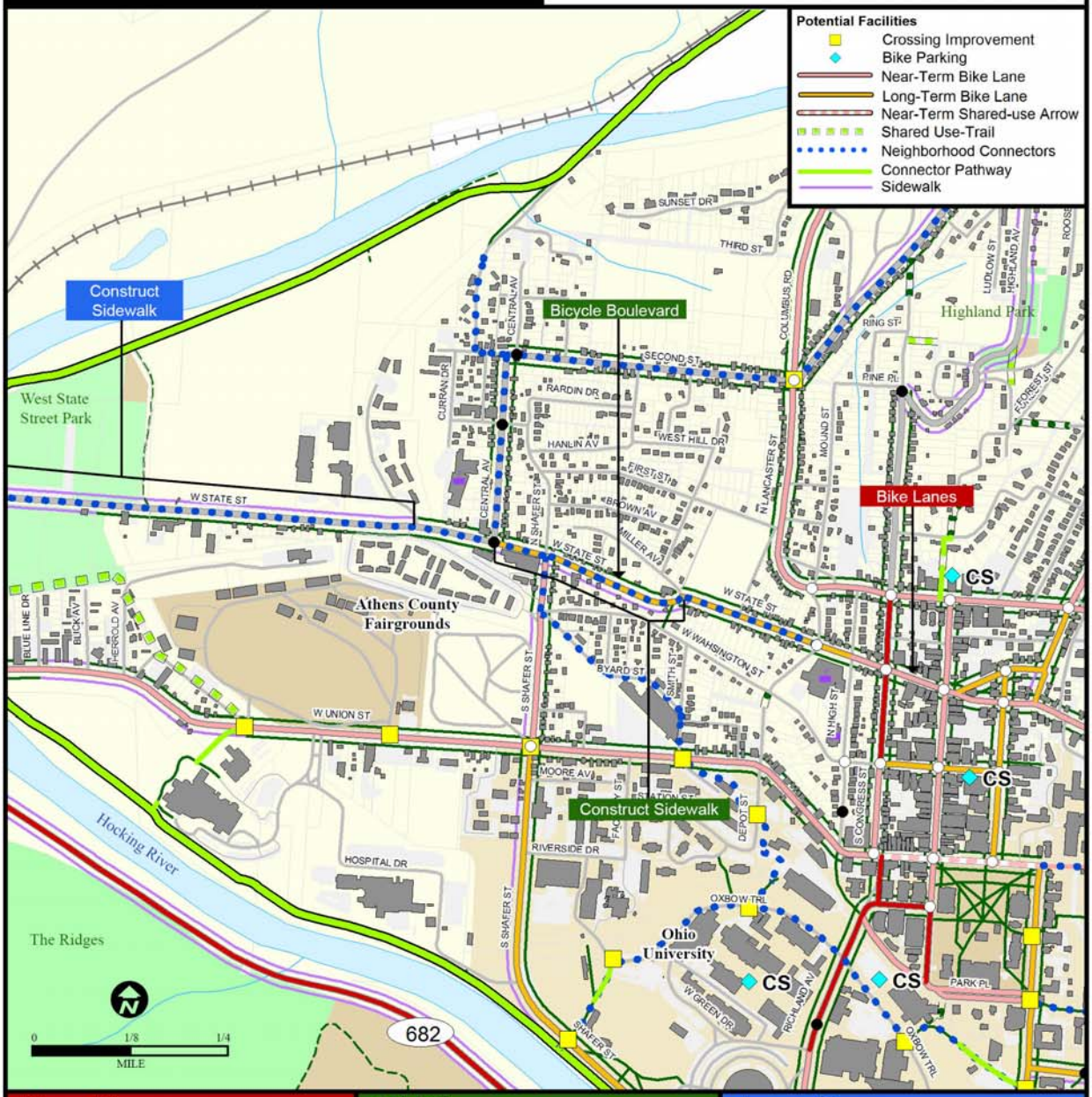
## West State Street

There is a desire for traffic calming, improved road crossings and better access to the bike path from E State St.

Map Comments:

1. Southbound bike lanes on College may be good for cyclists who wish to avoid the hill on Congress. (Agree – 1)
2. Desire to widen W State Street near overcrest by cemetery or add traffic calming. (Agree – 2)
3. Desire better access to W State from bike path via Shafer St or HDL Center Lot. (Agree – 2)
4. Desire traffic calming and pedestrian improvements at the intersection of W State Street and S Shafer St.
5. Desire to have crossing improvement at Byand St and S Shafer St.
6. Desire for better bicycle through traffic in area near Brown Av and First St. (Agree – 1)

# PROPOSED IMPROVEMENTS: W. State Street



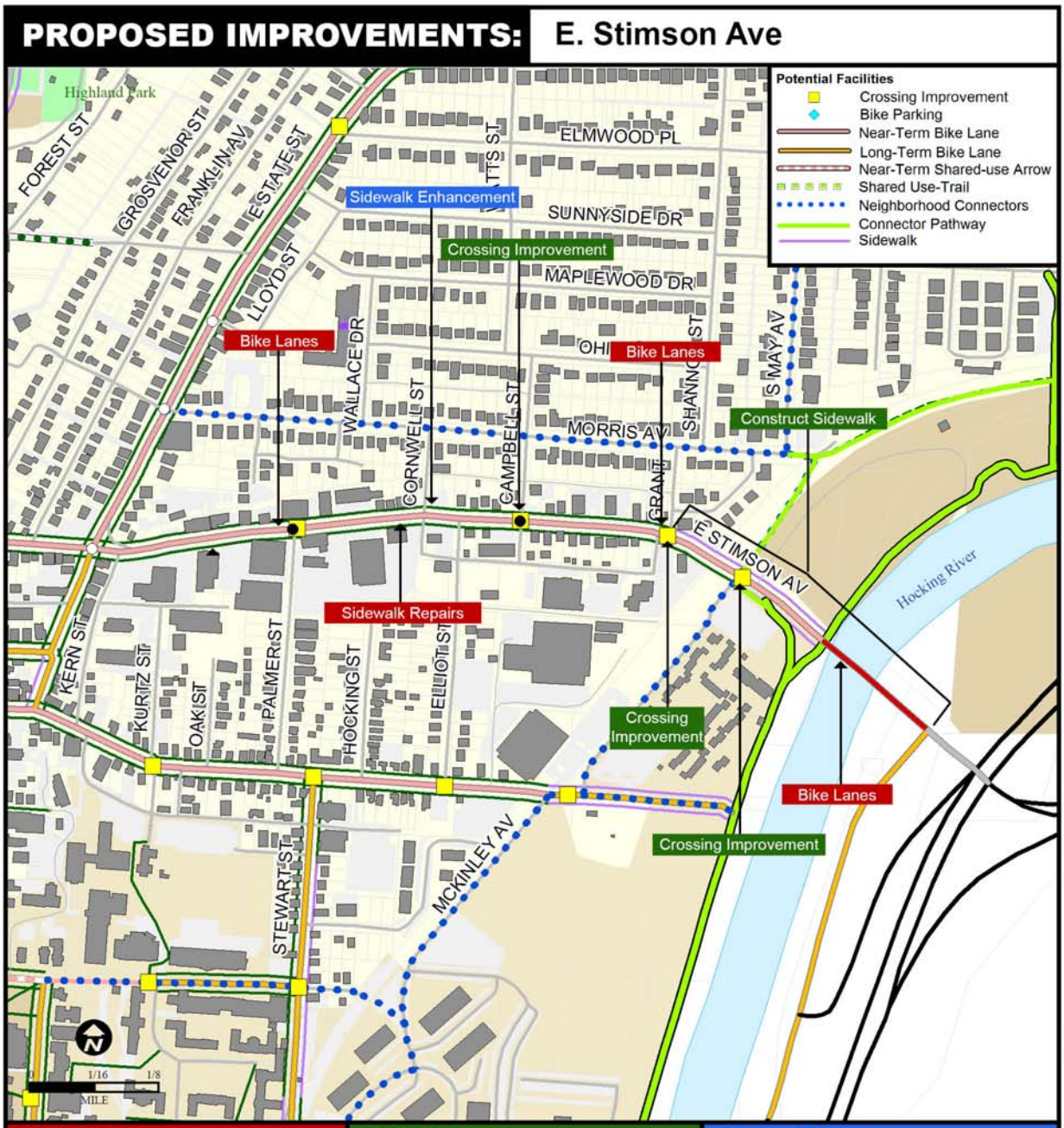

| Near-Term: | Mid-Term: | Long-Term: |
|---|---|---|
| • Add Bike Lane From High St to Congress by Removing On-Street Parking from One Side | • Add Bicycle Boulevard Elements from West State Street Park to High Street | • Add Sidewalk on South Side of W State St from Central Ave to Miller Ave<br>• Add Sidewalk to North Side of W State St connecting to West State Street Park |

## East Stimson Ave

There is a desire to have better road crossings and improved connections to the bike path on E Stimson Ave.

Map Comments:

1. Don't remove parking on E State Street between Stimson Ave and Madison Ave. (Agree – 2)
2. Consider Using Shannon St instead of S May for Neighborhood Connector Route. (Agree – 3)
3. Stoplight at the Intersection of Morris Av and E State Street need improvements because it does not recognize bicycles. (Agree – 3)
4. Desire for Bicycle Boulevard along S May Av. (Agree – 3)
5. Crossing Improvement on Stimson Av to get to Bike Path is a high priority. A hybrid pedestrian signal was suggested. (Agree – 4)
6. A stop sign is needed at the intersection of McKinley Av and Mill Street. Cars zoom around the corner endangering pedestrians crossing Mill St. (Agree – 2)
7. Traffic calming desired on Morris Av, S May and S Shannon. (Agree – 3)
8. Agree with crossing improvements on Stimson Ave for Pedestrians. (Agree – 2)
9. Improve access and Interchange between Stimson Ave and the Bike Path. (Agree – 3)

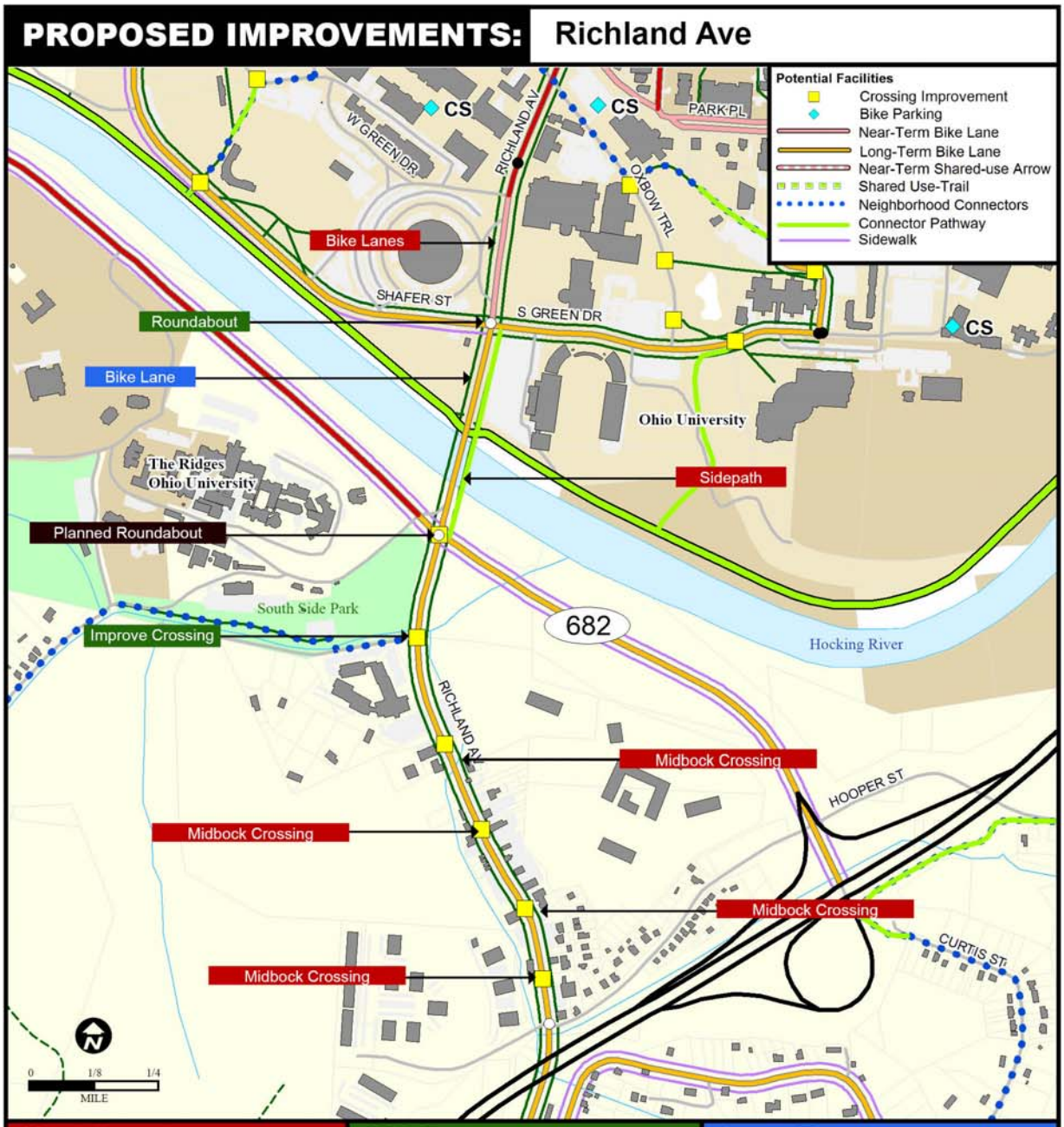

PROPOSED IMPROVEMENTS:
E. Stimson Ave
Potential Facilities
Crossing Improvement
Bike Parking
Near-Term Bike Lane
Long-Term Bike Lane
Near-Term Shared-use Arrow
Shared Use-Trail
Neighborhood Connectors
Connector Pathway
Sidewalk
Highland Park
FOREST ST
GROSVENOR ST
FRANKLIN AV
ESTATE ST
LLOYD ST
ELMWOOD PL
WATTS ST
SUNNYSIDE DR
MAPLEWOOD DR
Sidewalk Enhancement
Crossing Improvement
Bike Lanes
WALLACE DR
CORNWELL ST
CAMPBELL ST
GRANT ST
SHANNON ST
S MAY AV
Bike Lanes
Construct Sidewalk
MORRIS AV
E STIMSON AV
Hocking River
Sidewalk Repairs
KERN ST
KURTZ ST
OAK ST
PALMER ST
HOCKING ST
ELLIOTT ST
Crossing Improvement
Bike Lanes
Crossing Improvement
MCKINLEY AV
STEWART ST
1/16
1/8
MILE
Near-Term:
Repair Existing Sidewalks
Add Bike Lanes Between State Rd and Campbell Rd by Removing On-Street Parking.
Add Bike Lanes from Grant Road to Bridge by Paving the Road Shoulder
Add Bike Lanes Between Campbell Rd and Grant by Removing Center Turn Lane. Alternative to a Bike Lanes, Travel Lanes Could be Narrowed and a Shared-Use Arrow Could be Added
Mid-Term:
Complete Sidewalks Gaps
Road Crossings Improvements
Long-Term:
Enhance Plantings Between the Sidewalk and The Street

## Richland Ave

Many of the comments regarding Richland Ave had to do with road maintenance and repair. There was also some disagreement as to whether an upgrade is needed on the underpass and interchange where the bike path crosses Richland Ave. Currently, there is no marked crossing on Richland Ave where the bike path meets the road. It is recommended that improvements be made at this intersection.

### Map Comments:

1. Approve of Roundabout on Richland Av at S Green Dr and Shafer St. (Agree – 2)
2. Need SERIOUS upgrade of underpass and interchange where the bike path crosses Richland Ave. (Agree – 3, Disagree – 2)
3. Repair pot holes on Richland Ave. (Agree – 2)
4. Agree with proposed bike path extension into Ohio University Campus connecting to S Green Dr along the West end of the Golf Course. (Agree – 3)
5. Remove pavement “rumble strips” from existing bike lanes on Richland Ave. (Agree – 1)
6. Brick to pavement transition very rough.




## Near-Term:

- Sidepath Along East Side of Planned Bridge
- Add Midblock Crossings Along Richland Av Between Dairy Lane and Hooper St

## Mid-Term:

- Road Crossings Improvements
- Add Bike Lanes to Richland Ave between W Green Dr and S Shafer St through 4 to 3 Lane Conversion. Roundabout Must be in Place to Make this Conversion Work Well.
- Roundabout on Richland Ave at the Intersection of S. Green St and S. Shafer St

## Long-Term:

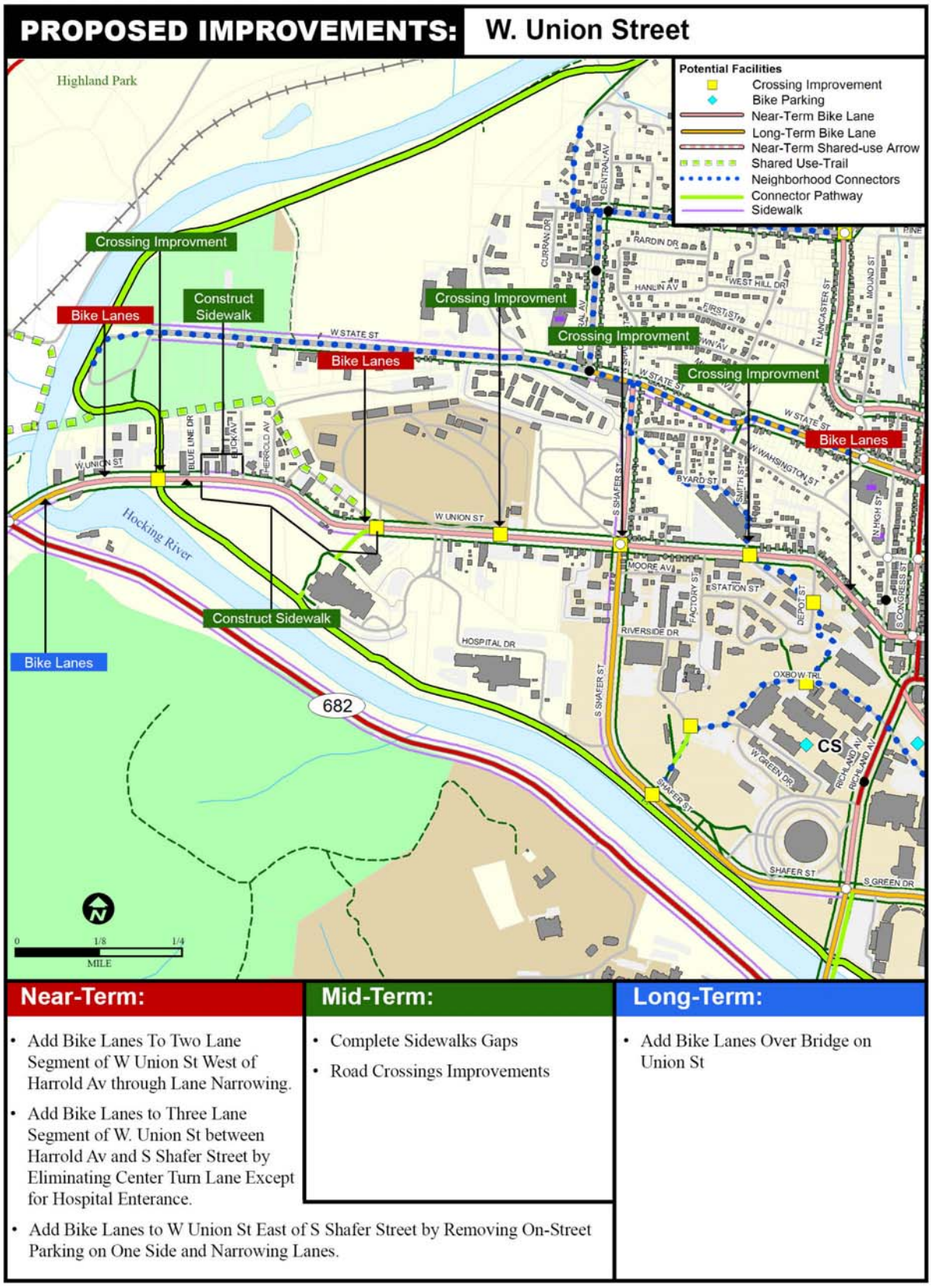
- Bike Lanes On Richland Ave South of S Shafer St

## West Union Street

On W Union St there is some disagreement as to whether roads with a downhill slope should have bike lanes or shared-use arrows. There is also a desire for Guided Bike Routes from W State St to Businesses on W Union St.

Map Comments:

1. Suggestion to place Bike Lanes on the Uphill slopes and shared-use arrows on downhill slopes. (Agree – 1)
2. Suggestion to place Bike Lanes on both the uphill and downhill slopes. (Agree – 1, Disagree – 1)
3. Desire for Guided Bike Routes from W State St to businesses on W Union St. (Agree – 1)
4. Add bike path extension to connect bike path to Shafer St.
5. Agree with potential extension of bike path over old rail road bridge to the west side of the river. Some sort of bike/pedestrian connection is needed between the town and the new suburbs.
6. Agree with the construction of sidewalk along W Union Street.




## Near-Term:

- Add Bike Lanes To Two Lane Segment of W Union St West of Harrold Av through Lane Narrowing.
- Add Bike Lanes to Three Lane Segment of W. Union St between Harrold Av and S Shafer Street by Eliminating Center Turn Lane Except for Hospital Enterance.
- Add Bike Lanes to W Union St East of S Shafer Street by Removing On-Street Parking on One Side and Narrowing Lanes.

## Mid-Term:

- Complete Sidewalks Gaps
- Road Crossings Improvements

## Long-Term:

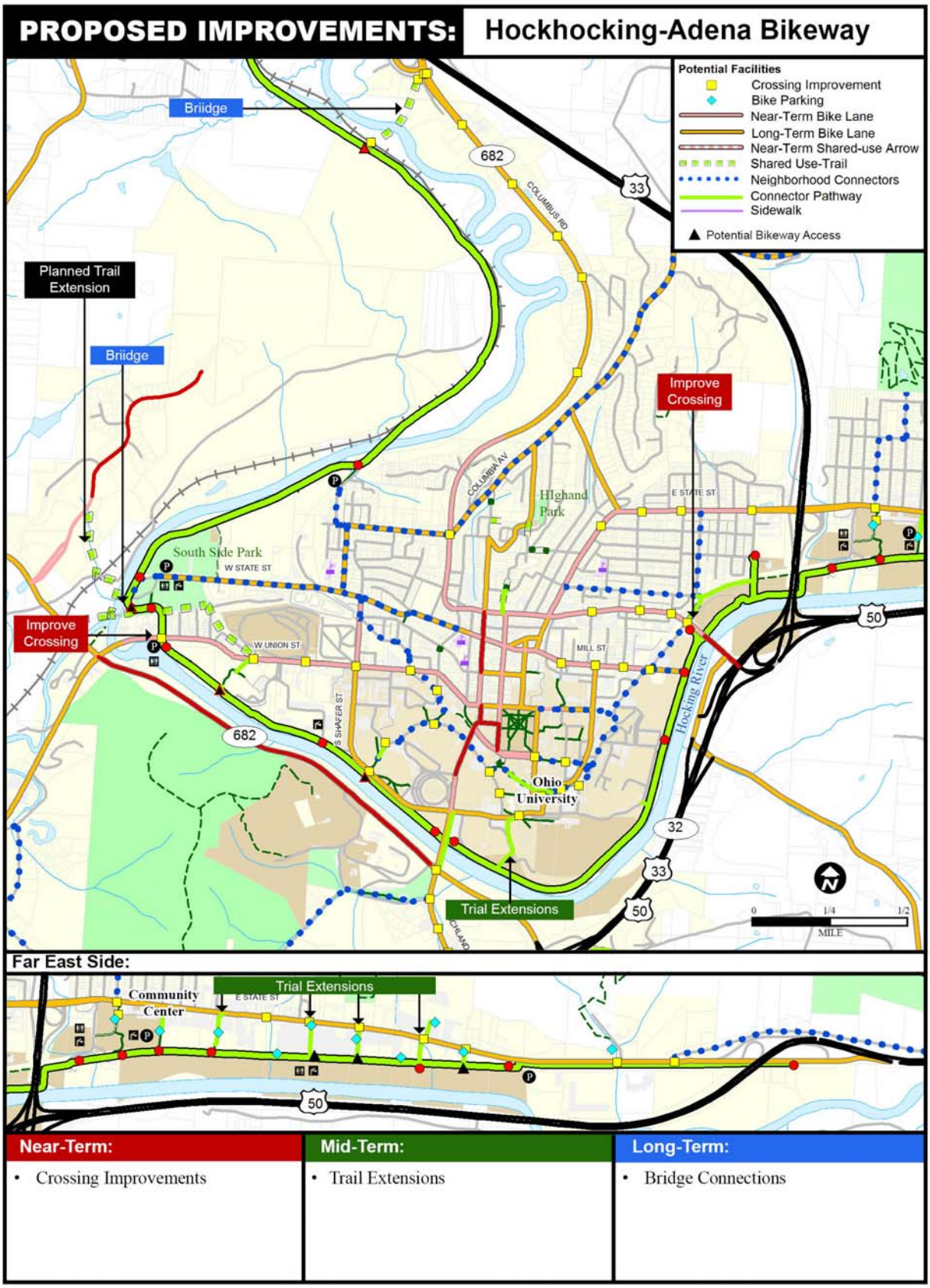
- Add Bike Lanes Over Bridge on Union St

## Hockhocking – Adena Bikeway

There is a strong desire to connect the bicycle path to the shopping area on the Far East side of E State Street. Road Crossings, pathway maintenance, bicycle parking and accessibility and connectivity to pathway were all concerns.

### Map Comments:

1. Covered and Secured Bicycle Parking is very important from the Far East Side, especially for commuters. (Agree – 4)
2. Entire pathway needs surface improvements. (Agree – 6)
3. Agree with improved crossing of bike path at W. Union St.
4. Agree with proposed pathway extensions into town, they are very important. (Agree – 2)
5. Mill St Apartments Street and Stimson Ave is a high priority need for a crosswalk. (Agree – 2)
6. Agree with a Crosswalk between Lowe's Parking lot and the Farmer's Market, along with better access to pathway. (Agree – 5)
7. Fix broken drinking fountains. (Agree – 3)
8. Same as comment 6. (Agree – 7)
9. Pave Connectors at Walmart and Lowes. (Agree – 3)
10. Poor interchange where the bike path meets Stimson Ave. Desire to add ramp on north side of Stimson Av to improve the connection. (Agree – 4)
11. Desire to relocate main bikeway from sewer drain to sewage plant up to railroad grade. (Agree – 1)
12. Serious Desire to upgrade underpass and interchange of bike path at Richland Av. (Agree – 1)
13. Support the connection for bike traffic to Porter, Grove and Baker Ct.
14. Agree with access to Morris and S May. (Agree – 1)
15. The west end of South Side Park has potential to become a canoe access port. Racks for bike and kayak/canoes would be nice. (Agree – 1)
16. Desire to create sidewalk along Madison Ave and Columbia Ave.

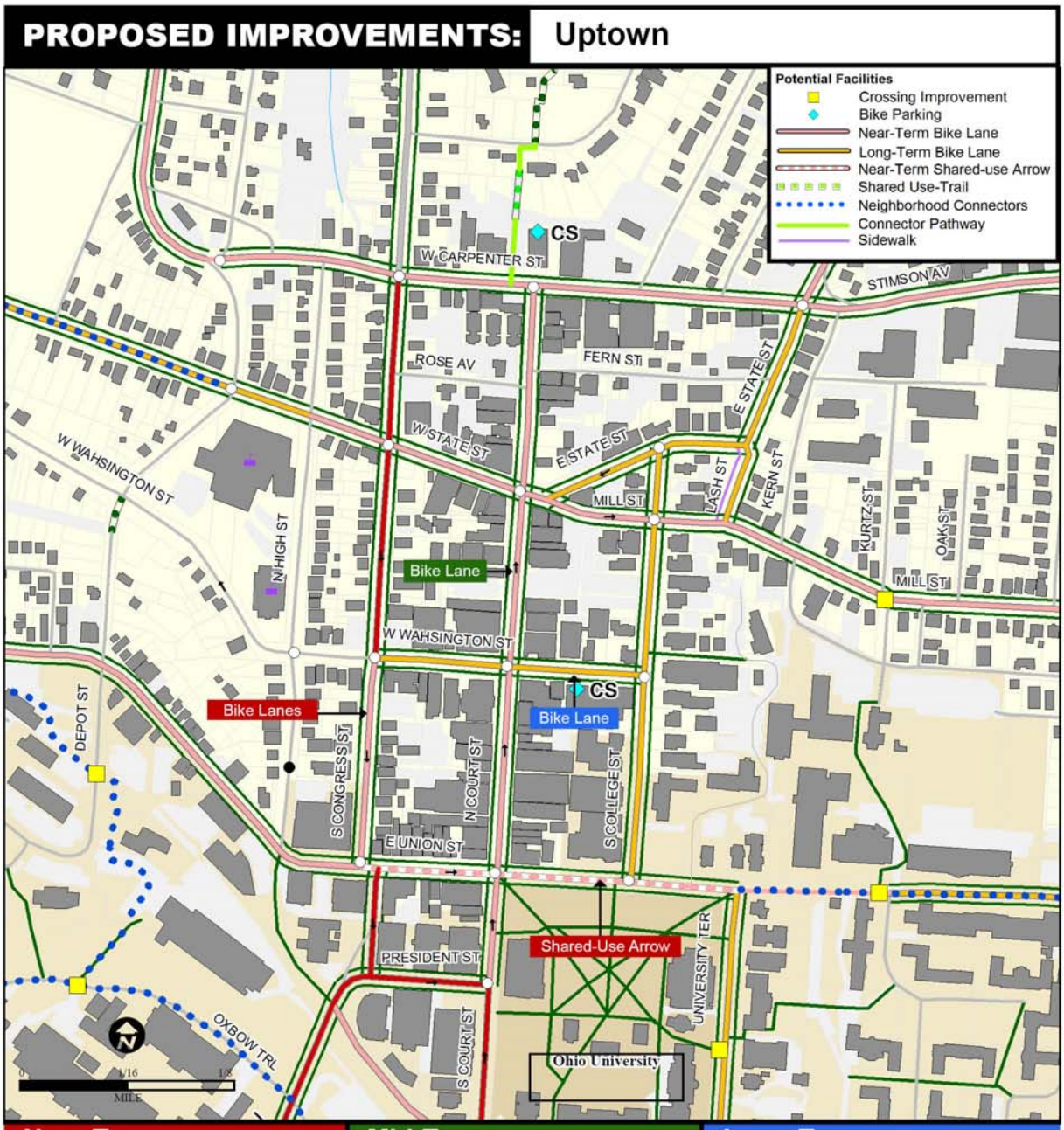

PROPOSED IMPROVEMENTS:
Hockhocking-Adena Bikeway
Potential Facilities
Crossing Improvement
Bike Parking
Near-Term Bike Lane
Long-Term Bike Lane
Near-Term Shared-use Arrow
Shared Use-Trail
Neighborhood Connectors
Connector Pathway
Sidewalk
Potential Bikeway Access
Briidge
Planned Trail Extension
Briidge
Improve Crossing
Improve Crossing
682
33
COLUMBUS RD
COLUMBIA AV
HIghand Park
E STATE ST
South Side Park
W STATE ST
W UNION ST
MILL ST
S SHAFER ST
682
Hocking River
Ohio University
50
32
33
50
Trial Extensions
0 1/4 1/2
MILE
Far East Side:
Community Center
Trial Extensions
E STATE ST
50
Near-Term:
• Crossing Improvements
Mid-Term:
• Trail Extensions
Long-Term:
• Bridge Connections

## Uptown

There were differing opinions for Court Street in the Uptown area, from keeping the street how it currently is, to removing all vehicular traffic and creating a pedestrian mall. There are concerns with the type and amount of bike parking in the Uptown area and suggestions to where additional contra-flow bike lanes may be added.

### Map Comments:

1. Desire to place contra-flow bike lane on Congress St on the right side, especially until Court Street is upgraded.
2. Traffic Light at W State St and Congress needs signal on south side for pedestrians crossing north.
3. Repair Brick on contra-flow lane on Court St. (Agree – 1)
4. Desire to switch to "U" design racks now!
5. Agree with proposed contra flow bike lane on Union between Court St and Congress. (Agree – 2)
6. Suggestion to create protected bike lane at Carpenter St and Court Street so bikes going west on Carpenter do not have to stop.
7. Suggestion to add bike route or bike lanes to W Carpenter where it becomes a local road to prevent going through the stop light at Lancaster. (Agree – 1)
8. Court Street is fine as it is. Suggestion to make no changes for reasons of business-toxicity. Extra space may be damaging. Give it an attractive streetscape. There are some parts of town where bikes just can't go. (Agree – 1, Disagree – 2)
9. Approve narrowing court and enlarging sidewalks. (Agree – 2)
10. Desire to keep pedestrian mall as a long term goal.
11. Suggestion to consider making Court St a pedestrian mall on weekend only. (Agree – 1)
12. Access to Uptown via E State St and College St Instead of Carpenter due to lower grade and more direct.
13. Add Covered bike parking Uptown and add more bike parking by removal of car parking spaces.
14. No parking uptown, bike path



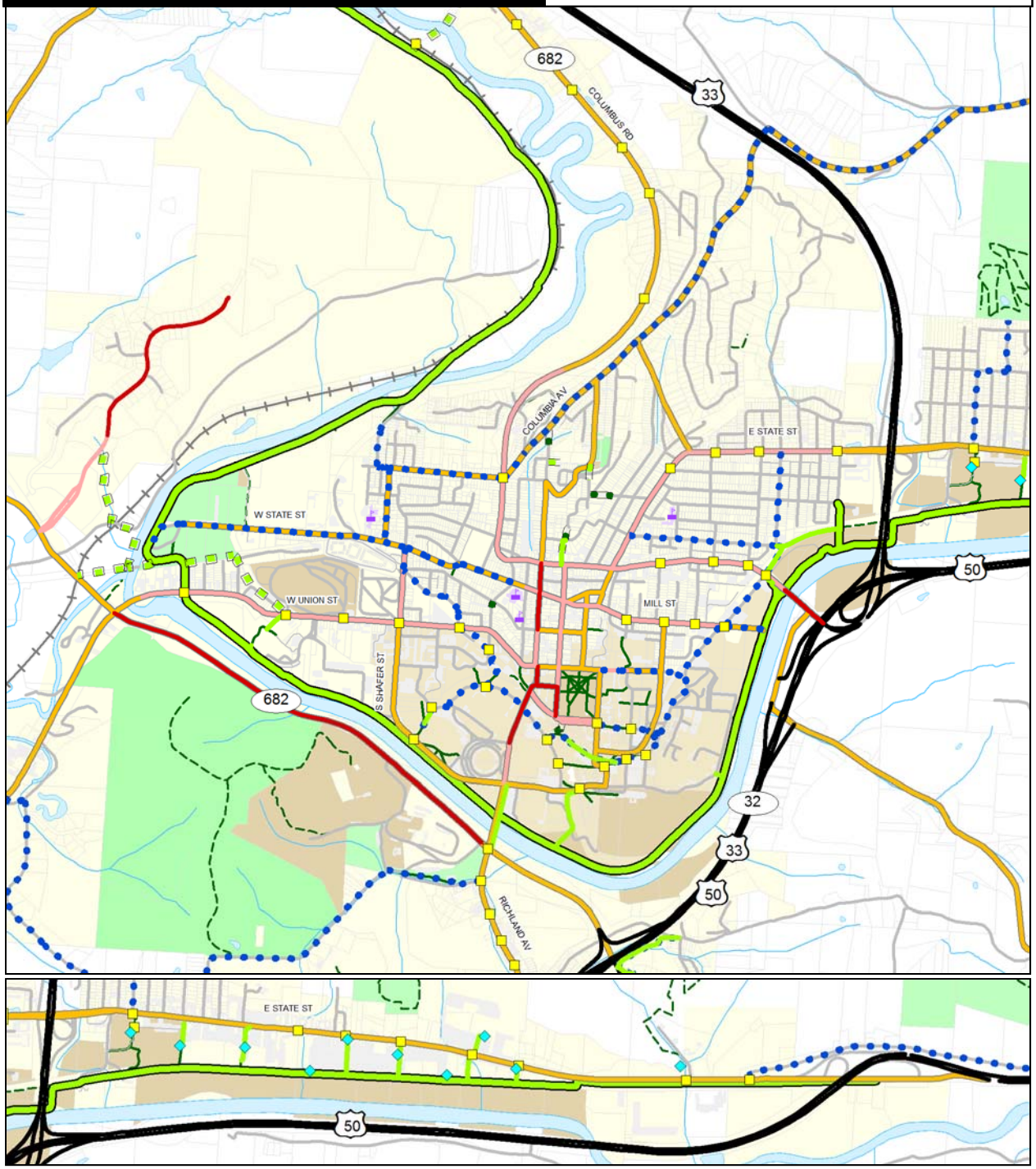

*Bike Lanes May be Provided in the Downtown Area by Removing On-Street Parking on One Side. Alternatively, Shared-Use Arrows May be Used if Parking is to be Retained on Both Sides of the Street.

# Overview Map

Map Comments:

1. Desire to add Sidewalk or some form of pedestrian path along roads leading out of town so people might consider walking to work if given the opportunity. (Agree – 2)
2. At the Far East end of town connect the bike path to Harmony Rd by crossing over the river.
3. Suggestion to place bicycle boulevard on Morris Av and S May because calming traffic protects everyone. (Agree – 1)
4. Bike path extensions and connector pathways need to be paved rather than an unimproved path. (Agree – 1)
5. Non-motorized network could be completed as a circle by using the following roads, S Shafer St, Richland Ave, Diary Ln, Elliotsville Rd, Rt. 56 , Union St and a portion of the bike path, creating a loop around The Ridge.
6. Consider a pedestrian path from the bike path and S Shafer St north through campus and along Factory St, through new commercial development and connecting to Byard St.

# PROPOSED IMPROVEMENTS: Overview




**Existing Facilities**

- Signalized Intersections
- Unsignalized Road Crossings
- Existing Bike Lanes
- Existing Shared-Use Trail
- Existing Paved Walkways
- Existing Unpaved Walkway
- Existing Stairways
- Local Road
- Primary Road
- Railroad
- Limited Access Highway

**Potential Facilities**

- Crossing Improvement
- Bike Parking
- Near-Term Bike Lane
- Long-Term Bike Lane
- Near-Term Shared-use Arrow
- Shared Use-Trail
- Neighborhood Connectors
- Connector Pathway
- Sidewalk

## Public Input Prioritization

At the end of the Workshop session, participants were asked to select three of the ten focus areas that they felt had the highest priority. East State Street, West Stimson Avenue and the Uptown Area were identified as the top priorities. Below is a list of the focus areas from highest priority to lowest priority.

1. **East State Street**, from Carpenter Street to US-33 (11)
2. **West Stimson Avenue**, from Carpenter Street to Rock Riffle Road (11)
3. **Uptown**, Congress Street and Court Street from President Street to Carpenter Street (6)
4. **Hockhocking-Adena Bikeway**, from US-33 (north) to US-50 including existing and proposed connectors/extensions (4)
5. **Richland Avenue**, from Hooper Street to Existing Bike Lanes (4)
6. **East State Street (Far East Side)**, from I-33 to Farmer's Market (4)
7. **West State Street**, from West State Street Park to Mill Street (3)
8. **West Union Street**, from 682 to Congress Street (3)
9. **Columbus Road**, from Second Street to Terrace Drive (1)

# 5.3 Proposed Road Cross-sections

The following are cross-section options for the varying roadways. Please note that the unique situation of each roadway should be considered in determining the most appropriate solution for that particular roadway. Some roadways change dramatically in width along a corridor so specific recommendations have been presented for each particular segment of the corridor.

The following recommendations are based on the existing roadway width, which was gathered through measurements from an aerial image and field work. A precise measurement of the roadway should be conducted to confirm these widths before any changes are implemented.

**Legend:**

BL Bike Lane
CBL Contra-Flow Bike Lane
SUA Shared-use Arrow
P On-Street Parking
CTL Center Turn Lane

**W Union between Blue Line Dr and Harrold Av – Add Bike Lanes through Lane Narrowing**

Existing 30': 15' l 15'
Proposed: 5' BL l 10' l 10' l 5' BL

**W Union between Harrold Av and Hospital Dr – Add Bike Lanes by Removing Center Turn Lane on Three Lane Segment of Road**

Existing: Varies from 40'- 32' as road changes from three lanes to two lanes
Proposed: 5' BL l 11' l 11' l 5'BL

**W Union between Hospital Dr and Shaffer St – Add Bike Lanes through Lane Narrowing**

Existing 42': 14' l 14' l 14'
Proposed: 5' BL l 11' l 10' l 11' l 5'BL

**W Union between Shaffer St and Depot St – Add Bike Lanes by Eliminating Parking on One side**

Existing 37': 14' l 14' l 9' P
Proposed: 6' BL l 12' l 12' l 6'BL

**W Union between Depot St and S Congress St– Add Bike Lanes to Uphill Slope and Shared-use Arrow to Downhill Slope by Eliminating Parking on One-side**

Existing 37': 7'P l 11.5' l 11.5' l 7'P
Proposed: 13'SUA l 11' l 6'BL l 7'P

**W Union between S Congress St and N Court St – Add Bike Lane through Lane Narrowing**

Existing 42': 9' P l 12' l 12' l 9' P
Proposed : 7' P l 11' l 11' l 6'BL l 7' P

One side of parking would have to be removed to fit a contra-flow bike lane, and since parking is probably of higher demand here, we recommend not putting in a contra-flow bike lane in the near-term.

Possible (Contra-flow): 5'BL | 10' | 10' | 5'BL | 7'P Extra 5'

**W Union between S Congress St and University Ter – Add Shared-use Arrow**

Existing 42': 9' P | 12' | 12' | 9' P
Proposed: 7' P | 14' SUA | 14' SUA | 7' P

**S Congress St between W Washington St and W Union St – Add Bike Lane through Lane Narrowing**

Existing 35': 13' | 13' | 9'P
Proposed: 6'BL | 11' | 11' | 7'P

**S Congress St between W Union St and President St – Add Contra-flow Bike Lane to Two Lane Segment by Removing One Lane of Traffic and Adding a Buffer Between the Traffic Lane and Contra-flow Lane**

Existing 25': 5'BL | 10' | 10'
Proposed: 5'BL | 11' | 4'Buffer | 5'CBL

**S Congress St between W Union St and President St – Add Contra-Flow Bike Lane to the One Lane Segment by Removing the On-street Parking**

Existing 20': 12' | 8'
Proposed (Contra-flow): 10' | 4'Buffer | 5'CBL

**President St between S Congress St and S Court St – Add Contra-Flow Bike Lane by Rearranging the Angled On-Street Parking to Parallel Parking and Moving it to the South Side of the Road.**

Existing 33': 17'P | 11' | 5'BL
Proposed (Contra-flow): 6'CBL | 12' | 7'BL | 7'P

**Richland Av – Extend Existing Bike Lane to S Green Dr through a 3 to 2 lane conversion by Placing a Roundabout at the Intersection of S Green Dr at Richland Av.**

Existing 36': 12' | 12' | 12'
Proposed : 6'CBL | 12' | 12' | 6'BL

**Park Pl – Add Bike Lane in both Direction by Removing One Vehicle Traffic Lane in Each Direction.**

Existing 33': 9' | 9' MEDIAN 9' | 9'
Proposed : 6'BL | 12' MEDIAN 12' | 6'BL

**W State St – Add Bike Lanes between N High Street and N Court St by Removing On-Street Parking from One Side.**

Existing 40': 8'P | 12' | 12' | 8'P
Proposed : 6'BL | 10.5' | 10.5'BL | 6' BL | 7'P

**Mill St – Add Bike Lane to Mill St between N Court St and S College St through Lane Narrowing and Removing On-Street Parking from one Side near the S College St Intersection where Three Lanes are Necessary for Automobile Turning Movement.**

Existing 38': 10' l 10' l 10 l 8'P
Proposed: 10' l 10' l 10' l 6'BL

**Mill St – Add Bike Lane to west-bound Lane and add Shared-use Arrow to east-bound lane by Removing On-street Parking between S College St and Kurtz St.**

Existing 28': 10.5' l 10.5' l 7'P
Proposed: 6'BL l 11' l 11' SUA

**Mill St – Add Bike Lane to Mill St West of Kurtz St by Removing On-Street Parking from One Side**

Existing 32': 12' l 12' l 8'P
Proposed: 6'BL l 10' l 10' l 6'BL

**Carpenter St – Add Bike Lanes west of E State St by Removing On-Street Parking from One Side.**

Existing 32': 8'P l 12' l 12'
Proposed: 6'BL l 10' l 10' l 6'BL

Due to the recent reconstruction of Carpenter St there is potential to add a Shared-Use arrow in both direction as a near-term solution and then add the bike lanes through restriping and removal of on-street parking as a mid-term improvement.

**W Stimson Ave – Add Bike Lanes between State St and Campbell St by Removing On-Street Parking.**

Existing 32': 8'P l 12' l 12'
Proposed: 6'BL l 10' l 10' l 6'BL

**W Stimson Ave – Add Bike Lanes between Campbell St and Grant by Removing Center Turn Lane.**

Existing 36': 12' l 12' l 12'
Proposed: 6'CBL l 12' l 12' l 6'BL

**W Stimson Ave – Add Bike Lanes East of Grant by Paving Road Shoulder.**

Existing 21': 11' l 11'
Proposed: 6'BL l 11' l 11' l 6'BL

**W Washington St – Add Shared-use Arrow between S Congress St and S College St.**

Existing 42': 9' P l 12' l 12' l 9' P
Proposed: 7' P l 14' SUA l 14' SUA l 7' P

**S College St – Add Shared-use Arrow between Mill St and E Union St.**

Existing 36': 7' P l 11' l 11' l 7' P
Proposed: 7' P l 11' SUA l 11' SUA l 7' P

**Mulberry St – Add Shared-use Arrow between Richland Ave and Court St.**

Existing 19': 12' | 7' P
Proposed: 12' SUA | 7' P

**S College St – Add Bike Lanes between Mill St and E State St by removing the Center Turn Lane (Roundabout at S College St and E State St must be in Place).**

Existing 34': 11.5' | 11'CTL | 11.5'
Proposed: 6'BL | 11' | 11' | 6'BL

**E State St – Add Bike Lane between N Court St and S College St (Roundabout at S College St and E State St must be in Place)**

Existing 38': 7'P | 12' | 12' | 7'P
Proposed: 7'P | 6'BL | 11' | 7'P Extra 3' for sidewalk improvement on south side

Where there is no parking on south side of street, closer to Domino's the road would widen to two lanes for traffic signal at Court:

Proposed: 7'P | 7'BL | 12' | 12'

**E State St – Add Bike Lane to West-bound Lane and add Shared-use Arrow to East-bound Lane by Removing Through Lane Narrowing between S College St and Lash St.**

Existing 28': 14' | 14'
Proposed: 6'BL | 11' | 11' SUA

**E State St – Add Bike Lane between Lash St and W Stimson Ave by Removing On-Street Parking from Both Sides.**

Existing 35': 7'P | 10.5' | 10.5' | 7'P
Proposed: 6'BL | 11.5' | 11.5' | 6'BL

**E State St – Add Bike Lane between W Stimson Ave and Morris St by Removing On-Street Parking.**

Existing 40': 7'P | 11' | 11' | 11'
Proposed: 5'BL | 10' | 10' | 10' | 5'BL

**N Lancaster St – Add Bike Lane to North-bound Lane and Shared-use Arrow to South-bound Lane between W Carpenter St and Second St by Removing One Lane of Traffic where Three Lanes are Present.**

Existing 28': 9.5' | 9' | 9.5'
Proposed: 13' SUA | 10' | 5' BL

**Columbus Rd – Add Bike Lane to Four Lane Segment through a 4 to 3 Lane Conversion.**

Existing 42': 11' | 10' | 10' | 11'
Proposed: 5'BL | 11' | 10' | 11' | 5'BL

**Columbus Rd – Add Bike Lanes to Two Lane Segment by Paving the Shoulder.**

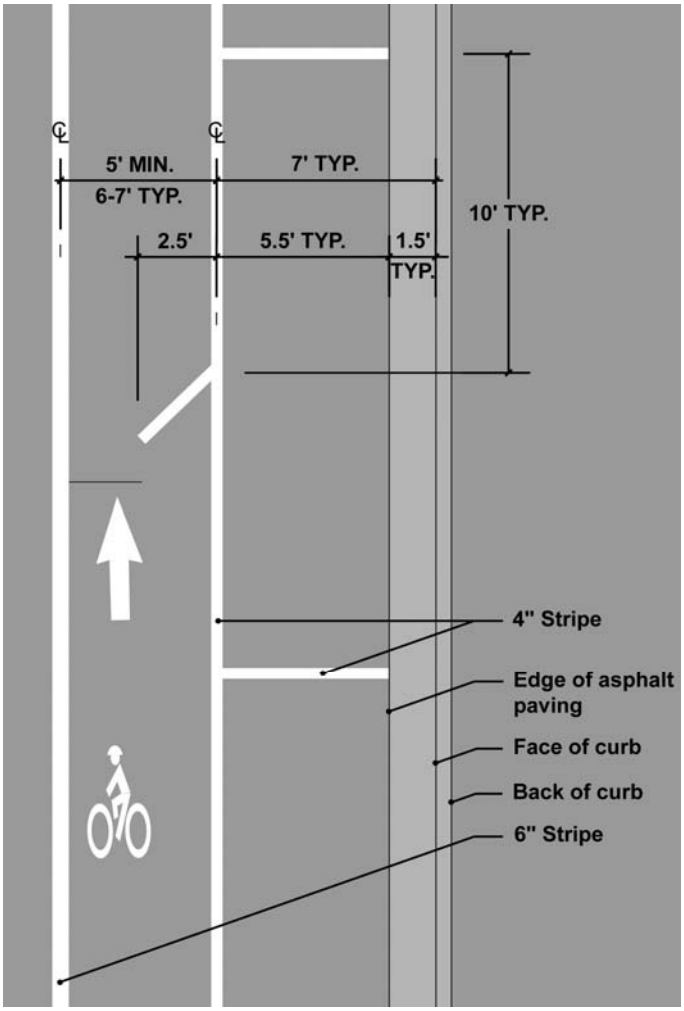
Existing 24': 12' | 12'
Proposed: 6'BL | 12' | 12' | 6'BL

# 5.4 Bike Lane Next to Parking Guidelines

Bike Lanes are still beneficial even when next to parallel parking. However, it is important to note that opening car doors are a hazard for bicyclists who ride close to parked vehicles. Bicyclists should be encouraged to ride outside the "door zone".

**Recommendations:**

- Strip outside edge of parking to encourage parking close to curb.
- Provide 6' to 7' wide bike lanes where room permits.
- A 5' wide bike lane may be used where space is constrained and parking and travel lanes are at minimum widths.
- Cross Hatch the "door zone" with pavement markings and place bicycle symbol and arrow to the outside of the bicycle lane to encourage safe bicycling lane position.
- Include information on bicycling next to parked cars in city bicycle safety information materials.




**Application:**

- On all roads with bicycle lanes and on-street parallel parking.
- The cross hatch in the "door zone" is NOT a standard marking included in the MUTCD. To utilize this marking a request needs to be made to the FHWA asking for permission to conduct an experiment with this marking.

**Example:**

- Experimental Cross Hatch pavement marking have been used on Michigan State University's Campus in East Lansing, Michigan. See example picture to the right.