



**BIKE MARION**  
**PLAN**  
MARION,  
ILLINOIS  
JUNE, 2022



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# 1. INTRODUCTION



# INTRODUCTION

The City of Marion is a charming community of 17,500 people. Among its goals for the future is to invest in its economy by attracting more young professionals and small businesses. Geographically, the city is well suited to achieve this goal. It is located within the Greater Egypt region of over 100,000 people, is less than 20 miles from Southern Illinois University-Carbondale – a pipeline of young professionals, and it is less than 225 miles from the cities of St. Louis, Nashville, Memphis, and Louisville.

Diversifying its portfolio of transportation options is a viable method for fostering growth in the direction that Marion desires. Biking is an integral part of any multimodal transportation system and the ability to traverse the city and region by bicycle will become increasingly important. With this plan, the City of Marion has solidified its commitment to biking as a viable form of transportation through continued expansion of and connectivity to the trail system, new on-street bikeways, and Complete Streets to integrate walking, biking, and transit considerations into the fabric of the community and all roadway projects.



## BIKE FRIENDLY COMMUNITY FRAMEWORK

To create a usable network of bicycle infrastructure in Marion that strikes a balance in catering to both recreational and commuter cyclists, it won't be enough to simply define a network of bike lanes and trails. It will require a network of low-stress bikeways that support bicycling by people of all ages and abilities; programs, training, and organized rides to give people the skills and confidence to travel by bike; enforcement programs and laws that create an environment of mutual respect among all road users; and guidelines and policies to guide city staff and elected officials to enable smart, responsible choices.

The League of American Bicyclists lays out a framework for a Bicycle Friendly Community (BFC) through The Five E's: 1) Education, 2) Encouragement, 3) Engineering, 4) EDI (equity,

diversity and inclusion), and 5) Evaluation & planning. However, for the success of this bike plan, it will be crucial to address economic benefits of biking in a community. While the subject of enforcement in the bicycling planning environment has been eliminated permanently as a pillar of the BFC program, creating a safe and inclusive interaction of all transportation modes should be included in this plan. Consequently, Economics and Enforcement have been included as 6th and 7th E's.

Figure 1.1 provides an overview of each of the seven E's involved with the plan.



Figure 1.1 - The E's of a Bike Friendly Community

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## 2. EXISTING CONDITIONS

# EXISTING CONDITIONS

What becomes readily apparent from bicycling in and around Marion is the wealth of opportunity in the realm of bicycling. Within city limits, Marion's traditional street grid and relatively compact layout allow for excellent connectivity. Its charming, traditional town square, and mural district along with many recreational, cultural, and commercial districts are each potential destinations for cyclists. On the west side of Marion's city limits, the planned Crab Orchard Greenway within the Crab Orchard National Wildlife Refuge will soon connect Marion to Carbondale and points in between. A few miles to the south, the Tunnel Hill Trail and US Bike Route 76 attract many recreational distance riders from around the region.

This chapter of the plan documents current conditions for biking, focusing on the coverage and quality of active biking facilities, popular destinations, and land uses that generate trips, connections to the transit system, and current plans and policies that relate to this planning effort. These current conditions provide the basis for infrastructure, programming, and policy recommendations that will be included in this plan.

## THE EXISTING BICYCLE NETWORK

Currently, the extent of an organized bike network in Marion is minimal. It consists of bike lanes, sidepaths, and paved shoulders. However, that does not deter cyclists from using the available infrastructure that is most comfortable for bicycle recreation and utilitarian travel in the City of Marion. The following sections and maps illustrate the existing and planned bikeway infrastructure in and around the City of Marion as a starting point for this plan. Analysis is provided for the types of infrastructure present as well as the level of quality and comfort for different types of riders.



## EXISTING FACILITY TYPES

To examine the existing network in Marion, bicycle facilities have been broken into two categories: 1) off-street trails and paths, and 2) on-street bikeways. On-street bikeways are located on the roadway pavement itself and can include bike lanes, marked shared lanes (aka sharrows), or simply identified as signed bike routes. Off-street trails and paths are best characterized as completely separated from roadways and are generally located along natural features like rivers and streams or next to other transportation infrastructure like roads and railroad corridors.

Figure 2.1, on the next page, shows where Marion's existing bikeway facilities are located.

### ON-STREET FACILITIES

There are two types of on-street facilities present in Marion 1) conventional bike lanes 2) and paved shoulders. All on-street facilities are located along DeYoung Street/IL-13. Conventional bike lanes can be found in two locations – between Russell and Court Streets and again between Norman Road and Main Street. Marked paved shoulders exist between Broeking Road/N Radcliffe Street and Pittsburg Road/IL-166 with the bike lanes between Norman Road and Main Street located between the two termini.

Both the bike lanes and paved shoulders are best suited for someone who is a confident and experienced rider. DeYoung is the main arterial through Marion with an average daily traffic count that ranges between 12,000 and 36,000 vehicles per day. It is primarily a commercial corridor with many of the city's larger retail centers and outlets located along the street. Intersections are also close together with many about 340 feet apart. On the fringes of town, DeYoung has higher speed limits and fewer

intersections. Neither the bike lanes nor the paved shoulders have a marked buffer between vehicle traffic. Where the eastern set of bike lanes (between Russell and Court) are located, DeYoung is six lanes across and has a speed limit of 40 MPH. Where the paved shoulders and second set of bike lanes are located, DeYoung narrows to four lanes but the speed limit increases to 55 MPH in most areas.

### OFF-STREET FACILITIES

There are two off-street facilities that can be found within Marion city limits, both of which are sidepaths paralleling the roadway. One is located along The Hill Avenue between Miners Drive and N Shane Lane/N Stanford Street, a distance of just under 3,000 feet. It is a relatively comfortable sidepath for most riders although it is necessary to cross street intersections and Interstate 57 on/off ramps without bike/ped signals and where drivers may be traveling at a higher rate of speed and not expecting the presence of cyclists. Therefore, it is not designed for vulnerable riders such as children but is comfortable enough for most adults. In addition, the sidepath does not connect to any other bike facilities west of Interstate 57 or east towards N Shane Lane/N Stanford Lane.

The other sidepath is located on Joseph Cannon Way between Skyline Drive and Walton Way, a distance of over 3,500 feet. It includes a short, perpendicular connector along Marathon Drive of an additional 550 feet. This sidepath was installed preemptively along the largely vacant Joseph Cannon Way before anticipated commercial development is built and such paths become harder to implement. The connector could eventually be extended to reach Illinois

Centre/Oasis Mall and provide connectivity among the existing and anticipated commercial spaces here.

Most of the existing and planned off-street bikeway facilities in and around Marion can be found outside the city limits, the connectivity they provide to the region will be valuable as implementation of the recommendations found in this plan progresses. It will be critical to provide connections from the regional network to the proposed City of Marion bicycle network.

### Crab Orchard Greenway



Perhaps the most significant planned off-street facility relevant to Marion is the Crab Orchard Greenway. The Crab Orchard Greenway is an 18.3 mile linear shared use path. When complete as currently planned, it will connect the western end of Marion through the Crab Orchard National Wildlife Refuge to Carbondale and points in between. It generally runs parallel to Illinois State Highway 13 (IL-13). Components of the Crab Orchard Greenway have been constructed in the following locations:

# Marion Existing Bikeways

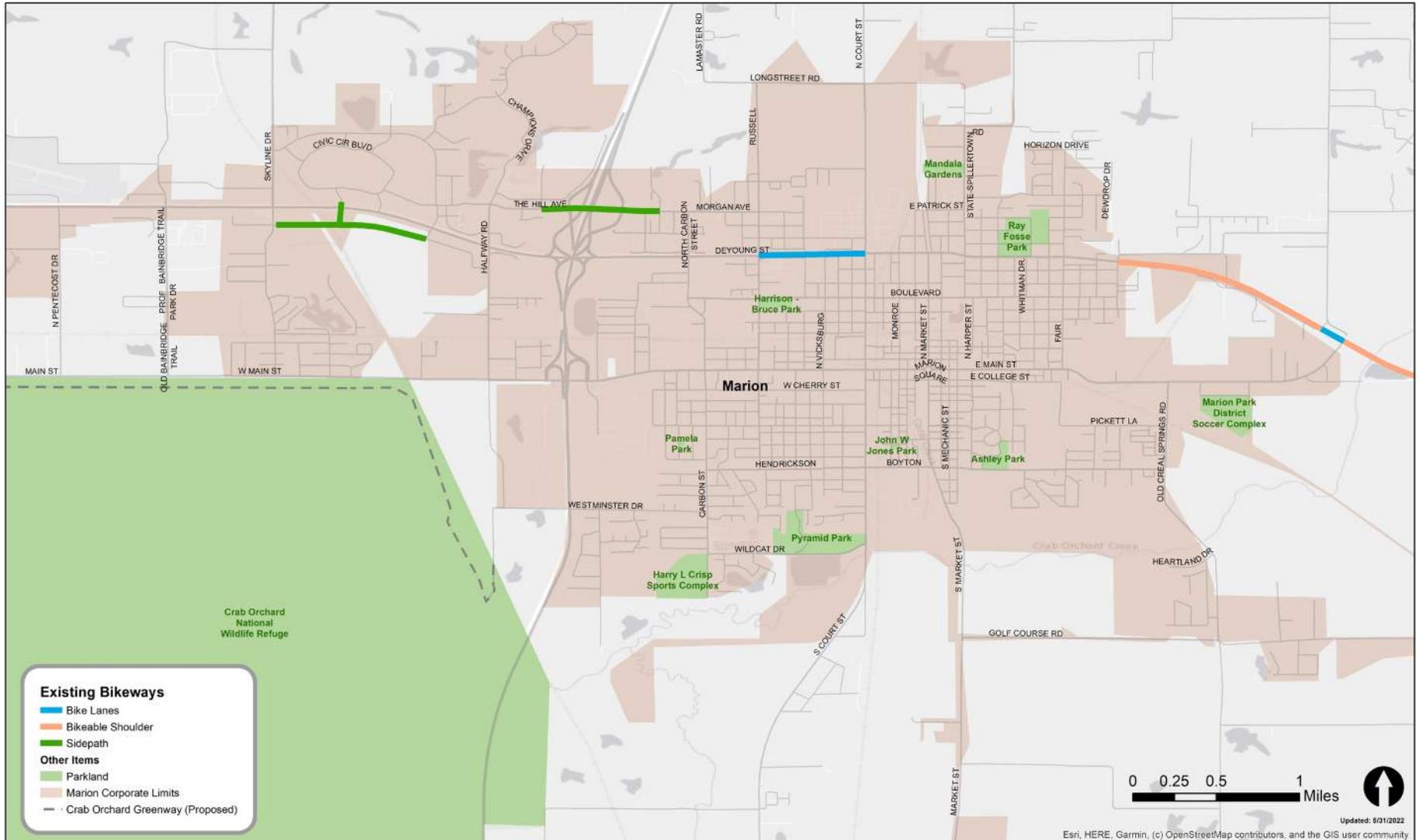


Figure 2.1 - Existing Marion Bikeways

1. **Carbondale** – between Lewis Lane and Giant City Road
2. **Carbondale** – stub on both the east and west side of Reed Station Road south of the intersection of IL-13
3. **Carterville** – along Campground Drive between the Crab Orchard Campground and Greenbriar Road
4. **Carterville and Crainville** – along Commerce Drive/Municipal Drive/Poteete Drive between Division Street and Fleming Road

In Marion the Greenway will split off into three different stems, each ending at a strategic destination, including the Oasis Mall/Illinois Centre, the RMTD (Rides Mass Transit District) bus depot, and the Harry L Crisp Sports Complex near Marion High School.

When complete, the Greenway has the potential to be both a recreational and commuter route. Access to the Crab Orchard National Wildlife Refuge will be a significant draw for recreational riders. With termini among several residential areas in Marion, the need to transport bicycles to the trail will be unnecessary for many. Commuters may find its connections to the RMTD bus depot, Harry L Crisp Sports Complex/Marion High School,

Oasis Mall, John A Logan College in Carterville, and University Mall in Carbondale beneficial.

Recently, IDOT has announced \$4 million in funds from the Illinois Transportation Enhancements Program have been allocated to continue construction on the project. The funding will go towards a 5.8 mile section in Marion that will include connections to the Sports Complex/High School and the RMTD bus depot. Preliminary and final engineering drawings are underway and are expected to be let for bidding in 2023.

Figure 2.2, shows where completed and proposed portions of the Greenway are located.

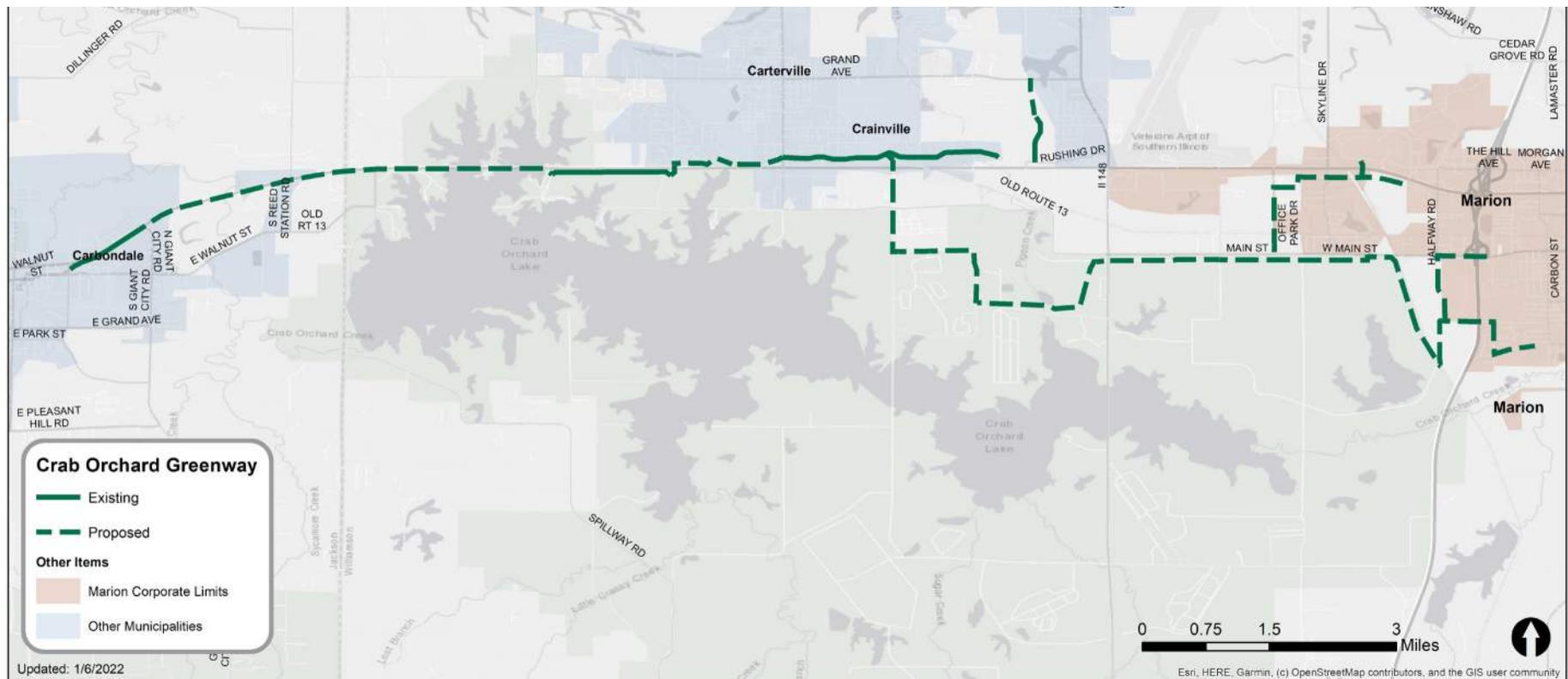


Figure 2.2 - Existing and Planned Alignments of the Crab Orchard Greenway

## BICYCLING COMFORT (LEVEL OF TRAFFIC STRESS)

Bicycle Level of Traffic Stress (LTS) is how a cyclist's comfort is analyzed and documented. The LTS for Marion's roadways reveals the extent to which the current bike network and road system is limited in its accessibility for a wide variety of cyclist types. This plan uses the LTS methodology established by the Mineta Transportation Institute's (MTI) Report 11-19:

Low-Stress Bicycling and Network Connectivity published in 2012 and later updated in 2017 to analyze the LTS on all Marion city streets and to determine the infrastructure improvement type and location recommendations for a viable bicycle network. The analysis combines individual roadway characteristics, like the presence of dedicated bicycle facilities, number of travel lanes, and posted speed limit, to assign a level of traffic stress to the roadway

Figure 2.3 shows the results of the level of traffic stress analysis. The least stressful roads are shown in a dark green while the most stressful are shown in red. Marion has high stress roads throughout the city, with both high traffic thoroughfares that cut through the middle of town like DeYoung and Court, as well as higher speed roads on the peripheries such as Main, Old Creal Springs, Market, and Skyline. Despite the presence of bike lanes on DeYoung between Russell and Court, the higher number of lanes, speed limit, and ADT

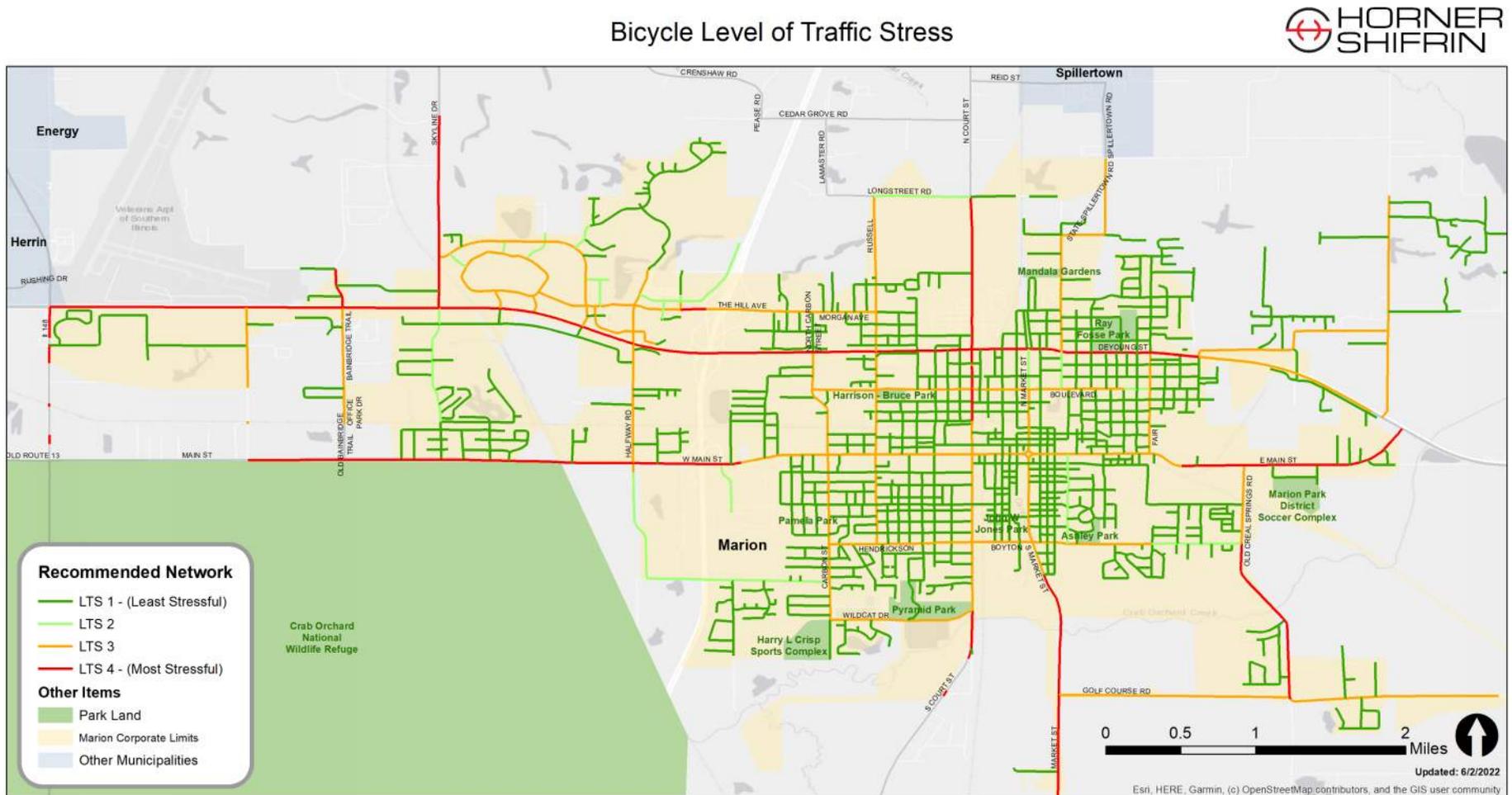


Figure 2.3 - Results of the Bicycle Level of Traffic Stress

Mixed Traffic Criteria								
Number of Lanes	Effective ADT*	Prevailing Speed						
		≤ 20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50+ MPH
2-way street (no centerline)	0-750	LTS 1	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3
	751-1,500	LTS 1	LTS 1	LTS 2	LTS 3	LTS 3	LTS 3	LTS 4
	1,501-3,000	LTS 2	LTS 2	LTS 2	LTS 3	LTS 4	LTS 4	LTS 4
	3,000+	LTS 2	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
1 thru lane per direction (1-way, 1-lane street or 2-way street with centerline)	0-750	LTS 1	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3
	751-1,500	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3	LTS 4
	1,501-3,000	LTS 2	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
	3,000+	LTS 3	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
2 thru lanes per direction	0-8,000	LTS 3	LTS 3	LTS 3	LTS 3	LTS 4	LTS 4	LTS 4
	8,001+	LTS 3	LTS 3	LTS 4				
3+ thru lanes per direction	Any ADT	LTS 3	LTS 3	LTS 4				

Figure 2.4 - Criteria for Mixed traffic Bike Facilities

Bike Lanes and Shoulders not Adjacent to a Parking Lane							
Number of Lanes	Bike lane width	Prevailing Speed					
		≤ 25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50+ MPH
1 thru lane per direction, or unlaned	6+ ft	LTS 1	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3
	4 to 5 ft	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4
2 thru lanes per direction	6+ ft	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 3
	4 to 5 ft	LTS 2	LTS 2	LTS 2	LTS 3	LTS 3	LTS 4

Figure 2.5 - Criteria for Bike Lanes and Shoulder not adjacent to a parking lane

kept it at a Level 4 on the traffic stress scale. Further down DeYoung, the paved shoulders/bike lanes present east of Broeking/Radcliffe do have an impact and the LTS score is at a 3 here. The highest concentration of high stress and higher stress (LTS 3 and LTS 4) roadways can be found in the northeast section of town adjacent to and around the Oasis Mall/Illinois Centre. Many of the commercial businesses in this area cater to motorists traveling along Interstate 57 and were designed with the idea the mall and commercial would be a regional draw with most patrons arriving by motorized vehicle rather than a bicycle. Thus, bicycle planning and safe routes for bicyclists are nearly absent.

Most of the lowest stress spaces to ride in Marion are the residential streets. Low posted speed limits, lack of traffic volume, and generally

ample space allow for a ride that is comfortable to all ages and abilities. This includes most of the roads that surround the downtown Tower Square except for Main and Market. Typically, the downtown areas of a city attract the most non-recreational riders because their density and layout supports both a high concentration and variety of businesses and services as well as a variety of transportation options for access. Having low stress streets around the downtown area provides a solid baseline for easily installing bicycle infrastructure to support the downtown business district.

Definitions for each of the four levels of traffic stress as defined in the MTI Report 11-19, are as follows:

- LTS 1:** Bicyclists are either physically separated from traffic; are in a wide, exclusive bicycling zone next to low-speed, low-volume traffic where there is not more than one lane in either direction; or a shared road where there is only occasional interaction with motor vehicles. LTS 1 indicates a relaxing ride requiring minimal attention to vehicle traffic and is suitable for children. Where bicyclists ride alongside a parking lane, ample space is available for both operating a bicycle and car doors to be open. Intersections are easy to approach and cross.
- LTS 2:** Except in low speed/low volume traffic situations, bicyclists have their own space to ride that keeps them from interacting with traffic except at crossings. There is a physical separation from higher speed and multilane traffic. Crossings are easy for an adult to negotiate but may be more challenging for children. Traffic stress is limited to what an average adult can tolerate. Where a bike lane lies between a through lane and a right-turn lane, it is configured to give bicyclists clear priority and vehicular speeds are comparable to bicycling speeds.
- LTS 3:** Involves interaction with moderate speed or multilane traffic, or close proximity to higher speed traffic. Traffic stress acceptable to the “enthused and confident” bicyclist. More traffic stress than LTS 2, yet markedly less than the stress of integrating with multilane traffic. Bicyclists either have an exclusive lane next to moderate-speed traffic or shared lanes on streets that are not multilane and have low traffic volume. Crossings may be longer or across higher-speed roads than allowed by LTS 2 but still considered acceptably safe to most adult pedestrians.

- **LTS 4:** Involves being forced to mix with moderate speed traffic or ride within close proximity to high-speed traffic. Traffic stress at LTS 4 is acceptable only to the “strong and fearless” bicyclist and are not appropriate environments for children.

The main determining factors for level of traffic stress in Marion then begins with the presence of bike lanes, followed by the number of vehicle lanes per direction, and then the prevailing speed

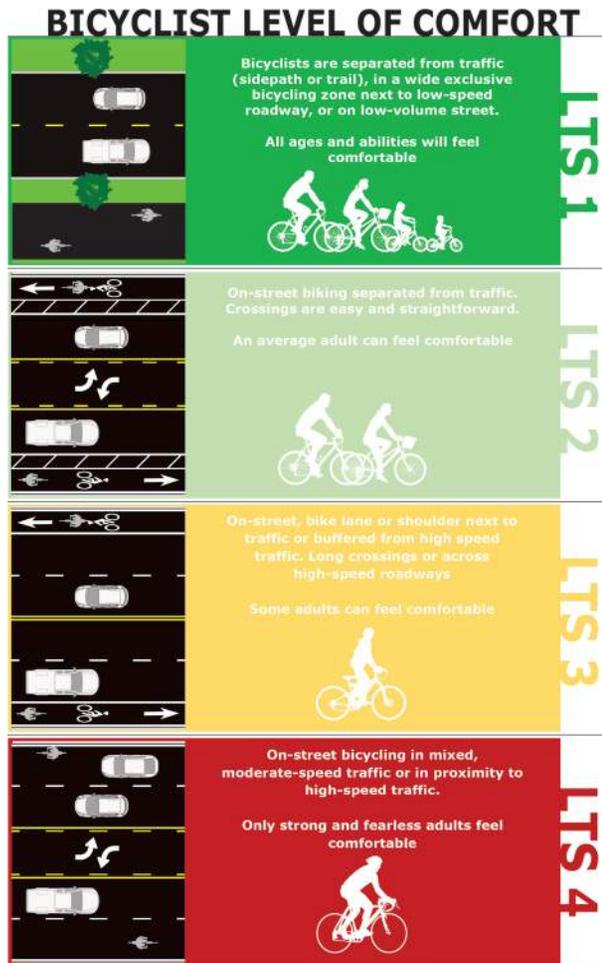


Figure 2.6 - Bicyclist Level of Comfort Chart

of traffic and effective average daily traffic count. Figures 2.4, 2.5, and 2.6 provide visual detail of this information.

## QUALITY

The quality of the active transportation infrastructure, including the condition of surfaces, pavement markings, signage, etc. is critical to the safety of users as well as the appeal to use it. While the Illinois Department of Transportation (IDOT) has built the bicycle infrastructure throughout Marion, the City of Marion is responsible for maintaining it. At the time of writing, Marion has been doing well with keeping the infrastructure in good condition. Pavement markings are visible and the concrete sidepath along The Hill is in good shape with few cracks or wear.

## CONNECTIVITY

Since the City of Marion was primarily laid out with a street grid, this street network can be used to create good connectivity for cyclists. Most roadways are low-speed, low-volume roadways in residential areas that are comfortable for most bicyclists and are existing opportunities for bikes and vehicles to share the road. Riding around the residential areas of Marion is generally comfortable. However, there are gaps in and barriers to connectivity, as well as intersections and crossings that are not currently designed for the addition of bicyclists.

Despite the benefits of a traditional street grid, a lack of infrastructure providing for safe travel of cyclists means that most of Marion is not well served for bicycle travel. There are only about 3.4 miles of bicycle infrastructure in the city. Furthermore, all infrastructure is located in the northern part of the City and is oriented in an east/west direction. This limits connectivity

largely to the retail corridors along DeYoung and The Hill, so long as a bicyclist’s point of origin is also on DeYoung and The Hill. A lack of useful bicycle infrastructure is most evident in the Tower Square area. Bicyclists who ride to work/school or to run errands are often more likely to do so in a more urban environment where the focus of land use is less on auto-oriented development. Tower Square is well suited for bicycle commuting in its denser, downtown-style format, but a lack of bike parking, bike infrastructure, and streets safe to ride on limit the number of riders willing to commute there.

The likelihood that a bicyclist’s point of origin is along DeYoung or The Hill is low. Where infrastructure is present there are few residences and no transit stations from which a bicyclist would start a journey. Anyone who does use the existing bicycle infrastructure in Marion likely had to start their journey using roads not designed for bicycle use.

## BARRIERS TO CONNECTIVITY

Real (physical) and perceived barriers can act as a challenge to bicycling in any city, especially a small-town that impacts connectivity of a low stress network for bicycling. Both of these types of barriers can deter bicycle activity and create difficulties for bicyclists attempting to get from Point A to Point B. A physical barrier is one that is readily identifiable and includes the West End Creek/Crab Orchard Creek, Interstate 57, and Route 13, as well as the auto-dominated land uses patterns around the mall and commercial developments. These barriers are difficult to traverse without going out of one’s way on a circuitous path to get to a destination, or fund projects to eliminate those barriers. They add undesirable distance which can equal time and effort and can often funnel bicyclists onto streets with higher vehicle traffic and are therefore less comfortable.

A perceived barrier can be just as detrimental to bicycling as a physical one. A perceived barrier is one where there is access from one point to another but the desirability to use such access is low given observed compromises to safety and comfort. For example, DeYoung Street offers signalized intersections at several locations for bicyclists to cross from one side to the other. Despite it having most of the on-street bicycle infrastructure, the amount of traffic that crosses any given intersection on DeYoung on an average day, the width of the street, an overall design that is unwelcoming to bicyclists, and the perception

that motorists won't be expecting a cyclist, crossing DeYoung can feel unsafe, unwelcoming, and uncomfortable.

Trips that necessitate dealing with either type of barrier can deter bicyclists lacking the highest confidence and comfort levels from riding to destinations where a barrier must be crossed. Barriers in general can divide a community and isolate residents from even nearby destinations.

In creating a low stress network for walking and biking it is critical that viable solutions be

included in the plan to eliminate weak links. Recommendations included in this plan will address real and perceived barriers to create a low stress network for walking and biking.

Figure 2.7 shows the locations of real and perceived barriers to bicycling in Marion.

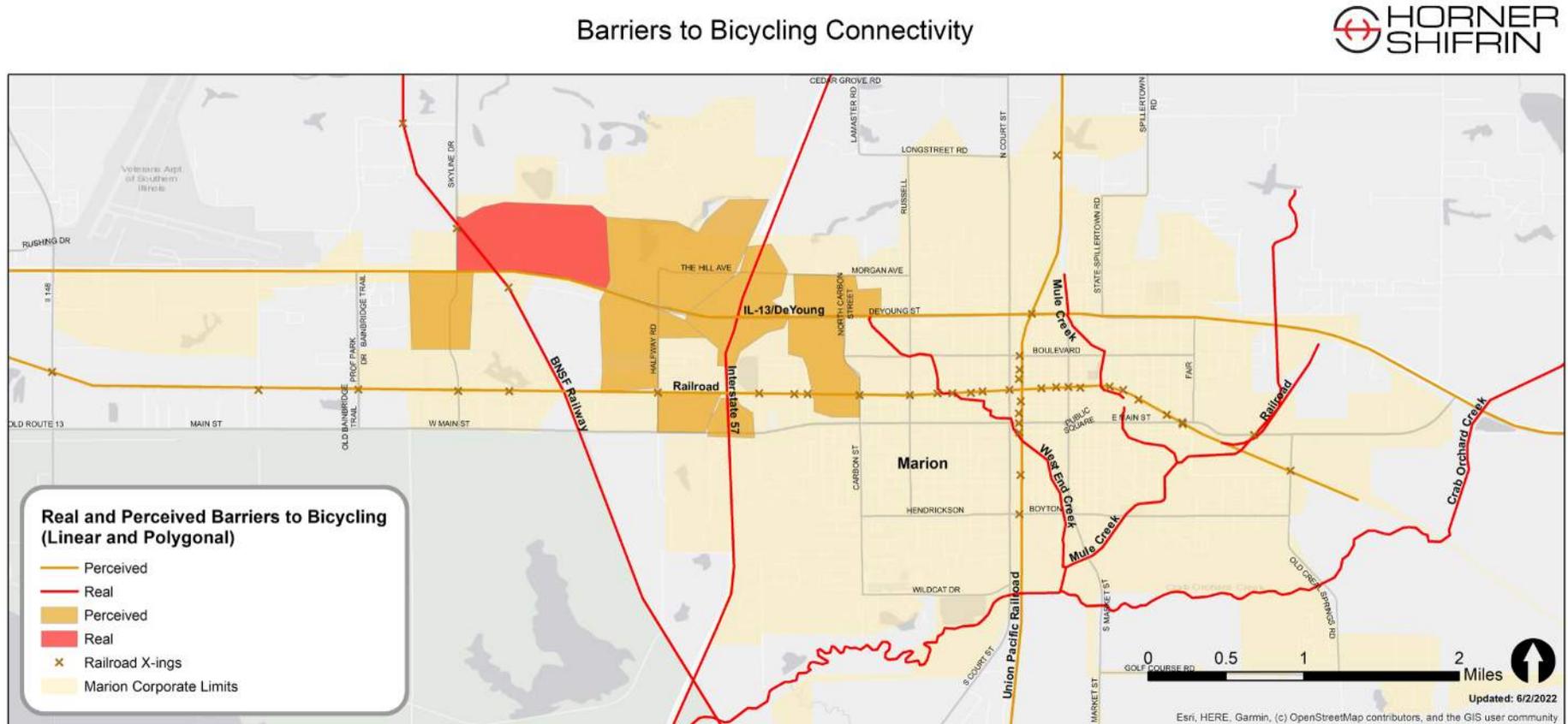


Figure 2.7 - Locations of Real and Perceived Barriers to Bicycling in Marion

## AVERAGE ANNUAL DAILY TRAFFIC (AADT)

Considering the AADT of the city's roadway network is one factor that will be important in deciding where to place bicycle infrastructure and the type of treatments that will be necessary to ensure a low-stress and comfortable environment for all riders.

Figure 2.8 shows the AADTs for the City of Marion. Streets below 3,000 AADT can generally be considered for calm street networks where bicyclists ride in mixed traffic without dedicated lanes or paths. Above 3,000 AADT usually warrants the implementation of more robust infrastructure like bike lanes or sidepaths to provide necessary safety elements.

Marion has many streets that fall below the 3,000 AADT threshold. These are mainly found in the residential areas of the city as well as areas of lighter density. On the other end of the spectrum, I-57 and parts of DeYoung have an AADT above 25,000. DeYoung having a similar AADT to I-57 puts into perspective the need to create safer cycling infrastructure.

### Average Annual Daily Traffic (AADT)

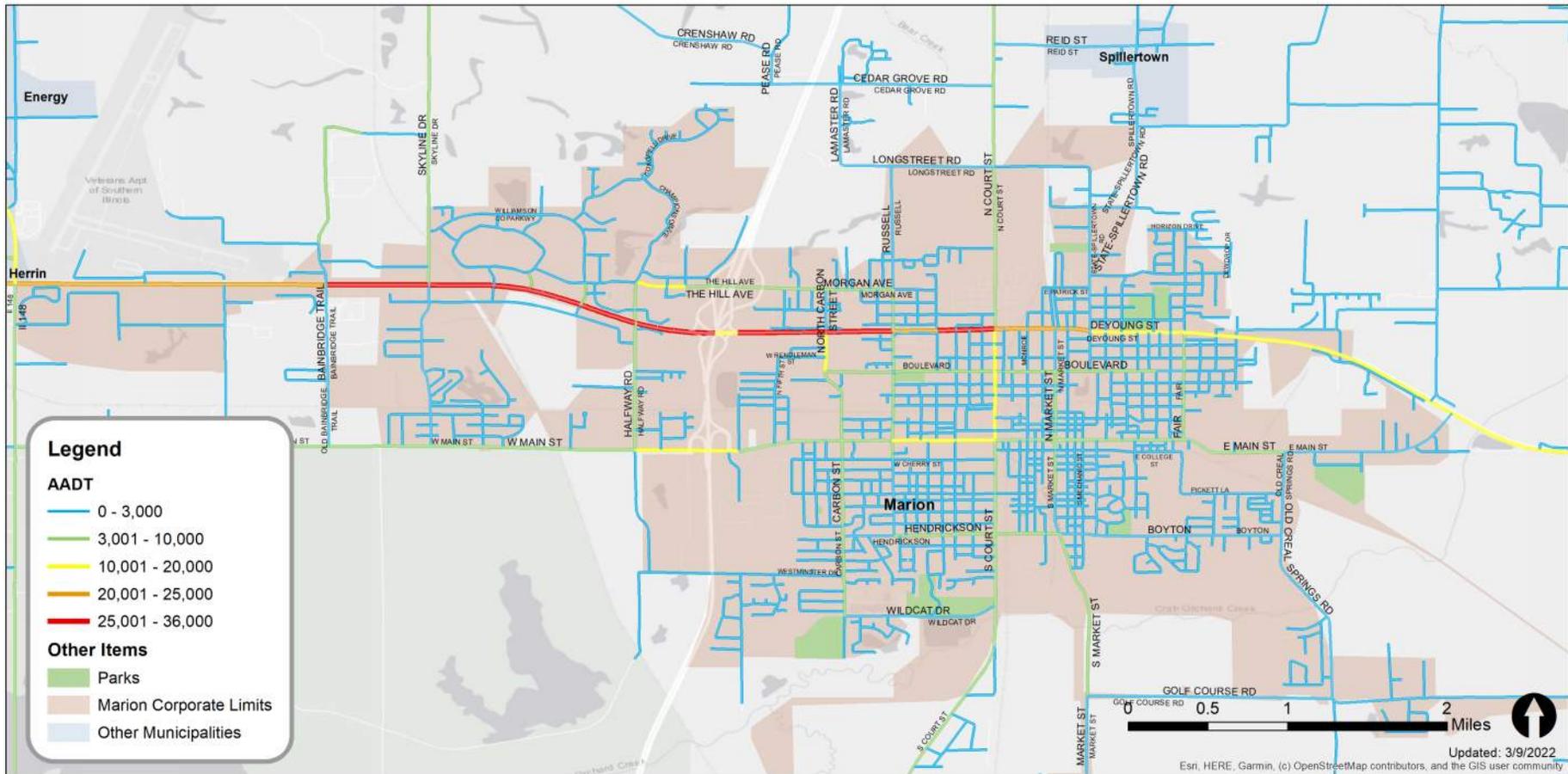


Figure 2.8 - Average Annual Daily Traffic in the City of Marion



## ROADWAY SPEED LIMITS

Speed limits are another determining factor for the comfort level of a given street and the level of treatment that should be recommended. Higher speeds decrease reaction and decision times when cars and bicyclists interact with each other. Furthermore, in the event that a car collides with a bicyclist, higher collision speeds correlate with higher rates of injury and possibility of death.

There are two ways that roadway speed can be mitigated to provide an appropriate environment for bicycling: 1) provide separation and buffers between bicyclists and/or 2) reduce car speeds to become more compatible to sharing the roadway with vehicles

Figure 2.10 shows that most of the roadways in Marion have low speed limits, 35 MPH or less. This is much more conducive to introducing

bicycle infrastructure onto or adjacent to a roadway. However higher speed limits can be found on parts of both DeYoung and Main, which are critical east-west corridors with many potential destination points between them.

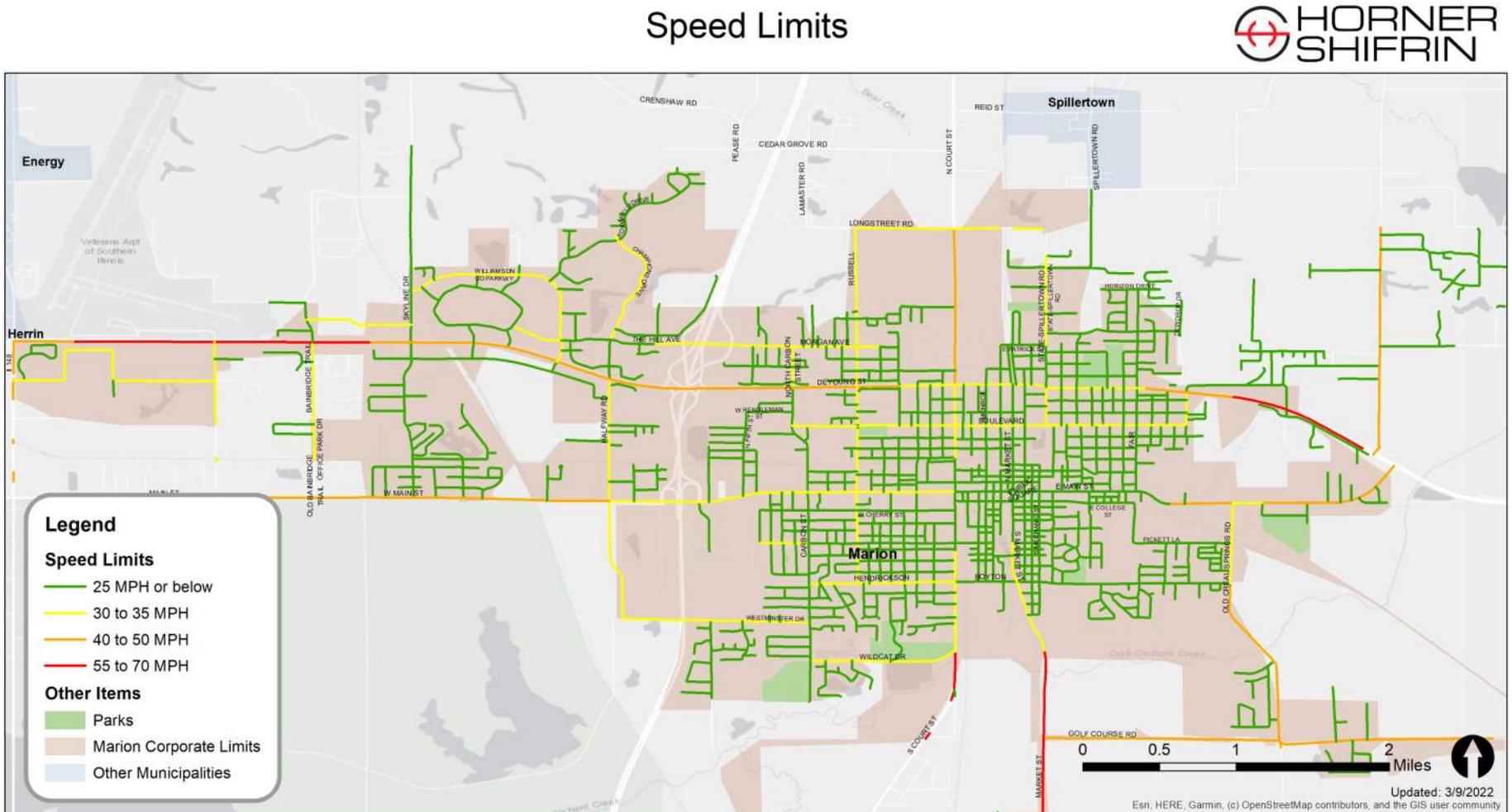


Figure 2.10 - Speed Limits in the City of Marion

## CRASHES AND SAFETY

When asked to describe bicycling priorities for the City of Marion, input at the Technical Advisory Committee meetings, Plan Oversight Committee meetings, and public open houses, focused on safety. Participants characterized bicycling in Marion overall as unsafe and devoid of infrastructure and policies to encourage it. Analyzing bicycle collisions in Marion reveals patterns and potentially sources of safety issues in both roadway design and bicyclist behavior. With these results, there is a distinct basis for infrastructure and program improvements that will enhance the safety of bicyclists.

Information on bicycle collisions was analyzed from 2015 to 2019, the five most recent years that complete and comprehensive information was available. Yet this information still may be an underestimation of the total number of collisions involving bicyclists as the information available comes from police reports. If the parties involved in a collision do not contact the police to report it, it is not represented in the data. Typically, these sorts of unreported collisions do not involve injuries or property damage. In fact, each of the reported bicycle collisions involved some kind of property damage. Despite possible under-reporting, this analysis provides valuable information toward building a safe and comfortable bicycle network for Marion.

### NUMBER OF CRASHES

During the five-year analysis period between 2015 to 2019, 22 collisions involving a bicyclist were reported to local police. The number of collisions involving a bicyclist did not show strong signs of growth or decline during the analysis period. While this means there is not a considerably high number of bicycle-involved collisions in Marion, nor a trend of the yearly number of bicycle-involved collisions

increasing, it remains important to address infrastructure that targets overall safety for all modes, including bicycling, with the ultimate goal of reducing fatalities and serious injuries to zero. There are safety related issues present that should be addressed. Figure 2.11 shows the number of collisions involving a bicyclist by year.

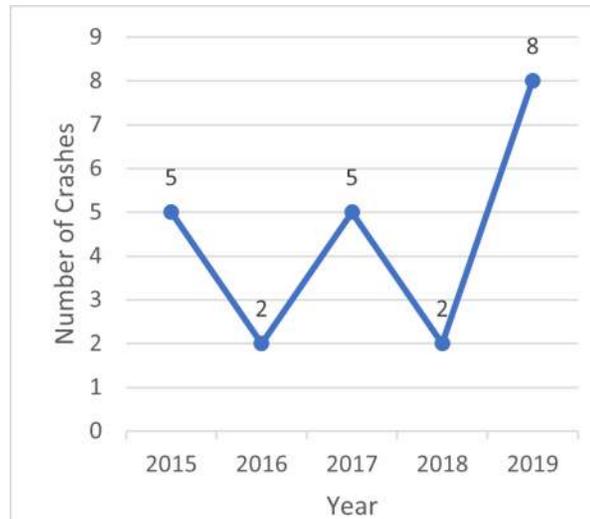


Figure 2.11 - Number of collisions involving a bicyclist in the City of Marion by Year

### TIME OF DAY

Like motor vehicle crashes, bicycle crashes generally occur during peak travel periods. Figure 2.12 shows crashes by time of day during the five-year analysis period. While the times these collisions occurred is nearly evenly split between the hours of 7:00 AM and 10:00 PM with between zero (0) and two (2) having occurred in any given hour, 4:00 PM notably bucked this trend with five (5) crashes. This is the time when both commuters are heading home from work and children are heading between home, school, and their extra-curricular activities. The morning and evening rush hours (6:00 AM to 10:00 AM and 4:00 PM to 8:00 PM) accounted for 13% and 40% of crashes respectively. Over school dismissal hours (2:00 PM to 5:00 PM), 36% of crashes occurred.

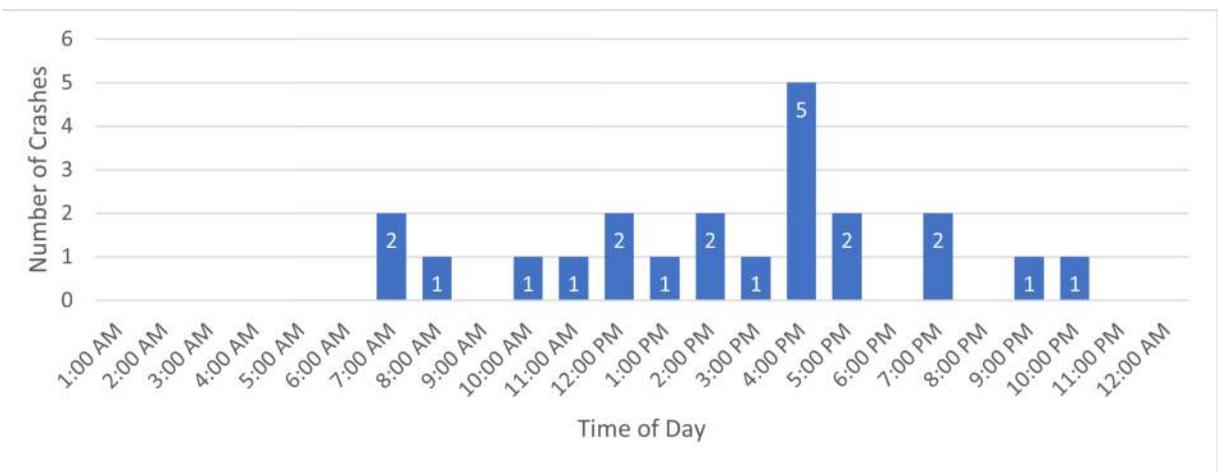


Figure 2.12 - Number of crashes by time of day in the City of Marion - 2015-2019

## TIME OF YEAR

The hottest months (July, August and September) and coldest months (January, February, March) of the year are when collisions were least likely to occur in Marion during the five-year analysis period. Either no bicycle collisions occurred, or, in the case of February and July, just one (1) each. Conversely, the milder months were when the most crashes occurred. October saw the highest with six (6), followed by April with four (4) and June with three (3). Figure 2.13 shows the time of year bicycle crashes occurred in the City of Marion during the five-year analysis period.

## COLLISION SEVERITY

Fortunately, none of the 22 bicycle collisions in Marion reported to police during the study period involved a fatality. However, each

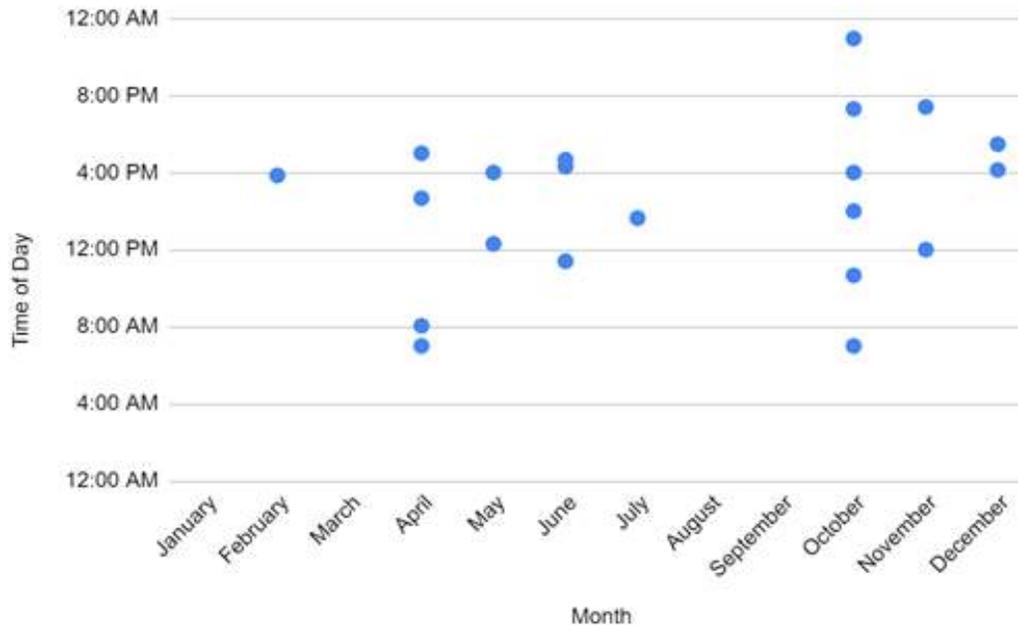


Figure 2.13 - Crashes by time of year in the City of Marion - 2015-2019

involved an injury. As noted above, it is possible that additional collisions have occurred that did not involve an injury and were not reported to police, rendering the 100% injury rate of bicycle collisions less extreme. But our ability to estimate how many collisions went unreported and how many of those unreported collisions involved an injury is not possible.

The State of Illinois classifies the severity of collisions as follows:

1. No Injuries – crash where there were no injuries
2. C Injury Crash- crash where the most severe injury is C (possible injury)
3. B Injury Crash- crash where the most severe injury is B (non-incapacitating injury)

4. A Injury Crash- crash where the most severe injury is A (incapacitating injury)
5. Fatal Crash- crash where the most severe injury is K (fatal injury)

On a collision report, a collision is classified by the most severe injury experienced by someone involved. A severity classification does not mean *everyone* involved in the collision experienced the same level of injury, but at least one person did. It is safe to say that for each of the 22 collisions, the bicyclist assumed the most severe injuries as each were between a bicycle and a motor vehicle.

Figure 2.14 below shows the distribution crash severity among the 22 collisions. Non-incapacitating injuries (B Injury Crashes) were most common with 12 and accounted for 54% of all reported collisions. There were seven (7) collisions with possible injuries (C Injury Crashes) and, unfortunately, three (3) with incapacitating injuries (A Injury Crashes).

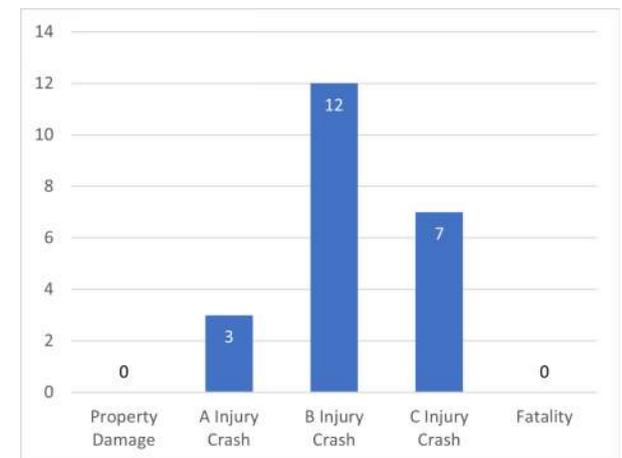


Figure 2.14 - Distribution of crash severity

## CRASH LOCATIONS

Figure 2.15 shows that the locations of collisions involving bicyclists were spread somewhat evenly throughout the city during the five years between 2015 and 2019. Most

of the collisions occurred on major roads with a BLTS score of 3 or 4, including Main with six (6) collisions, Carbon with five (5) collisions, DeYoung with four (4) collisions, and Court and Hendrickson with two (2) collisions. The intersection of Carbon and Main is by far a key

target for improvements to safety for bicycling with a total of four (4) or 18% of all bicycle collisions having occurred at that intersection. No other intersection in Marion had more than one collision occur during the study period.

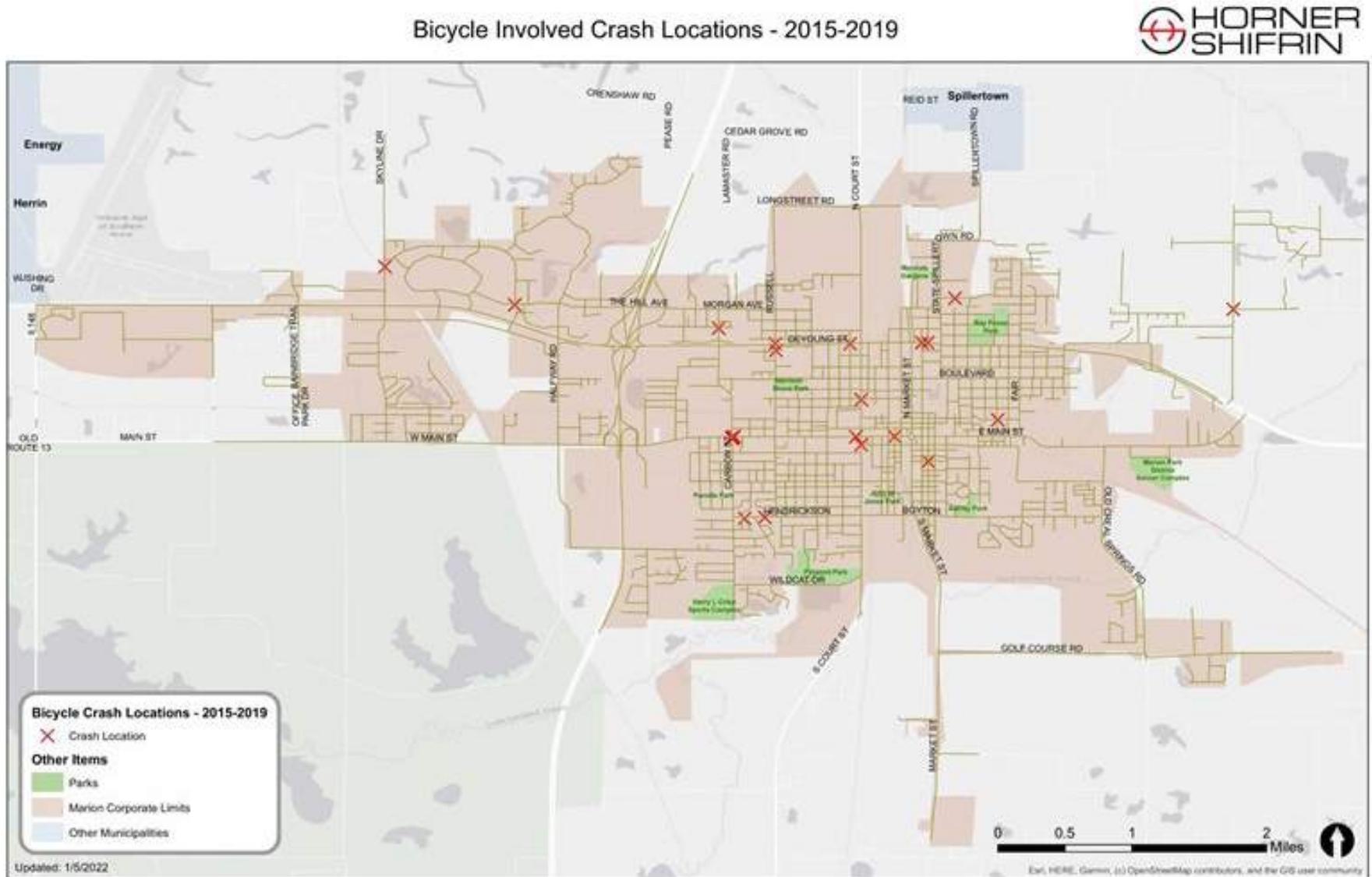


Figure 2.15 - Bicycled Crash Locations in the City of Marion - 2015-2019

## SUPPORT FACILITIES

With infrastructure in place that allows for safe bicycle travel for all ages and abilities, it is crucial for destinations to have places to store bicycles short-term and long term. Bike racks, bike lockers, and long-term secure bike parking, and wayfinding, are important components of a successful bike network. A lack of secure parking can deter people from bicycling to destinations, even for short trips. Currently, Marion Community Unit School District 2 provides bicycle parking at each of their schools. Other destinations such as The Hub Recreation Center, the VA Medical Center, Illinois Centre/Oasis Mall, Ray Fosse Park, and Walmart, among others offer bike racks, for patrons.

The city does not have a current standard for bike parking facilities, as well as definition of locations for bike racks that address short- and long-term parking. Gaps in the bike parking needs include convenient bike parking in the downtown square, Rent One Park, or the Bus Depot for examples. Where bike racks are provided, the placement of them is sometimes in isolated or un-obvious locations. There are opportunities to provide repair facilities, bike lockers, and long-term secure bike parking which should be incorporated into any infrastructure project.

Wayfinding signage is the other key component to a successful bicycle network. Signage helps people find the planned bicycling routes in a community to encourage the use of safe routes. This is particularly important when routes turn and jog

though a community. Wayfinding also helps users get to key community destinations. Marion's streets have existing street signage and there are some signs that direct drivers to city landmarks. A comprehensive Bike Marion wayfinding program can address a barrier to bicycling that includes directions and distances to landmarks, trails, and key destinations.



# DESIRABLE DESTINATION ANALYSIS

The purpose of a transportation network is to take people to the places they want to go. This can include school, work, shopping, and places for recreation. Higher densities of these sorts of key activity centers are indicators of demand for bicycle facilities. An examination of these

key activity centers provides an idea of where destinations are concentrated and, consequently, where bicycle infrastructure investment should be targeted.

These key activity centers are concentrated around the middle of the city and its northeast and southwest regions.

Figure 2.16, shows the location of key activity centers throughout Marion. Many of the activity centers are recreation centers, including various city parks, athletic fields, and forthcoming trailheads for the Crab Orchard Greenway. Schools also compose a large amount of activity centers.

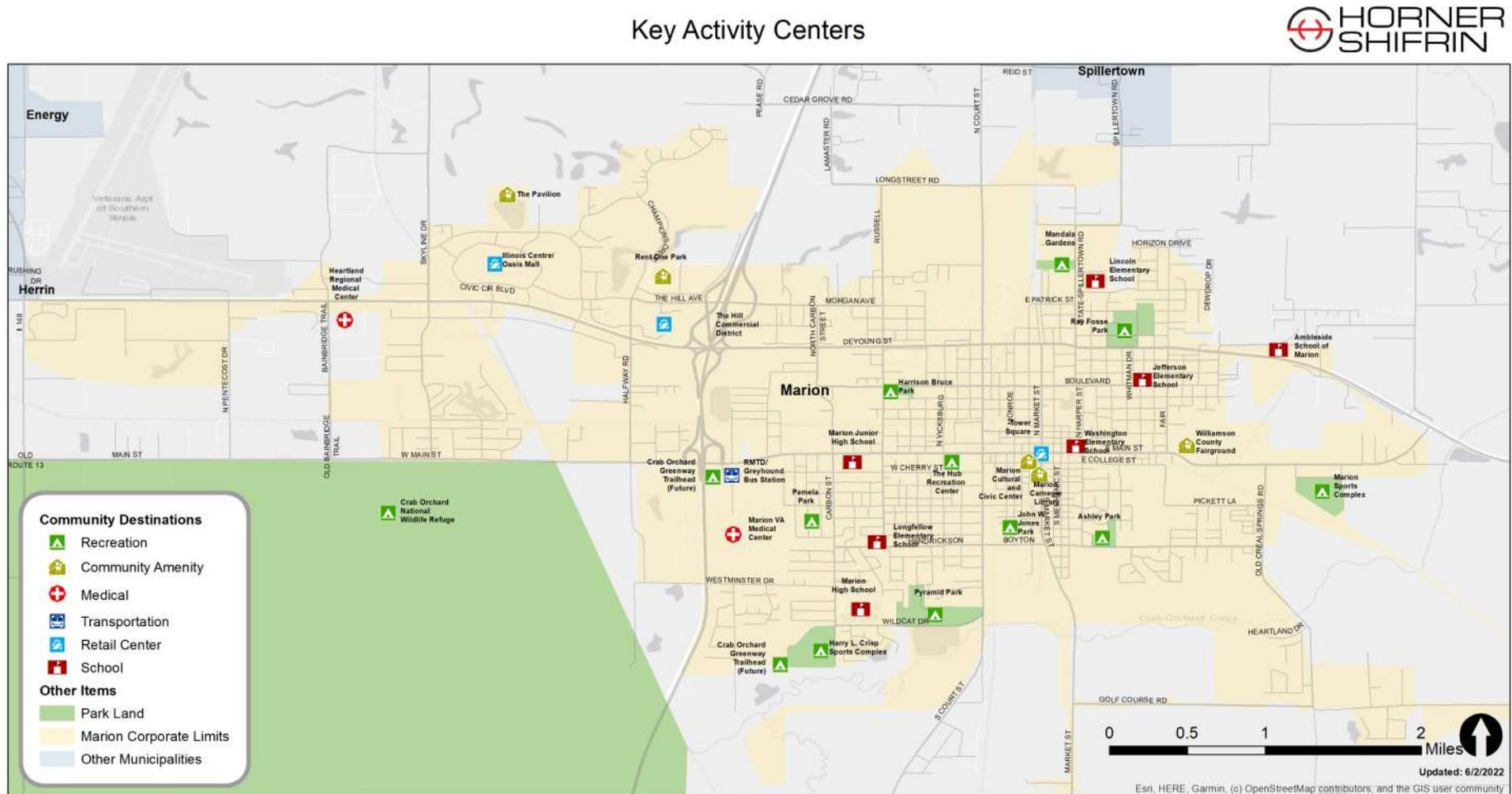


Figure 2.16 - Locations of Key Activity Centers in Marion

## POINTS OF ORIGIN ANALYSIS

Building connections to key activity centers is fruitless unless they address where bicyclists are traveling. Meaning where trips originate, and destinations where people want to go. To determine where points of origin for bicycle trips in Marion, data from two unique sources was gathered and analyzed from Streetlight and Strava.

## STREETLIGHT DATA

One of the data services used by Horner & Shifrin to understand existing bicycle ridership patterns in Marion is StreetLight. Streetlight is an on-demand mobility analytics platform



that indexes and processes over 40 billion anonymized location records every month from smart phones and navigation devices in connected cars and trucks with other data sources to develop a view into North America's network of roads, bike lanes and sidewalks.

For Marion, the analysis was run using data from the month of September 2020. As an organizing function, US Census Block Groups that bisect Marion city limits were used to

### Streetlight Data

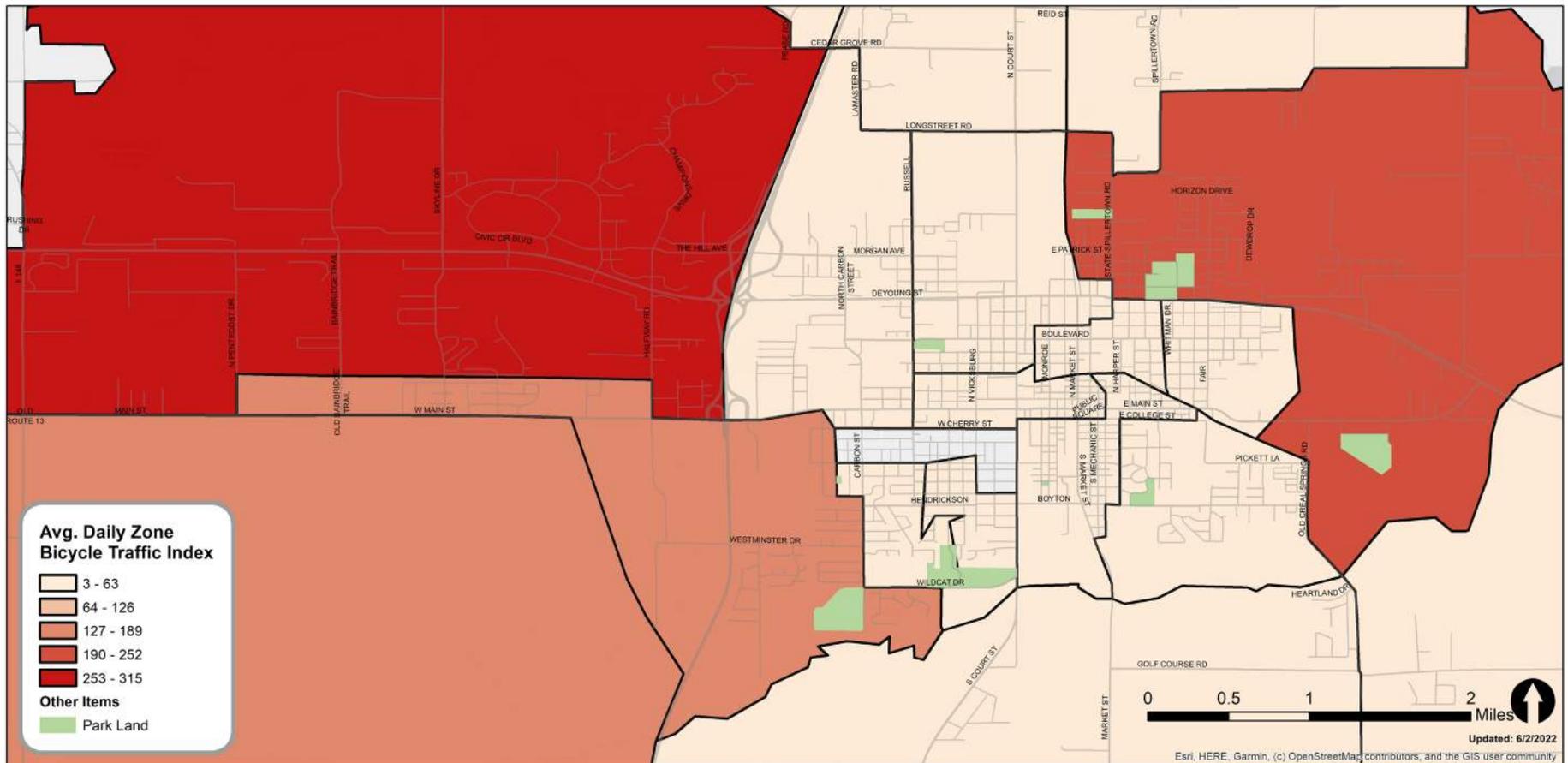


Figure 2.17 - Normalized Value of where bicycle trips began in the City of Marion - September 2020

divide the city into 20 separate zones. Figure 2.17 shows the normalized value of where bicycle trips began in the City of Marion during September 2020.

Note: Direct volume data (numbers of people) is not available using this data source. StreetLight uses what is called normalized value to represent relative activity. Children over the age of 13 are included in the data category related to places of work/school.

## STRAVA ANALYSIS



Strava is an international social network for athletes, mostly runners and bicyclists. It allows users to track their performance during runs or rides using the GPS feature on their mobile device. Since 2017 they have posted a “Global Heatmap” which is a visualization of trailing data of Strava users around the world. According to Strava, the heatmap consists of:

- 700 million activities
- 1.4 trillion latitude/longitude points
- 5 terabytes of raw input data
- A total distance of 16 billion km (10 billion miles)
- A total recorded activity duration of 100 thousand years

Where that’s relevant to this report is that we can see where Strava users like to ride in and around Marion and the rest of Southern Illinois. Figure 2.18 shows the recorded rides around Marion while Figure 2.19 shows recorded rides in most of the Greater Egypt Region. In this

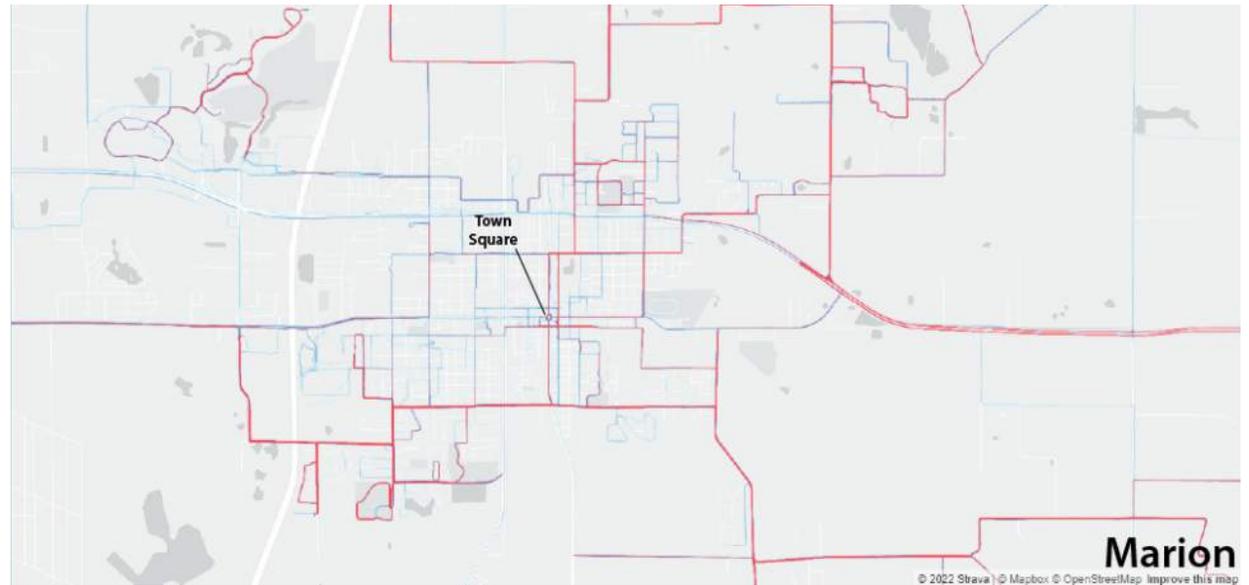


Figure 2.18 - Recorded rides around Marion

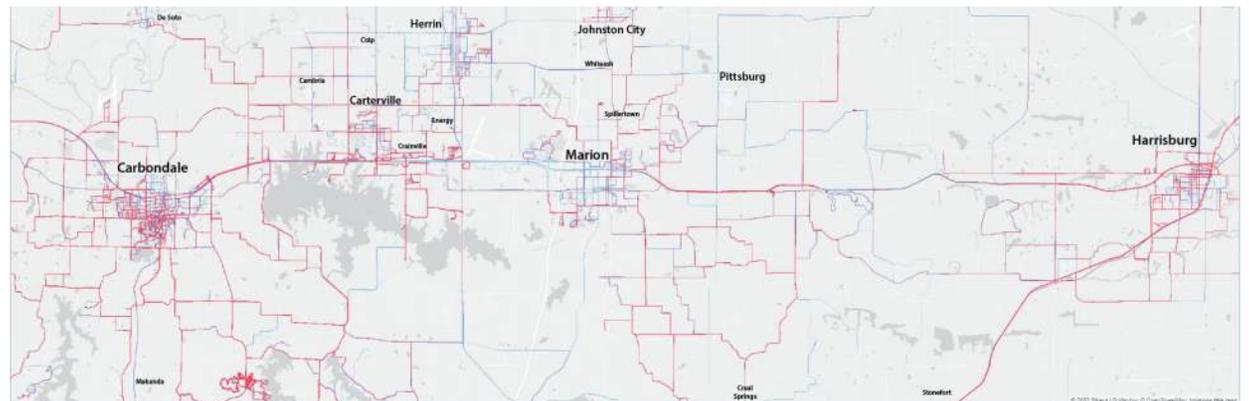


Figure 2.19 - Recorded rides in the Greater Egypt Region

visualization, a bright red line indicates a high density of recorded rides where as a light blue line indicates a low density.

## POINTS OF ORIGIN ANALYSIS OUTCOMES

Both Streetlight and Strava have their own data limitations. Streetlight provides visualization of points of origin for all riders who have brought

their mobile device with them on a ride, can compile demographic information of each user, and provide an assumption of where they are going, but cannot currently provide accurate counts of riders or provide information on precisely where a trip began and the route taken. Strava on the other hand does provide information on routes taken, but is limited to only those who are active Strava users and Strava’s userbase is likely to be riding for

recreational purposes. However, combining the available data from these services provides a solid baseline for where bicyclists are beginning their trips and routes they prefer to take.

The outcome of the analysis shows that, as far as Census Block Groups in September 2020, the most trips on a bicycle originated in the block that covers the northwest portion of the city that is (mostly) north of Main Street and west of I-57. According to the Strava data, most of those trips appear to be originating in the Kokopelli Estates subdivision and leading towards Rent One Park and Oasis Mall/Illinois Centre. There are also bright red lines along Crenshaw Road, though it is difficult to say if trips originated on this largely rural road or if it is just riders passing through.

The second highest Census Block Group where bicycle trips originated is in the northeast area of Marion as shown on Figure 2.17, the Streetlight Data map. Despite the lower density of this area, Strava data shows a high number of trips along Norman Road as well as Broeking Road.

Both data sources show that a significant number of trips also begin in the southwest Census Block Group that covers the Crab Orchard National Wildlife Preserve. There is a high intensity of bright red around the Harry L. Crisp Sports Complex that leads out along Carbon Road and diverts along Westminster Drive as well as Hendrickson Street/Boyton Road.

Conversely, what both data sources show is that the central part of Marion, especially just west of downtown has little activity as far as trip origination. Downtown appears to have patterns of bicyclist traffic along Market Street as well as on College Road and Main Street to the east.

Using the Strava data to look more at the region as a whole, we see that many recorded rides occurred in and around Carbondale with a high intensity of rides shown to have occurred along IL-13 along the partially completed Crab Orchard Greenway in the direction of Marion. Completing the Crab Orchard Greenway will encourage riders from Carbondale and elsewhere in the region to further their trip into Marion, providing the city with a myriad of economic benefits as far as opening the city to new potential employees and employers outside the city and creating opportunities for recreational riders to or through come to Marion and patronize local businesses during their journey.

## PUBLIC TRANSIT ACCESS AND CONNECTIONS

A transportation network is composed of many different transportation choices for mobility in the community. Networks are best served when modes support one another. A bicycle network, for example, can be greatly enhanced by connecting to the transit network and vice versa. Transit can assist bicyclists in extending their trip distances that would otherwise take a significant amount of time and energy to do solely on a bike. Conversely, a bike network can create “first and last mile” connections to help transit reach more isolated locations that are not served or are difficult for transit to operate to efficiently. Bicycle infrastructure is often a part of a successful first mile/last mile strategy, greatly enhancing the efficiency of both transit and bicycle travel.

The City of Marion and the rest of southeastern Illinois is provided public transit by the Rides Mass Transit District (RMTD). Their mission

is to “provide affordable, safe and accessible public transportation for all residents of the communities served by promoting independence, self-sufficiency and economic opportunity.” There are currently two fixed routes that operate from Marion’s RMTD Bus Depot southeast of Main Street and Commander Drive. One route goes straight to Harrisburg while the other goes to various stops in Carbondale. Neither has any



other stops in Marion. The RMTD Bus Depot also serves Greyhound buses.

The service provided by RIDES operates with a point deviation service in a service zone setup where buses travel from point to point in adjacent zones, but riders have to call an hour or more ahead of time to have a bus dispatched to them. The buses do not currently accommodate bikes. Going forward, RIDES anticipates adding more fixed route service to area communities like Marion.

The bike network's ability to enhance connections to the existing and expanded transit service in Marion can expand commuters access to destinations in Carbondale or Harrisburg. In addition, connections from the bus depot in Marion to businesses in the square, as well as other destinations will benefit from low-stress bicycle connections. A viable bike network could enhance transit ridership. The lack of intracity routes, however, places limitations on the maximum effectiveness of a Marion bike network connection to transit.

## EXISTING PLANS AND POLICIES REVIEW

Existing plans and policies were reviewed for a baseline in what's been planned already, where, and to ensure coordination with those plan, rather than contradiction. Below is a summary of the relevant local and state plans that have been completed and would impact the outcome of this plan.

### LOCAL POLICIES AND LEGISLATION

The current City of Marion planning and policies and regional planning policies were evaluated to identify the relevant components of the plans and codes that will inform bikeway planning in the City.

Over the last decade, several local plans have been developed to provide a foundation for enhancing biking and walking in the region, including the 2020 Marion Downtown Planning Study (which focused on the walking environment), the 2016 SIMPO East-West Corridor Study, the 2018 Pedestrian Crossing Study, and the 2014 SIMPO Multi-Modal Transportation

System Assessment. Several of these plans provide recommendations that inform this plan such as connecting to the Crab Orchard Greenway and the Marion High School Sports Complex.

Below is a summary of each of the planning documents that inform this plan:

### MARION, ILLINOIS, CODE OF ORDINANCES

The section of the Code of Ordinances that addresses bicycle and motorized bicycle operation is Title 7 – Motor Vehicles and Traffic. The following is a summary of the applicable ordinances that are relevant to this planning study:

**Bikes on Sidewalks - CHAPTER 3 – DRIVING RULES, Sec. 7-3-15- RESTRICTIONS ON DRIVING (Code § 10.20.060)** states that It is unlawful for any person to ride or propel a bicycle on any sidewalk in the city. (1977) – Most people ride on sidewalks because the city streets are not low stress. The key to the overall biking effort is to provide appropriate bicycling facilities that support where Marion residents want low stress separated facilities to access destinations.

**Bicycle Prohibited Areas - CHAPTER 8 – SKATEBOARD AND BICYCLES, Sec. 7-8-2 – PROHIBITIONS (Ord. 3172, 4-14-2014)** states that it is unlawful for any person to ride a bicycle on the sidewalks, parking areas, driveways, yards, and all areas associated with parking lots on the following municipal properties:

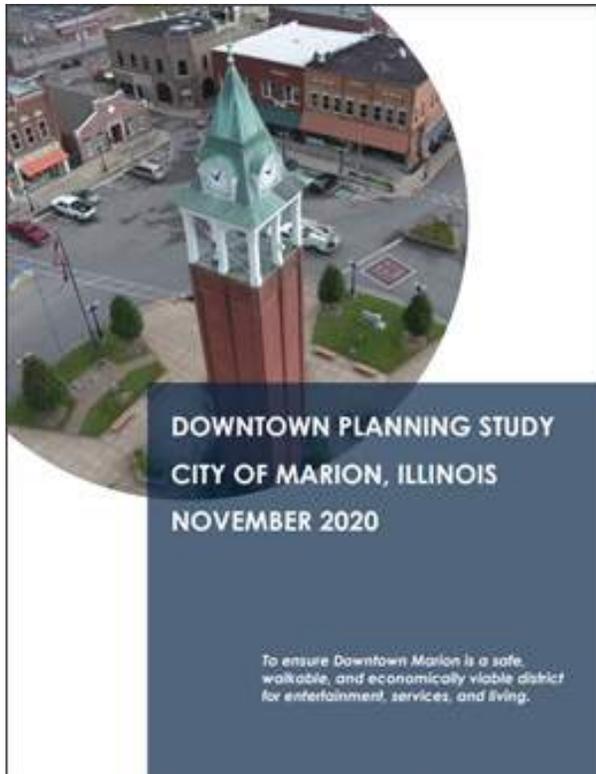
- City hall and city hall grounds
- The Tower Square
- Municipal parking areas
- The Marion Carnegie Library

- The Pavilion of the City of Marion
- The Marion Cultural and Civic Center

While it appears this ordinance is addressing the use of BMX/trick bicycles in the downtown areas to avoid safety hazards or damage to property, it creates a roadblock in implementing bicycle infrastructure and support facilities at these city institutions. This ordinance should be revised to permit bicycling to designated bike parking locations and bike dismount/walk your bike areas.

## DOWNTOWN PLANNING STUDY - 2020

Many businesses and residents have actively worked towards restoring and rejuvenating Downtown Marion and in 2019 the city decided to take action. The aim of this plan is to improve the public infrastructure in and around the Downtown Tower Square.



### Recommendations pertinent to bicycling in Marion:

The plan includes several guidelines for streetscaping that include or can accommodate bicycle travel to downtown Marion:

#### Bike Racks:

*Provide bike racks at major destinations and in larger parking lots. Consider attractive bike racks that allow the bike frame to be locked to the rack.*

- *Promotes biking and reduces chances of bikes being locked to trees, poles, fences, etc.*
- *Can be an opportunity for public art or to add subtle color to the area.*
- *Can coordinate with the high school shop class for designs unique to Downtown Marion, adding community character and placemaking.*

#### Signs/Poles:

*Add wayfinding signage and make it consistent throughout downtown and Marion.*

1. *Adds to the downtown identity and helps direct driver/ pedestrians to community destinations.*
2. *Promotes businesses and enhances community character.*
3. *Wayfinding Signs should reflect the character and nature of the Downtown and have a consistent design concept throughout the area.*
4. *Consider the following techniques:*
  - a. *Wayfinding signage should direct people to key locations in and around Downtown Marion (e.g. City Hall, Court House, Civic Center, Carnegie Library,*

*the Hub, restaurants, shops, parks, markets, etc.) as well as places within the region (trails, historic sites, outdoor recreation, etc.).*

*b. Signage should be attractive and coordinated.*

*c. The design should be easy to read and easy to update as changes occur*

### Vision

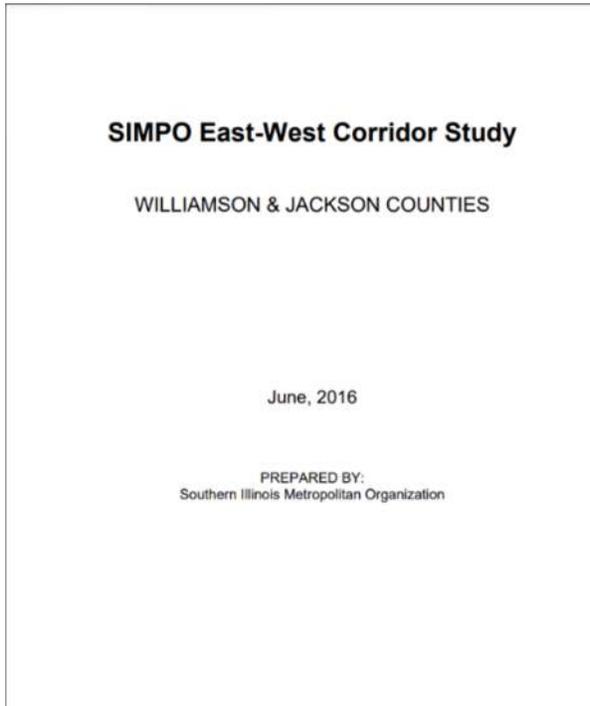
*[A downtown] that activates the Tower Square year-round and provides flexible in use. It introduces a water feature for the warm months and an area for an ice rink in the winter months. It provides new parking areas that can convert to outdoor plazas. It transforms for the alleyways into places for safe alternative transportation modes. It introduces safer traffic patterns and allows for accessibility of all users. It introduces more trees, shrubs and landscaping. And, it excites and ignites imagination and a desire to be downtown.*

#### Alleyways:

*Alleyways should be considered as spaces for safe "alternative transportation" including bicycles. They should include string lights for aesthetics, safety, and nighttime interest.*

## SIMPO EAST-WEST CORRIDOR STUDY – 2016

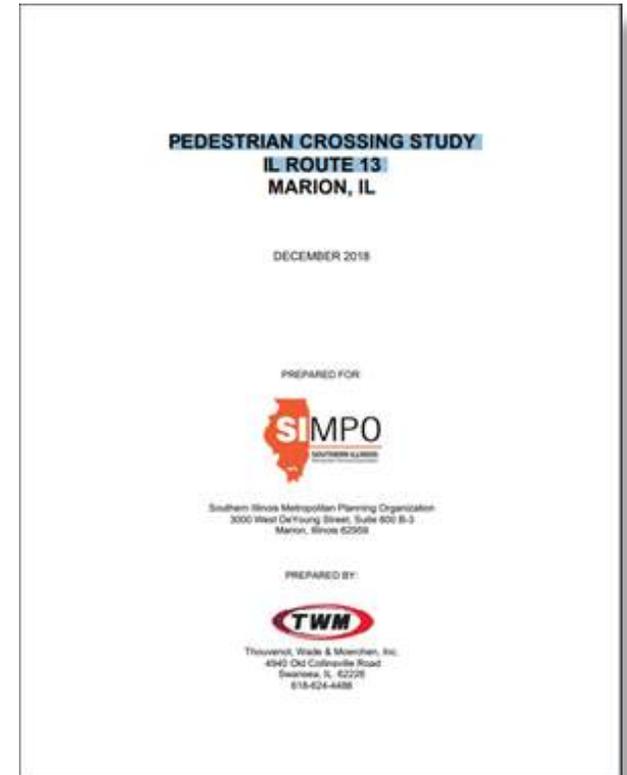
This study was conducted to identify the most feasible and beneficial corridor in the SIMPO planning area that could supplement IL-13, the primary east/west arterial route through the region. Marion is among the cities served by IL 13 as it crosses through the northern half of town and leads directly to the city centers of Carbondale and Murphysboro to the west Harrisburg to the east and provides indirect access to most other communities in the region. The average annual daily traffic figure exceeds 30,000 on IL-13 between Marion and Carbondale. An additional east/west corridor could alleviate congestion on IL 13 and provide better service to areas that do not have an efficient connection to IL 13.



The study includes two possible corridors, Herrin Road north of Marion between Johnson City and (through a proposed extension) Reed Station Road, and Crenshaw/College/Sycamore between Court Street/IL-37 north of Marion and Reed Station Road. The study leaves the door open for bicycle facilities to be included, but makes no recommendation for their accommodation outside of providing information regarding IDOT regulations for implementing such accommodation. It states that if the Herrin Road corridor is selected bicycle accommodation should include an 8' paved shoulder since the ADT is greater than 2,000 vehicles and that if Crenshaw/College/Sycamore is selected, a minimum shoulder width of 4 feet is required and would be exceeded by the recommended design criteria. The plan concludes by recommending the Herrin Road corridor.

## PEDESTRIAN CROSSING STUDY IL ROUTE 13– 2018

The purpose of this study was to calculate the feasibility of an enhanced pedestrian crossing across IL Route 13 (DeYoung Street) at Ray Fosse Park to a point somewhere between Garfield and Otis Streets. After studying existing conditions, vehicular traffic, and pedestrian traffic and meeting with stakeholders, various design standards were studied. This included a pedestrian bridge, a pedestrian tunnel, a marked crosswalk, a median refuge island, rectangular rapid flashing beacons, pedestrian hybrid beacon/high-intensity activated crosswalks, and/or traffic signals.



Four alternatives were developed for implementation. They are as follows:

- Option 1 – Pedestrian Bridge over IL Route 13.
- Option 2 – Tunnel Under IL Route 13
- Option 3 – At-Grade crossing with IL Route 13
- Option 4 – Extend IL Route 13 Sidewalk and Enhance Traffic Signals at State & Fair Streets

The outcome after further consultation with SIMPO, the City of Marion, and IDOT District 9 was that an at-grade crossing (Option 3) was the preferred alternative. An exact location for it would be determined during Phase I Engineering.

While primarily aimed at increasing pedestrian safety, bicycle safety was considered as well. While not the safest form of crossing as one must still cross DeYoung Street on the travel lanes, it would be an improvement over the current lack of any crossing infrastructure. Further accommodation for bicyclists would need to be considered to ensure safety among both bicyclists and pedestrians.

### AN URBAN BEGINNING: MOVING FORWARD TOGETHER SIMPO 2045 LONG RANGE TRANSPORTATION PLAN - 2020

This plan acts has the Long Range Transportation Plan (LRTP) for the Carbondale-Marion Metropolitan Area and is maintained by the region’s metropolitan planning organization, the Southern Illinois Metropolitan Planning Organization (SIMPO). The plan was developed in accordance with federal guidelines to assist



with coordinating and implementing regional transportation projects and programs.

The LRTP includes a section on bicycle planning and highlights the importance of having a bicycle network as part of the regional transportation network:

*As the MPA continues to grow, incorporating non-motorized transportation into future roadway projects will ensure that people of all ages and abilities have the opportunity to travel about their community, regardless of their mode of choice.*

The LRTP recognizes that most of the current bike infrastructure is located in and around Carbondale and include bike lanes, pavement markings, and designated bike paths.

#### Bicycle Level of Service:

The LRTP includes its own bicycle level of service assessment, similar to the BLTS assessment found in this plan. The metrics were somewhat different, providing results that show residential streets as less bicycle friendly than the BLTS of this plan but also finds some of the arterial streets more bicycle friendly than this plan. Two of the main differences between the rating systems is that the Bicycle Level of Service considers pavement width and condition while the BLTS finds these less important to bicyclist comfort. There are also slight differences in how ADTs

and speed limits factor in. The Bicycle Level of Service is Figure 2.20 provides an overview of the evaluation criteria for the LRTP Bicycle Level of Service and Figure 2.21 shows the results of the evaluation.



Figure 2.21 - Results of the Bicycle Level of Service Evaluation

BLOS Grade	BLOS Score	Description
A	<=1.5	Excellent bicycle environment
B	1.5-2.5	Good bicycle environment
C	2.5-3.5	Fair bicycle environment (acceptable to experienced and novice bicyclists)
D	3.5-4.5	Poor bicycle environment (acceptable to experienced bicyclists)
E	4.5-5.5	Deficient environment (unacceptable to experienced and novice bicyclists)
F	> 5.5	Unsafe environment (unsuitable for any bicycle travel)

Figure 2.20 - Bicycle Level of Service Evaluation Criteria

## Values and Objectives Pertinent to Bicycling in Marion:

Five transportation values were identified in this plan to guide transportation network planning in the Carbondale-Marion Metropolitan Area. They are each accompanied by objectives and strategies for implementation. Through these values and action steps, it is clear that the pursuit of viable bicycle transportation that both connects points within the City of Marion and connects Marion to the region is important. The following are the five values established as well as the supporting objectives

### 1. Support Economic Vitality and Quality of Life

Objectives:

- 1.1 Reduce congestion at the crossroads of commuter routes and retail centers
- 1.2 Support easy access to healthcare providers
- 1.3 Enforce Access Management
- 1.5 Support environmentally sustainable transportation system expansion
- 1.6 Support financially sustainable transportation system expansion
- 1.7 Encourage development in areas with existing infrastructure

### 2. Encourage Transportation Choices

Objectives:

- 2.2 Expand and improve the bicycle facility network- including development of a regional bicycle master plan, incorporation of Bikeable shoulders into rural roadway projects and seeking funding for additional trail segments along IL-13

- 2.3 Increase transit usage- including appropriate passenger amenities
- 2.4 Expand fixed-route transit- including development of operational coordination between RIDES, JMTD and Saluki Express.
- 2.5 Improve roadway system reliability

### 3. Maintain a Safe Transportation System

Objectives:

- 3.1 Reduce the number of crashes
- 3.2 Reduce the number of fatal
- 3.3 Improve safety on pedestrian facilities
- 3.4 Improve safety on bicycle facilities - includes expansion of the bicycle facility network especially along IL 13, development of a bicycle safety education programs with health and education advocates, and production of an annual report of pedestrian and bicycle crashes
- 3.5 Improve safety for at-grade rail crossings - including grade-separated rail crossings where feasible and adequate signing and signal control at all at-grade rail crossings
- 3.6 Improve safety within the vicinity of schools- includes providing extensive sidewalk facilities between schools and residential areas and multiple entrance and exit options to reduce congestion.

### 4. Preserve the Existing System

Objectives:

- 4.1 Maintain satisfactory bridge conditions
- 4.2 Maintain satisfactory pavement conditions

- 4.3 Maintain satisfactory sidewalk conditions - including completing an MPO-wide inventory of sidewalks

- 4.4 Maintain a satisfactory bus fleet

- 4.5 Preserve existing environmental assets

### 5. Foster Coordination Throughout the MPA

Objectives:

- 5.1 Increase coordination between key stakeholders to maximize the strengths of the region
- 5.2 Educate and inform the general public
- 5.3 Coordinate with economic, health, and education advocates to create a network of support groups
- 5.4 Coordinate transit service within the MPA

## STATE POLICIES AND REGULATIONS

In 2007, the State of Illinois enacted Section 4-220 of the Illinois Highway Code, or what is commonly known as the Complete Streets Law. This law states the following:

*In general, projects with start dates after 2008 have been required to facilitate bicycle and pedestrian transportation where warranted.*

Since then, there have been essentially two main documents that provide guidance and recommendations regarding bicycle planning at the state level in Illinois, the Bureau of Local Roads & Streets Manual (specifically Chapter 42) and the Illinois Bike Transportation Plan. The Bureau of Local Roads and Streets Manual presents most of the information normally

required in the development of a typical local agency project by IDOT. IDOT requires that a project designer try to meet all criteria and practices presented in the manual, including roadway designs that meet IDOT's operational and safety requirements while preserving the aesthetic, historic, or cultural resources of an area. Chapter 42 specifically deals with planning and designing bicycle facilities.

The Illinois Bike Transportation Plan, launched in 2014, is a chapter in the Transforming Transportation for Tomorrow plan, which is the state's first multimodal transportation improvement program. The Bike Transportation Plan is the first statewide bike plan in Illinois and will allow IDOT to systematically integrate transportation alternatives into existing state operations.

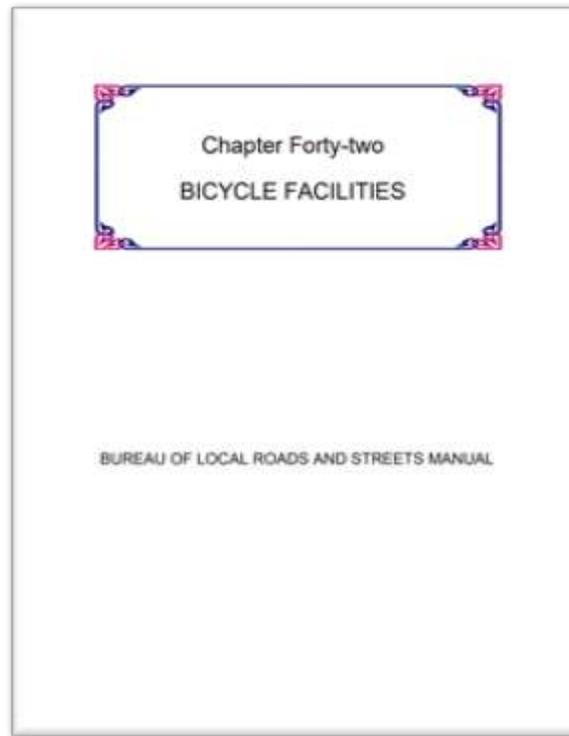
The following is a review of the existing plans and relevant recommendations to creating the policies and recommendations contained in this plan for the City of Marion.

## **BUREAU OF LOCAL ROADS & STREETS MANUAL – BICYCLE FACILITIES (CHAPTER 42)**

The Bicycle Facilities chapter (Chapter 42) of the Bureau of Local Roads & Streets Manual outlines the overarching policy of bicycle facility planning for local agencies in the State of Illinois:

*The local public agency (LPA) should consider the travel needs of all users of a transportation corridor when planning transportation improvements. Bicycle facilities shall be considered on all Federal-aid projects and should also be considered on MFT projects, where practical.*

To fulfill this policy, IDOT recommends that local agencies should consider need based on



context of the location (urban, rural towns, rural highways, or unpopulated rural areas) and conduct a needs assessment based on six criteria provided:

- The highway or street is designated as a bikeway on a regionally or locally adopted bike plan or published in a regional or locally adopted map as a recommended bike route.
- The 5-year projected two-way bicycle traffic volume after completion of the project is 25 ADT or greater during the peak three months of the bicycling season on a highway or street where the current vehicular traffic exceeds 1000 ADT.

- The route provides primary access to a park, recreational area, school, other designated bikeways/trails, or other significant destination.
- The route provides unique access across a natural or man-made barrier (e.g., bridges over rivers, roadways, railroads) or under access-controlled facilities and roadways.
- The highway project negatively affects the recreational or transportation utility of an independent bikeway or trail. Highway projects will negatively affect at-grade bikeways, paths, and trails where they are severed, when the projected roadway traffic volumes increase to a level that prevents safe crossings, or where the widening of the roadway prohibits sufficient time for safe crossing.
- Provisions may also be necessary to safely accommodate bicycle traffic on highways where bridge decks are being replaced or rehabilitated.

If from the needs assessment it is determined that bicycle facilities should be implemented as part of a highway project, the manual provides guidance on appropriate accommodations but suggests that the primary source of planning and design guidance should be the most recent edition of AASHTO's Guide for the Development of Bicycle Facilities. For more urban locations, IDOT further recommends consulting the National Association of City Transportation Officials' Urban Bikeway Design Guide and the Institute of Transportation Engineers' Designing Urban Walkable Thoroughfares. The manual follows the principles described in each of these documents.

## ILLINOIS BIKE TRANSPORTATION PLAN



The Illinois Bike Transportation Plan is built upon five foundational principles. They are:

**Access-** Bicycling will be accessible to all Illinois residents regardless of age, ability, background, and income.

**Choices-** Bicycling will be a safe and viable transportation option, among a host of mobility options, for people of a broad range of ages and abilities in all areas of Illinois.

**Connectivity-** Bicycling will seamlessly connect with other modes of transportation like trains and buses and the state transportation system will provide diverse options for bicycling that connect communities throughout Illinois.

**Safety-** Bicycling will be a safe and comfortable activity for everyone. IDOT will continue progressing towards its goal of zero traffic fatalities and strive to minimize safety concerns for current and prospective bicyclists.

**Collaboration-** IDOT will strive to strengthen existing partnerships and to build new and innovative ones to advance its vision and goals for bicycling in the state.

Through research for the plan, it was found that Illinois ranked rather average by various national advocacy entities that attempt to study different components of the impacts of bicycling. At the time of writing, Illinois ranked 19th in bicycle commuting participation by the Alliance for Biking and Walking, 30th in health by America's Health Ratings, and 9th for bicycle friendly states by the League of American Cyclists. Policies and best practices implemented by peer states such as Wisconsin, Minnesota, and Oregon, provided further context for Illinois's performance in bicycle planning. Further research and data analysis from a variety of other sources provided the basis for the plan's recommendations.

### Recommendations Pertinent to Bicycling in Marion:

The plan's recommendations are organized into five categories: Planning and Policies, Design and Maintenance, Funding, and Education/Promotion. Each recommendation included an action item and objective to complete. Below are the action items and objectives most relevant to bicycle planning in the City of Marion:

#### Planning and Policies:

- Improve Complete Streets inventory and roadway evaluation procedures
- Ensure that Complete Streets projects have an equal consideration in the Multi-Year Planning Process
- Develop policies, design guidelines and programs that support the IDOT zero fatality policy

- Develop a state bicycle network that connects with population centers, popular destinations, and national bicycle networks
- Continue to support the SRTS Program and establish goals with performance measures to support its advancement and programs that support the IDOT zero fatality policy
- Make intermodal connections a priority in bikeways planning efforts
- Work with public transit and rail partner agencies to improve intermodality
- Coordinate with other agencies on bicycle and pedestrian issues

#### Design and Maintenance

- Update design guidance and policies for bicycle and pedestrian projects and programs within department manuals

#### Funding:

- Enhance the efficiency and effectiveness of the state's grant programs ITEP Provide funding resources for communities and streamline the ITEP application process. Enhance the online application process by providing tools such as a detailed facility cost-estimation tools.

#### Education and Promotion:

- Expand public education, outreach and enforcement for bicycling
- Continue to develop and expand educational resources for residents
- Expand public education, outreach and enforcement for bicycling



# 3. COMMUNITY ENGAGEMENT

# COMMUNITY ENGAGEMENT

The purpose of the Marion Bike Plan is to develop an integrated network for biking, as well as define and assess programming and infrastructure projects that will produce inviting, low-stress cycling infrastructure for both commuting and recreational users. The efforts of this plan are part of a larger economic development strategy to attract young professionals and small business owners to Marion.

The Engagement Plan was designed to have coordinated engagement with the public and principal stakeholders, aligning planning activities as they progress. It also included discovery and education phases, as well as identification of key messages, critical questions to ask the community, and a schedule of activities for targeted audiences and how to reach them.

## *Engagement Goals*

- 1. Create community and stakeholder support by building trust and communicating benefits and opportunities*
- 2. Identify transportation concerns and challenges between biking and driving*
- 3. Coordinate this plan with existing, regional land use and transportation plans.*
- 4. Build consensus on the network, projects and programs*

## STUDY OVERSIGHT COMMITTEE

The Engagement Plan included a Study Oversight Committee with representation from a variety of champions and entities that would implement and benefit from the plan. Below is a list of Study Oversight Committee members:

Ron Osman – Commercial Property Owner  
Wayne Tate – Event Organizer  
Ashley Gott – VisitSI Tourism Board Member  
Rob Landes – Business Owner (Good Life Nutrition)  
Dave Severin – State Representative  
Hank Deiters – Founder of Marion Bike Club  
Allison Hasler – Advocate  
Cary Minnis – Workforce Advisory Board

## TECHNICAL ADVISORY COMMITTEE

The Engagement Plan also included a Technical Advisory Committee with presentation from city departments and partner agencies that will implement and benefit from the plan. This committee was engaged on technical details of the plan to ensure support for plan elements, recommendations, the process for implementing the plan, and priorities of implementation. They were engaged during the process through virtual and in person meetings and e-mail correspondence to ensure technical buy-in at every step.

Jim Webb – City Commissioner of Streets  
Doug Phillips- Superintendent of Streets Department  
Glenn Clarnia – City of Marion Economic Development Director  
Mike Absher – Mayor  
David Fitts – Chief of Police  
Cody Moake – Chief of Staff  
Travis Emery – Williamson County Highway Department  
Carrie Nelson – IDOT District 9  
Michael Ziarnek- SIMPO

## EDUCATION PHASE

Following an investigation into the history of bicycle projects and planning efforts in Marion for context and guidance, the education phase began at the initial committee meetings as well as the initial public meeting on the plan and plan elements.

The planning team provided education regarding the elements of the plan, benefits of bicycle network planning and how to implement and maintain the recommendations from the completed bike plan.

# SCHEDULE OF ACTIVITIES

Engagement Activity	Schedule
Oversight Committee Meeting 1	Sept. 29, 2021
Technical Advisory Committee Meeting 1	Sept. 29, 2021
Open House #1	Nov. 18, 2021
Oversight Committee Meeting 2	Feb. 15, 2022
Technical Advisory Committee Meeting 2	Feb. 15, 2022
Open House #2	Apr. 27, 2022

## ENGAGEMENT AND METHODS

Below is a summary of the methods that were included in the engagement plan to reach target audiences.

### PUBLIC MEETINGS

Two public meetings were scheduled to provide education and two-way communication opportunities for the general public, advocates, and other interested individuals.

**Open House 1:** The purpose of this first open house was to inform the community about the project and findings to-date, obtain preliminary input on the issues and opportunities for improvements, and gather feedback on the community’s vision for bike transportation in Marion.

The meeting was held on November 18, 2021, at the Hub Recreation Center. About 15 to 20 people attended to ask questions, gather information, or provide feedback. They were composed of a combination of those who had heard about the open house and those who were at the recreation center. Comment cards, surveys, and stay informed request forms were made available and five of each were received. The overall response was positive with attendees favoring the direction of the plan goals and vision.

**Open House 2:** The second open house for the Bike Marion plan was held in the evening of Wednesday April 27, 2022 at the Hub Recreation Center. The purpose of this open house was to review the vision and goals with the public and facilitate discussion on the proposed bike network and accompanying infrastructure, including bike parking, intersection improvements and priorities.

The attendance for the meeting included people who came to the event and people who were at the recreation center. Seven attendees submitted requests to stay informed about the planning process, three comment cards were filled out, and several comments were posted on the online interactive map, discussed later in this chapter. Many more people engaged in conversation or expressed interest in the plan. It is estimated that between 15 to 25 people engaged with the Horner & Shifrin staff and/or the displays.

A variety of topics were discussed with attendees and included the following main themes:

- 1. Schedule** – many people stated they like the idea of a bike plan and asked when it would be approved and when the implementation phases could start.
- 2. Safety** – a high priority for most of the attendees. Not many people considered themselves strong and fearless – the type of rider who feels confident riding

anywhere – and would prefer a network that is largely off-street or separated from traffic. Desire for more connections to the southeast area of Marion to create safe connections.

- 3. Connectivity** – a high priority for most of the attendees, particularly long distance, confident riders, as a desire to be able to connect to not just points in Marion but points throughout the region, including neighboring cities like Carbondale and nearby trails like the Tunnel Hill Trail.
- 4. Need** – a few participants were apprehensive that a bike network was needed and could work in Marion given that they perceive the city to have an ingrained, auto-centric nature.

### WEBPAGE

A webpage on the city’s website was created for the plan to provide dissemination of critical information and updates in the plan process and will continue to serve as a resource for the public to monitor plan implementation. Members of the public were given the opportunity to sign-up for communications on planning milestones and leave comments for the study team as a direct line of communication.

### SOCIAL MEDIA

Social media platforms administered by the city and area advocacy groups like the Marion Illinois Cycling Club provided information about the planning process and upcoming planning events that the public could participate in.

## INTERACTIVE MAP

To gain a broad level of community input, an interactive digital map (Figure 3.1) was created using Horner & Shifrin's Skyview Map Application portal interface shown below. The public encouraged to place digital pins at locations around the city and leave comments about walking and biking in Marion. This map was made available throughout the planning process but gained the most input around the time of Community Meeting 2, when the recommended network was available for comment.

See Appendix 1 for a list of comments received from the interactive mapping tool.

## SURVEY/COMMENT CARDS

At both open houses, the survey and comment cards made provided feedback on several items related to the plan. They were asked to rate the vision and goals as well as to list what about the idea of bicycling around Marion they are excited about and what they are concerned about.

Seven comment cards were returned by attendees from the open houses, five at the first open house and three at the second open house. In both instances agreement with the direction of the vision and goals was unanimously positive. Furthermore, items that were noted as bringing excitement and concern also aligned with the vision, goals, and objectives.

See Appendix 2 for further details on the comments received from the survey/comment cards.

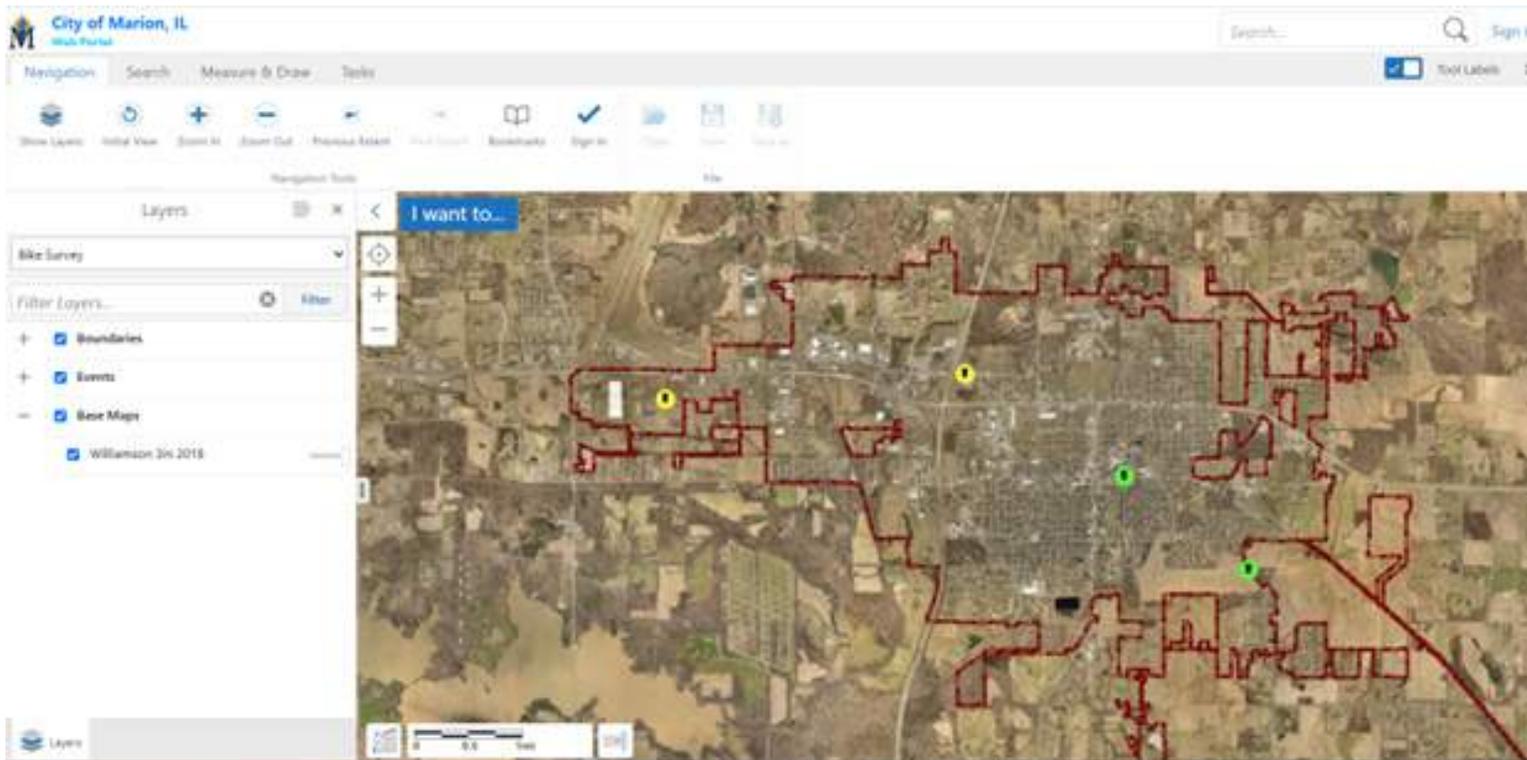


Figure 3.1 - Interactive Map

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# 4. VISION GOALS AND OBJECTIVES

# VISION, GOALS, AND OBJECTIVES

The southern Illinois region has a significant bicycling culture in both urban and rural settings and for both commuting and recreation. From college students and professors in Carbondale to families and experienced bicyclists accessing the Tunnel Hill Trail and Illinois back roads, cycling is a part of Southern Illinois. At the heart of southern Illinois is the City of Marion. From initial meetings with the Plan Oversight Committee and Technical Advisory Committee, it was established that the city has strong, untapped potential to leverage the local cycling culture to enhance the quality of life for Marion’s community. There is a strong desire for cycling infrastructure in Marion and a master plan is needed to define this need and determine an action agenda towards implementation.

With this in mind, a vision for what cycling accommodation in the City of Marion and strategies for how to achieve that vision were accomplished through establishing a vision statement and a set of goals with supporting objectives. At the core of goal and objective formation were the League of American Bicyclist's aforementioned Five Essential Elements (the Five E's) of a Bicycle Friendly Community to organize the goals into a clear framework based on proven elements of great bike plans: Equity, Engineering, Education, Encouragement, and Evaluation. Also included are two additional E's- Enforcement and Economics for a total of seven E's. Figure 4.1 provides an overview of the seven E's of the Bike Marion Plan.

Multiple objectives have been identified to add measurable actions to each goal. These provide the foundation for the plan and informed the formation of recommendations that will in-turn see the vision and goals become a reality.

## GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

### GOAL 1, ENGINEERING:

The Bike Plan for Marion will emphasize the use of current best practices to implement bicycle infrastructure that is accessible and usable by people of all ages and abilities.

#### Objectives:

- **Objective 1.1:** Increase total bicycle network miles .
- **Objective 1.2:** Increase network connectivity by reducing gaps between existing facilities.
- **Objective 1.3:** Increase bicycling safety through improvements to existing bicycle facilities and network expansion .

### Vision

*Marion, Illinois, will provide a low-stress, connected, safe, and inviting city for bicycling and bicyclists of all ages and abilities for healthy and active lifestyles, economic growth, and a high quality of life for businesses and residents.*



Figure 4.1 - The Seven E's of the Marion Bike Plan

- **Objective 1.4:** Meet or exceed minimum design standards and incorporate best practices in facility design, utilizing national resources including the latest editions of the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide, and the Federal Highway Administration (FHWA) Small Town and Rural Multimodal Networks Guide.
- **Objective 1.5:** Coordinate with adjacent municipalities and other local and state agencies to increase regional connectivity, particularly for projects that extend to the city limits or connect with bicycle facilities outside the city’s jurisdiction like the Crab Orchard Greenway .
- **Objective 1.6:** Maximize bicycle amenities at the city’s transit center and any future added transit stops to support multimodal transportation.
- **Objective 1.7:** Amend the zoning ordinance, subdivision regulations, and other policy tools to create a bicycle-supportive built environment .
- **Objective 1.8:** Provide support facilities to enhance the bicycle network in the form of short- and long-term bicycle parking, bicycle repair stations, bike share stations, and wayfinding signage.

#### Performance Measures:

- Measure and track total bicycle network miles on a yearly basis.
- Adopt the NACTO Bike Guide and FHWA Small Town and Rural Multimodal Network Guide for use in **design, operations and maintenance** of bikeways by 2023.

- Implement 50% of the **planned network** of Calm Streets by 2025, and 100% by 2029.
- Implement priority elements by 2025 and the majority of the other elements by 2035.
- Implement traffic calming procedures and policies that encourage traffic calming devices as necessary and a mechanism for the public to request traffic calming measures.

## GOAL 2, ENCOURAGEMENT, ENFORCEMENT, AND EDUCATION:

The City of Marion will promote the increased the use of bicycling in Marion as a mode of transportation and foster an environment of responsibility and mutual respect among people walking, bicycling, and driving with activities and programs that promote benefits of bicycling, as well as bicycle safety.

#### Objectives:

- **Objective 2.1:** Increase opportunities for adults, college students, teens, and youth to learn basic bicycle skills and traffic safety through regularly offered courses and training.
- **Objective 2.2:** Work with private and public schools to increase bicycle skills and traffic instruction as a part of school curricula.
- **Objective 2.3:** Support community partners’ bicycle-related education initiatives to reach targeted populations and the broader community .

- **Objective 2.4:** Support community partners’ bicycle-related encouragement initiatives to reach targeted populations and the broader community .
- **Objective 2.5:** Use the City’s various social media platforms to promote bicycling.
- **Objective 2.6:** Work with local businesses and the chamber of commerce to create incentive programs for bicycling to work, to shop, and to community events .
- **Objective 2.7:** Support law enforcement with training opportunities to address the needs of bicyclists and other road users .
- **Objective 2.8:** Develop law enforcement programs and activities to promote safe and responsible travel behavior .

#### Performance Measures

- Promote and support two or more bicycle events for the general population annually that promotes bike plan implementation. (Mayor Bike Ride, Community Bike Ride, etc.)
- Promote and support two or more bike safety trainings will be offered annually and documentation of number of bicyclists trained documented.
- Offer bike safety classes within the elementary and middle school students annually.
- Obtain supplemental training for law enforcement in the laws that govern biking as well as motorist interactions with cyclists.

## GOAL 3, EVALUATION:

The City of Marion will establish and monitor specific performance targets to document results of the implementation of the Bike Plan.

### Objectives:

- **Objective 3.1:** Create an annual implementation agenda to guide bicycle project and program development and delivery within budgetary constraints established in the Capital Improvement Plan .
- **Objective 3.2:** Shift the role of advisory committee overseeing this plan to support evaluation, data collection, and implementation tracking efforts.
- **Objective 3.3:** Use evaluation and implementation tracking measures to highlight plan-related accomplishments and communicate the importance of bicycling to the community.
- **Objective 3.4:** Encourage community participation and feedback through ongoing engagement activities and open communication channels.

### Performance Measures

- Monitor mode shift for increasing bicycling on an annual basis
- Prepare a report card of progress measurement of the bike plan annually as reported to the City Council to document progress and effectiveness of the plan.

## GOAL 4, EQUITY:

The City of Marion will establish the network and programs that focus on all ages and abilities and income levels to establish a network that focuses on connectivity to all areas of the community reaching all residents.

### Objectives:

- **Objective 4.1:** Increase bicycle network coverage to become an integral part of the Marion transportation network, reaching all populations and areas of the city
- **Objective 4.2:** Provide facilities for bicyclists to safely and conveniently store their bike at centers of activity
- **Objective 4.3:** Pursue designation as a Bicycle Friendly Community by the League of American Bicyclists.

### Performance Measures

- Adopt a complete street policy by 2023.
- Adopt a bike parking ordinance by 2025.
- Achieve Bicycle Friendly Community Status of Bronze by 2025, and Silver by 2029.

## GOAL 5, ECONOMIC BENEFIT:

The City of Marion will retain and attract residents and businesses and support growth.

### Objectives:

- **Objective 5.1:** Connect people to job centers, employment opportunities, educational facilities, recreation facilities, and transit

- **Objective 5.2:** Promote the City of Marion as well as the Crab Orchard Greenway and Tunnel Hill Trail as a destination and base camp for recreational tourism
- **Objective 5.3:** Work with Williamson County Community and Economic Development Department, Marion Chamber of Commerce, and major employers to leverage bicycle infrastructure projects as assets to attract employers, talent, and development to the City of Marion
- **Objective 5.4:** Pursue funding strategies for project and program development that leverage community partnerships and existing resources
- **Objective 5.5:** Develop, fund, and staff maintenance practices and procedures that extend the quality and life cycle of active transportation infrastructure and maximize the value of investments in walking and bicycling.

### Performance Measures

- Plan and adopt a bicycle wayfinding plan by 2023 and implement elements of the plan annually on each new bikeway segment installed annually.
- Promote Marion as a destination and base camp for regional cycling in regional publications during spring and summer months.

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# 5. NETWORK RECOMMENDATIONS

# RECOMMENDED NETWORK

The recommended bikeway network is a culmination of a vision from Marion city officials and the public as well as an extensive planning process centered around bicycling network best practices and how to apply them to the Marion setting. At full built-out, the network will provide both transportation and recreation opportunities that support safe, enjoyable, connected bicycling for all ages and abilities. It will feature multiple bikeway types with a unifying branding and wayfinding scheme. The details of the recommended network are outlined in this chapter.

## NETWORK ATTRIBUTES

The decision to pursue developing a bicycle network in Marion is rooted in the desire to build upon the momentum around the region and strikes a balance between recreation and transportation; a financially feasible network that will contribute to the economic development of the region and attract new residents. To strike this balance, a series major attributes that the network would have were developed to ensure that the vision and goals were realized:

**Connectivity** – The ability of the system to connect people from their homes to as many destinations and destination types as possible by bike, not only in Marion but throughout the region.

**Directness** – Providing routes that are not circuitous or meandering that make travel times unnecessarily long and conveying that travel by bike is a forethought within the Marion transportation network.

**Comfort** – To get potential riders and current riders alike to utilize the bicycle facilities, they need to feel inviting and welcoming; that they are a forethought in transportation planning and an integral part of the overall transportation system.

**Safety** – A successful bike network is one that appeals to all ages and abilities. Providing a safe network that minimizes hazards for users is important to ensuring the riding experience is comfortable for all ages and abilities and is key to gaining buy-in from those who are interested in bicycling

**Experience** – The quality of the riding experience should be one where it feels pleasant and fun to ride rather than a chore.

**Feasibility** – With the initial political support for the plan rooted in economic development, providing significant value while minimizing costs is important.

**Evolution** – All cities are dynamic and it so it should not be expected that the bicycle needs and feasibility in Marion today will be the same tomorrow. Therefore it is important that what is proposed has the ability to adapt to changing needs over time and does not need to be completely undone to move forward.

## RECOMMENDED NETWORK

Figure 5.2 shows the recommended network by bikeway type and locations of current intersection improvement projects. The plan is designed to capitalize on Marion's existing low stress residential streets for a calm street network that is connected to north-south and east-west bikeway spines that connect the city together and with its destinations. A total of about 66 miles of bikeway are being proposed in this plan. Figure 5.1 breaks down the recommended bicycle improvements by mileage per type.

Figure 5.1 - Recommended Bicycle Improvements by Mileage

Bikeway Type	Mileage
Sidepath/Shared Use Path	18.4
Calm Street	16.2
Rail ROW Trail	11.0
Bikeable Shoulder	10.8
Bike Lanes	7.8
Share the Road	1.8

The next pages provide definitions and illustrations of the bikeway types that are recommended for the Marion plan.



# Recommended Network

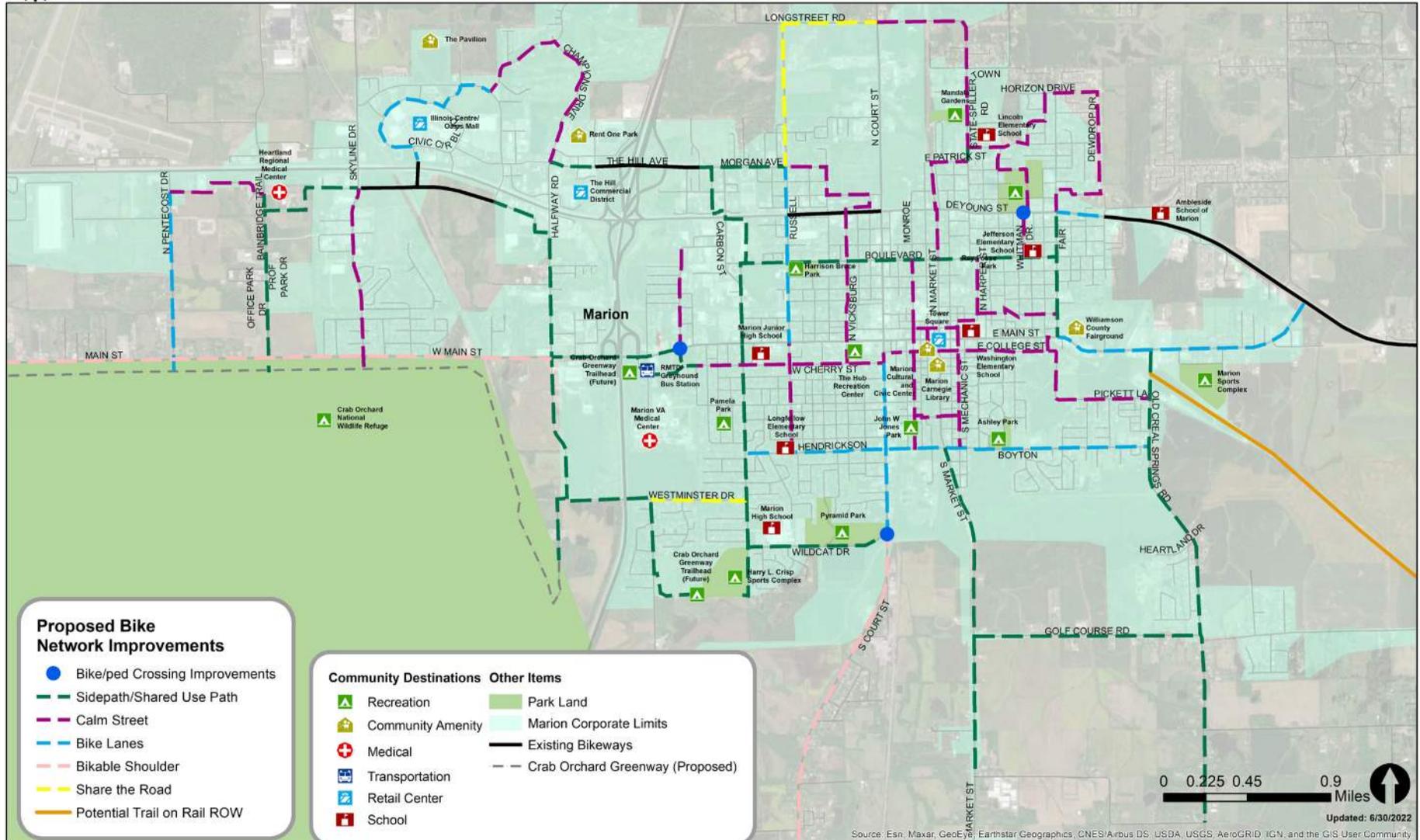


Figure 5.1 - Proposed Bike Network Improvements for the City of Marion

# BIKEWAY TYPES

Bike networks utilize a variety of bikeway types that each provide purpose and value given the context for which they've been implemented. Bikeway types generally fall into three categories: 1) mixed traffic facilities, 2) visually separated facilities, and 3) physically separated facilities. In assembling the network for Marion, bikeway treatments from each of these three categories were chosen based on locational context and consideration for the established vision, goals, and objectives. Below is an overview of the facilities that are recommended for implementation on the Marion bikeway network.

## MIXED TRAFFIC FACILITIES

Mixed traffic facilities involve combining cyclists with motor vehicle traffic (and sometimes pedestrians) and are most suited for roads with low volumes of traffic that operate at low speeds. The low intensity of motor vehicle traffic allows a sense of safety and comfort without the need for separation.

### CALM STREETS

Calm streets (Figure 5.2) (also called Bicycle Boulevards) are streets with low volumes of vehicle traffic with low prevailing speeds (typically in residential areas) enhanced for bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications.

#### Typical Application

- Parallel with and near major thoroughfares (1/4 mile or less), keeping cyclists away from the safety hazards of traveling on a busy street.



Figure 5.2 - Elements of a calm street

Source: *Small Town and Rural Design Guide - Bicycle Boulevard*: <https://ruraldesignguide.com/mixed-traffic/bicycle-boulevard>

- Best on streets with travel speeds at 25 mph or less and with traffic volumes of fewer than 3,000 vehicles per day.
- Follows a desire line for bicycle travel and is relatively continuous (2-5 miles). Alignments that meander or are circuitous should be avoided.

#### Safety

In a comparison of vehicle/cyclist collision rates on streets modified as calm streets for cyclist use, compared to parallel and adjacent arterials with higher speeds and higher traffic volumes, calm streets are found to have a crash reduction factor of 63%, with rates two to eight times lower when controlling for volume.

#### Design Considerations

Signage designating a given street as a calm street as well as pavement markings are the

minimum treatments necessary to designate a street as a calm street. Wayfinding and branding signage can also be used to guide bicyclists along a calm street network and create identity.

When implementing volume-control treatments based on the context of the calm street, motor vehicle volumes should range from 1,000 to 3,000 vehicles per day.

#### Construction Costs

Construction costs for a calm street can range from low to moderately priced depending on the level of traffic calming implemented. Without the need for traffic calming, costs are associated with signage and pavement markings. Traffic calming measures add to the level of bicyclist safety significantly but add to the overall cost significantly as well.

## Speed Management (Traffic Calming)

Streets designated as calm streets should have 85th percentile motor vehicle speeds of 20 to 25 MPH. Where prevailing motor vehicle speeds are above these speeds, speed management devices can be implemented to reduce motor vehicle speeds closer to that of bicyclists. This creates a more comfortable environment for bicycling and has the added benefit of producing safer spaces for pedestrians as well.

There are many strategies for managing speed but not all of them are right for the Marion context given current traffic conditions and built environments. There are several measures including speed humps, medians, and mini traffic circles that are easy to implement and receive community support and should be considered in areas where speed management should be implemented. Further details on these strategies are provided below:

### Speed Hump

Speed humps (Figure 5.3) are vertical rises in the pavement. They are typically 3 to 4 inches high and 12 to 14 feet long. At these dimensions, speed humps cause motorists to reduce speed to negotiate while cyclists can comfortably glide over them without need for speed reduction. The effect is that they reduce vehicle speeds to 15 to 20 mph.

Speed humps should not be confused with speed bumps that are often found in parking lots or private residential areas. The more abrupt and narrow speed bump can be a safety hazard to cyclists that can lead to falls.



Figure 5.3 - Speed Hump

Source: *Urban Bikeway Design Guide - Speed Management*: <https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/speed-management/>

### Median

Medians (Figure 5.4) are a brief island in the middle of the street that are used to constrict the traffic lane width and provide a visual cue that reduced vehicle speeds. Medians can also provide a pedestrian refuge if paired with a mid-block crossing. The narrowing of the traffic lane, which can be paired with a slight diversion outward, causes motorists to reduce speed to negotiate the space. Cyclists are able to pass through with no speed reduction necessary.

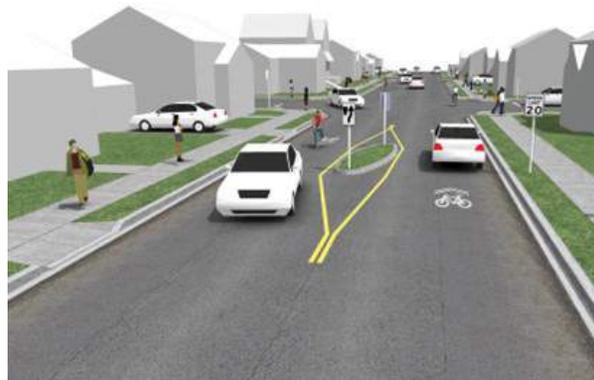


Figure 5.4 - Median

Source: *Urban Bikeway Design Guide - Speed Management*: <https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/speed-management/>

### Mini Traffic Circle

Mini traffic circles (Figure 5.5) are raised islands placed in the middle of intersections on streets with low traffic volumes, typically controlled by stop signs. They reduce speeds similar to medians in that they create an obstacle that must be negotiated to pass through the intersection. Taller landscaping can be placed in the middle to reduce the visual corridor, forcing motorists to be more observant at the intersection. Also similar to medians, they generally allow bicycles to pass through without any speed reduction.



Figure 5.5 - Mini Traffic Circle

Source: *Urban Bikeway Design Guide - Speed Management*: <https://nacto.org/publication/urban-bikeway-design-guide/bicycle-boulevards/speed-management/>

## SHARE-THE-ROAD

Signed share-the-road (Figure 5.6) roadways are similar to calm streets but are not as formalized. They can be found on roads with a variety of prevailing speeds and traffic volumes and for that reason are often best suited for those who consider themselves “strong and fearless” riders as opposed to families with small children. Due to the low level of cyclist accommodation, a motor vehicle driver will usually have to cross over into the adjacent travel lane to pass a bicyclist.

### Typical Application

- In a Marion context, signed share-the-road roadways serve to provide continuity with other bicycle facilities. They can also be used to designate preferred routes through high-demand corridors but this is not recommended.
- Traffic calming, wayfinding, pavement markings, and other enhancements that provide a higher level of comfort are typically minimal compared to a calm street.

### Design Features

- Lane width varies depending on roadway configuration.
- Share-the-road Signage should be applied at intervals frequent enough to keep bicyclists informed of changes in route direction and to remind motorists of the presence of cyclists. Common placement locations include:
  - The beginning or end of a share-the-road route.
  - Where there are changes in direction or the route intersects with other bike routes.
  - Intervals of ½ mile or less on a long stretch of roadway.

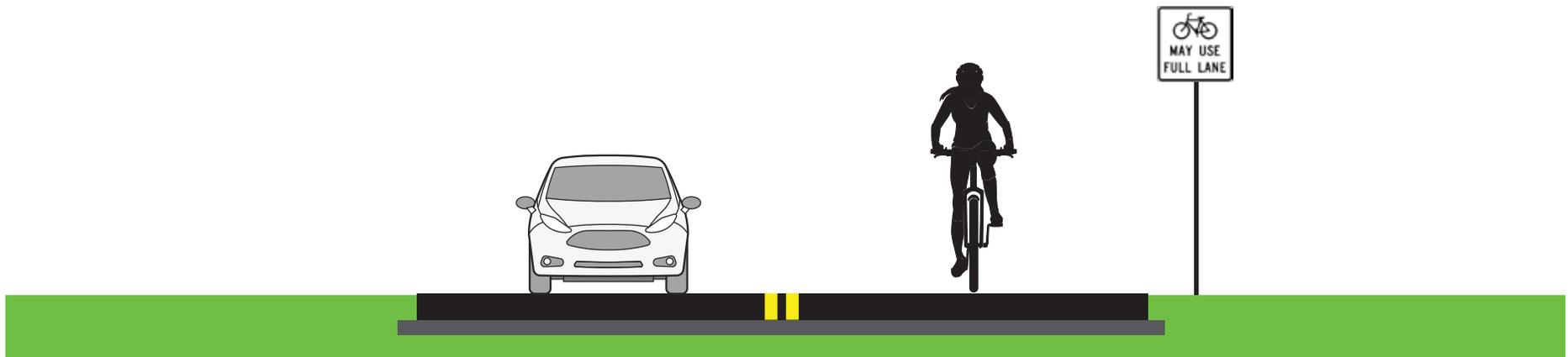


Figure 5.6 - Cross Section of Share the Road configuration

## BIKEABLE SHOULDER

Bikeable shoulders (Figure 5.7) utilize the shoulder space along highways as a space for bicyclists. Unlike bike lanes they are not designated spaces for bicyclists and function concurrently with their traditional purpose as a space for inoperable vehicles to keep from obstructing or providing a safety hazard in the travel lanes.

### Typical Application

- Treatment for a Bikeable shoulder can be applied to paved shoulders provided on roadways in low density areas.
- The shoulder should be at least four feet wide.

### Safety

Bikeable shoulders are best suited for adults who are skilled riders. Oftentimes, including in the Marion context, these are applied on roadways with moderate to high motorized traffic volumes and speeds, which can be uncomfortable and unsafe to more novice and vulnerable users.

### Design Considerations

- Bikeable shoulders often, but not always, include signage and pavement markers alerting motorists to expect bicycle travel along the roadway. It is recommended that these be included on any designated Bikeable shoulder.

- A rumble strip along the outside of the Bikeable shoulder provides an added level of safety where no other barrier can feasibly exist. Breaks in the rumble strips should be provided to allow bicyclists to move between the Bikeable shoulder and travel lanes as needed, otherwise they may have trouble navigating over them without falling.

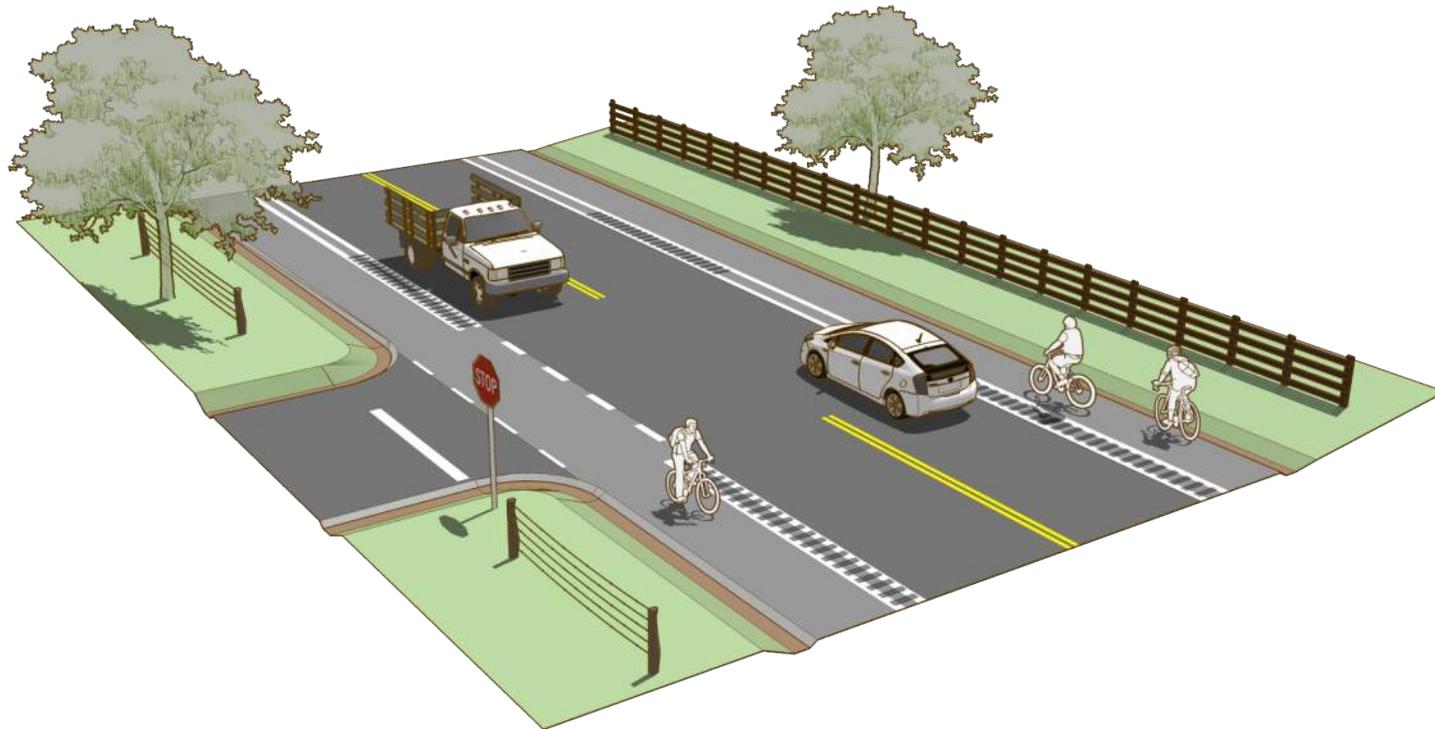


Figure 5.7 - Bikeable Shoulder

Source: *Small Town and Rural Design Guide - Bikeable Shoulder*: <https://ruraldesignguide.com/visually-separated/paved-shoulder>

## VISUALLY SEPARATED FACILITIES

Visually separated facilities involve creating designated spaces for cyclists on a given roadway separate from motor vehicle traffic and are best suited for roads with moderate traffic volumes and operating speeds. These facilities use pavement markings and buffer striping to mark the separation between motorists and bicyclists.

### CONVENTIONAL BIKE LANES

Conventional bike lanes (Figure 5.8) designate a dedicated space for bicyclists using pavement markings and signs. They are typically placed parallel to the motor vehicle travel lanes and to the outside against the curb, parking lane, or road edge with the bicycle traffic flowing in the same direction as the adjacent motor vehicle travel lane.

#### Typical Application

- Bike lanes may be used on any street with adequate space, but are most effective on streets with more than 3,000 motor vehicles per day.
- Bike lanes are most appropriate on streets with speeds of 25 MPH or greater.
- Bike lanes are best for skilled adult riders on most streets but can be appropriate for children when the lane width is greater than six feet and motor vehicle traffic volume and speeds are low.

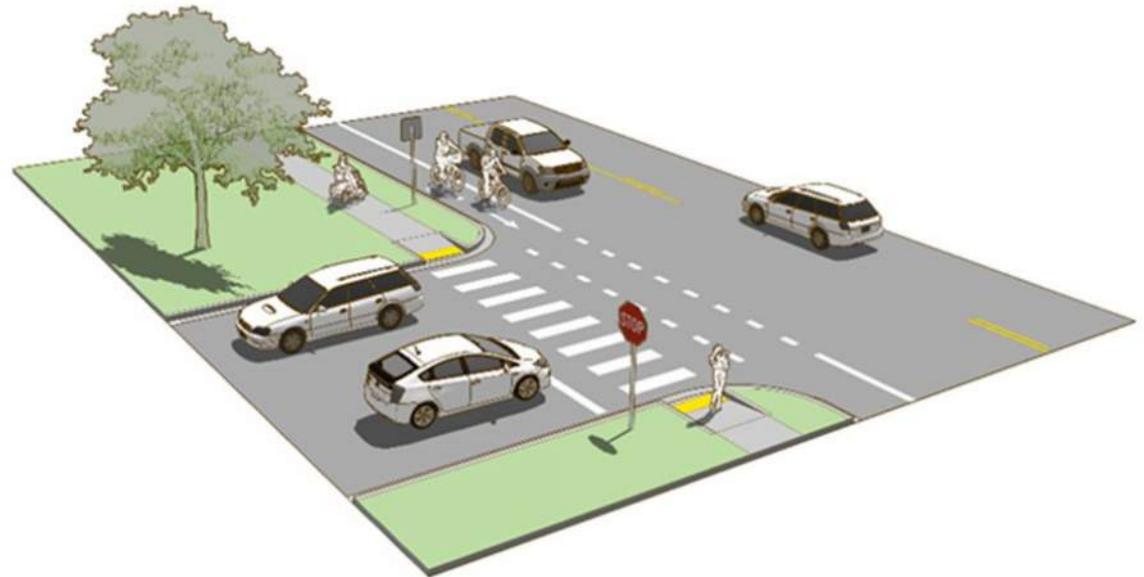


Figure 5.8 - Conventional Bike Lane

Source: *Small Town and Rural Design Guide - Conventional Bike Lane*: <https://ruraldesignguide.com/visually-separated/bike-lane>

#### Design Features

- A 6-inch stripe divides the bike lane from the motor vehicle travel lanes while a 4-inch stripe or “T”s divide the bike lane from a parking lane.
- A bicycle lane marking should be included at the beginning of each block and at regular intervals along the route
- The bike lane should be five to six feet wide adjacent to curb and gutter or four feet more than the gutter pan width.
- The bike lane should be at least five feet wide when adjacent to on-street parking, though six feet is preferred.
- On high-speed streets ( $\geq 40$  mph) the minimum bike lane should be 6 feet. On streets where bicyclist traffic is heavy and cyclists passing one another is expected, extra-wide lanes up to seven feet should be considered.
- Color can be used within the bike lane to highlight its presence and discourage motorists from entering it. Green is most widely used.

#### Safety

Studies show that installation of bike lanes can reduce vehicle/bicycle crashes by 35%.

## BUFFERED BIKE LANES

Buffered bike lanes (Figure 5.9) are conventional bike lanes with a designated buffer space creating a greater distance of separation from the adjacent motor vehicle travel lane and/or parking lane.

### Typical Application

- Wherever a conventional bike lane is being considered.
- On streets with high motor vehicle speeds and high volumes or high truck volumes.
- On streets where extra or excess space is available, especially where there is underutilized on-street parking or following implementation of a lane reduction project.

### Design Features

- Unlike a conventional bike lane, the minimum bicycle travel area (not including buffer) is 5 feet wide.
- The buffers should be a minimum of two feet wide. If the buffer is 2.5 feet or wider, white chevron or diagonal markings should be used within the buffer space.
- A dashed line should be used at intersections, but not driveways. The MUTCD does not recognize driveways as intersections. (MUTCD 2009, AASHTO Bike Guide 2012)
- If space allows, it is best to place a buffer both on the parking side and the travel side of the bike lane. However, if not

enough space is available, placement of the buffer is often better suited on the parking side to prevent collisions between cyclists and open car doors.

### Safety

A study following the installation of a buffered bike lane in Portland, Oregon, found that 89% of bicyclists felt safer riding on that street after the buffered bike lane was installed.

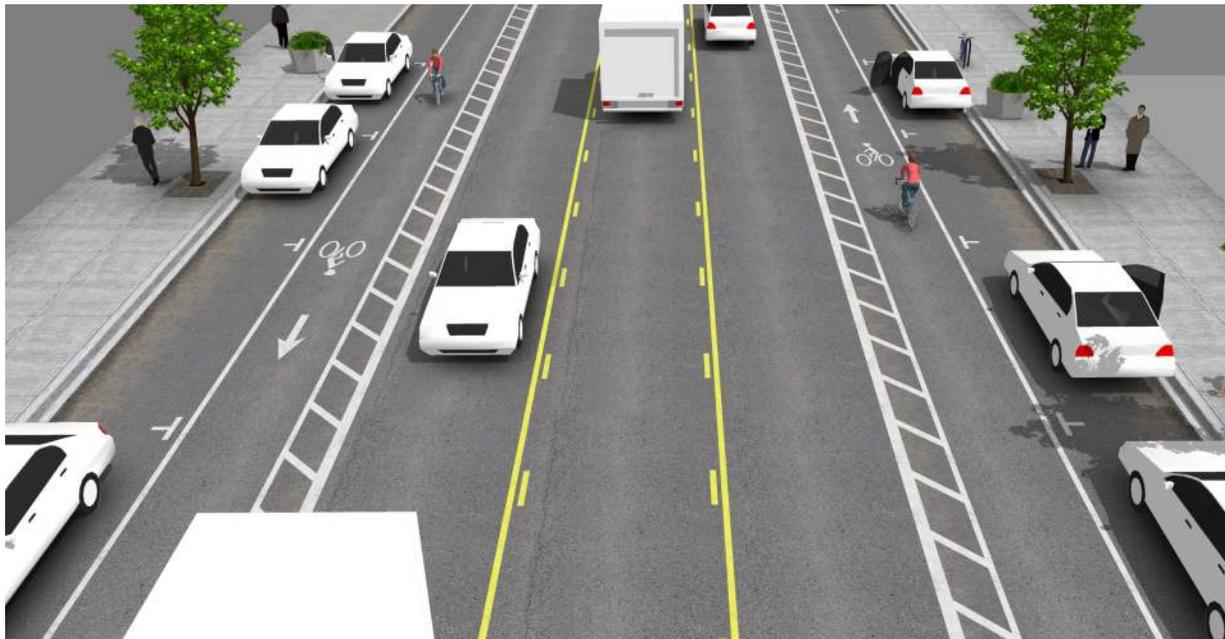


Figure 5.9 - Buffered Bike Lane

Source: *Urban Bikeway Design Guide - Buffered Bike Lanes*: <https://nacto.org/publication/urban-bikeway-design-guide/bike-lanes/buffered-bike-lanes/>

## PHYSICALLY SEPARATED FACILITIES

Physically separated facilities are those that use physical elements to separate bicyclists from motor vehicle traffic. These facilities use barriers, are raised higher than the street level, or are located in open spaces to increase safety and comfort of cyclists. Such facilities are best suited for roadways where there are high volumes of motor vehicles traveling at high rates of speed.

### SIDEPATHS

Sidepaths (Figure 5.10), are a bidirectional type of path that runs parallel to the street. They often are used to accommodate cyclists as well as other non-motorized transportation and pedestrians and as such are much wider than a standard sidewalk. They are generally safe and comfortable for cyclists of all ages and abilities and offer a high-quality cycling experience.

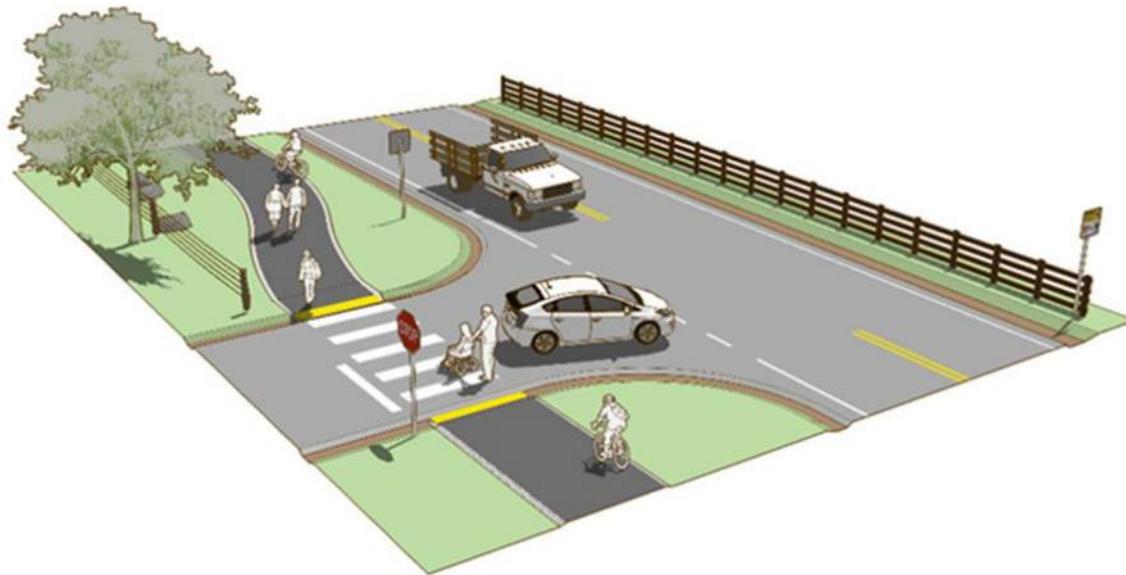


Figure 5.10 - Sidepaths

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

### Typical Application

- Along roadways and highways with higher traffic volumes traveling at higher speeds.

### Design Considerations

- There should be at least five feet of separation from the sidepath and the motor vehicle travel lanes.
- Special attention should be given to intersections and driveway crossings. These should be designed to promote awareness of conflict points, and ensure motorists are properly yielding or stopping. The AASHTO Bike Guide 2012 provides a variety of best practices for enhancing sidepath crossings.
- Sidepaths are not recommended along roadways with many driveways and intersections. These create conflict points and are susceptible to collisions between

bicycles and turning vehicles. In cases like this, a shared-use path may be more appropriate.

- Special attention should be given to where a sidepath terminates and leads into other bicycle infrastructure.
- A sidepath must be a minimum of eight feet wide where bicycle and pedestrian traffic is expected to be low with ten or twelve feet preferred where bicycle and pedestrian traffic is expected to be heavy.

### Construction Costs

Sidepaths tend to be on the more expensive end of bicycle facilities. A general rule of thumb for communities like Marion is that they will cost about \$1 million per mile, but can range between \$65,000 to \$4 million per mile depending upon the technical and engineering challenges, the need for bridges and other structures, and the materials that are used.

## SHARED-USE PATHS

Shared-use paths (Figure 5.11), like sidepaths, provide safe and comfortable transportation and recreation experience not just for cyclists, but for other non-motorized modes of transportation and pedestrians. Shared-use paths are different from sidepaths in that they do not run parallel to any roadways. Rather they follow their own distinct trajectory and can often be a means for providing more direct routes when a street does not or should not go in areas.

### Typical Application

- In abandoned rail corridors (commonly referred to as Rails-to-Trails or Rail-Trails).
- In active rail corridors, trails can be built adjacent to active railroads (referred to as Rails-with-Trails). These tend to be difficult to implement, however, as receiving approval from the given railroad can be challenging.
- In utility corridors, such as power line and sewer corridors. The ROW is typically an ideal size for a shared-use path and acquiring the rights to construct a shared-use path in these corridors is often easy given their public ownership.
- In waterway corridors, such as along canals, drainage ditches, rivers, and beaches.

### Design Features

- A shared-use path must be a minimum of eight feet wide where bicycle and pedestrian traffic is expected to be low with ten or twelve feet preferred where



Figure 5.11 - Shared-Use Path

Source: *Small Town and Rural Design Guide - Shared-Use Path*: <https://ruraldesignguide.com/physically-separated/shared-use-path>

Bicycle and pedestrian traffic is expected to be heavy. A separate five-foot path can be used to separate bicycle and non-motorized traffic from pedestrian traffic.

- A 2-foot or greater shoulder on both sides of the path should be provided. An additional foot of lateral clearance (3 feet total) is required by the MUTCD for the installation of signage or other furnishings.
- Striping is generally unnecessary, but paths with particularly heavy use can use striping to help organize pathway traffic.

### Construction Costs

Shared use paths tend to be on the more expensive end of bicycle facilities. Like side paths, a general rule of thumb for communities like Marion is that they will cost about \$1 million per mile but can range between \$65,000 to \$4 million per mile. Depending upon the technical and engineering challenges, the need for bridges and other structures, and the materials that are used.

## TRAILHEADS

With the recent \$4 million in funding from IDOT to implement about six miles of planned trails known as the Crab Orchard Greenway, Marion should consider connections with Greenway trailheads. Connectivity to these trailheads will provide a vital link for cyclists to access both recreational opportunities within the Crab Orchard National Wildlife Refuge as well as communities to the west such as Carbondale, Carterville, Crainville, and Herrin.

While the trailheads will not be managed by the City of Marion, they can be utilized as a gateway to the city. Wayfinding and other community information can be posted recognizing the bicycle network that is available in Marion and point visitors to community assets and trail network connections. This is a simple branding technique that can provide substantial economic benefits to the community.

## CROSSING TREATMENTS

Designs for intersections with bicycle facilities should reduce conflict between bicyclists (and other vulnerable road users) and vehicles by heightening the level of visibility, denoting a clear right-of-way, and facilitating eye contact and awareness with competing modes. Intersection treatments can resolve both queuing and merging maneuvers for bicyclists, and are often coordinated with timed or specialized signals.

The configuration of a safe intersection for bicyclists may include elements such as color, signage, medians, signal detection, and pavement markings. Intersection design should take into consideration existing and anticipated bicyclist, pedestrian and motorist movements. In all cases, the degree of mixing or separation between bicyclists and other modes is intended to reduce the risk of crashes and increase bicyclist comfort. The level of treatment required for bicyclists at an intersection will depend on the bicycle facility type used, whether bicycle facilities are intersecting, the adjacent street function and land use.

## CONVENTIONAL AND BUFFERED BIKE LANES

Intersections should include markings that show the intended path for bicyclists. There is a variety of concepts that can be used for these markings, ranging from minimalist dashed lines to filling the crossing with color. Figures 5.12, 5.13, 5.14, and 5.15 provide examples of possible intersection crossing treatments.



Figure 5.12 - Crossing Markings with Dotted Lines

Source: *Small Town and Rural Design Guide - Intersection Crossing Markings*: <https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/intersection-crossing-markings/>



Figure 5.13 - Crossing Markings with Dotted Lines and Colored Conflict Area

Source: *Small Town and Rural Design Guide - Intersection Crossing Markings*: <https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/intersection-crossing-markings/>



Figure 5.14 - Crossing Markings with Dotted Lines and Shared Lane Markings

Source: *Small Town and Rural Design Guide - Intersection Crossing Markings*: <https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/intersection-crossing-markings/>



Figure 5.15 - Crossing Markings with Elephant's Feet

Source: *Small Town and Rural Design Guide - Intersection Crossing Markings*: <https://nacto.org/publication/urban-bikeway-design-guide/intersection-treatments/intersection-crossing-markings/>

## SIDEPATH CROSSING

Conflict points such as driveways and intersections pose one of the few safety concerns with sidepaths (Figure 5.16). The AASHTO Bike Guide 2012 - Section 5.2.2 provides information on how to identify and mitigate potential design issues. When designing for a crossing, it is essential to promote awareness both of motor vehicles to bicyclists and bicyclists to motor vehicles. This will be accomplished through

facilitating proper yielding utilizing various signage and pavement markings and ensuring there are no visual obstructions.

Sidepaths should have the same priority as the parallel roadway at all crossings. Trying to require stopping and yielding at each driveway and intersection will lead to non-compliance.

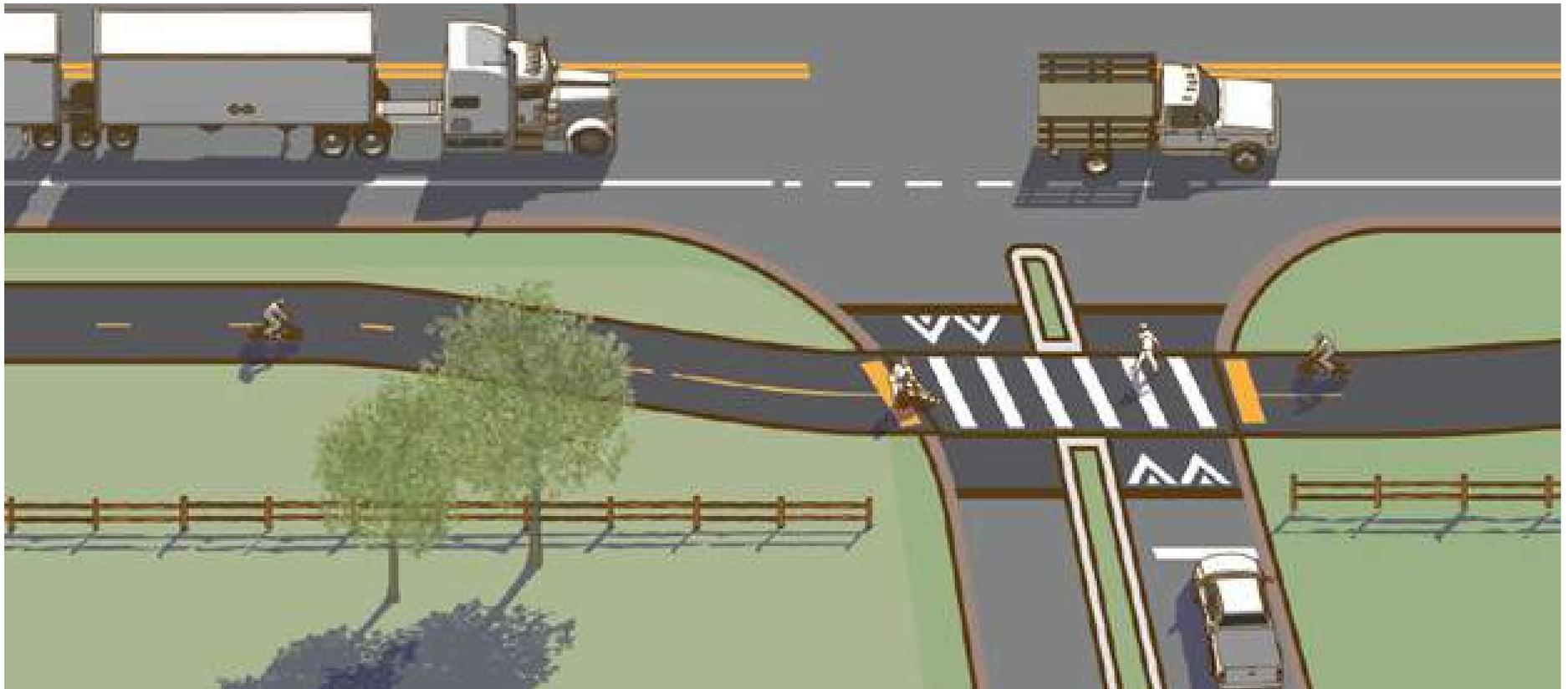


Figure 5.16 - Sidepath

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

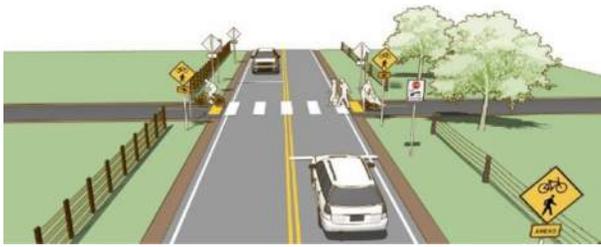


Figure 5.18 - Simple Marked Crosswalk

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

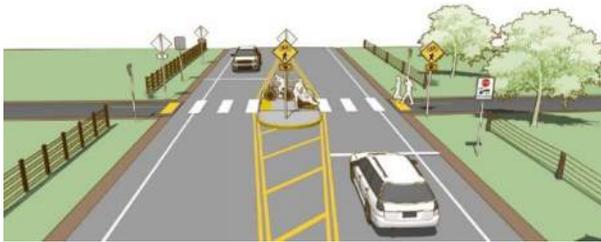


Figure 5.19 - Median Safety Island

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>



Figure 5.20 - Rapid Flash Beacons

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

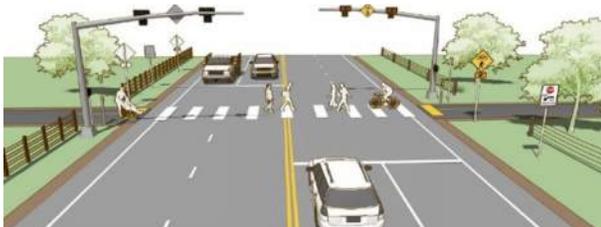


Figure 5.21 - Pedestrian Hybrid Beacon

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

## SHARED-USE PATH CROSSING

There are a variety of treatments that can be applied to a shared use path crossing depending on the traffic volume and prevailing speed of the roadway crossed. The FHWA Safety Effects of Marked Crosswalks at Uncontrolled Locations 2005 recommends crossing enhancements on high-speed and high-volumes roadways where crosswalk markings alone are not a viable safety measure. Figure 5.17 provides a visual representation of the conditions suitable for

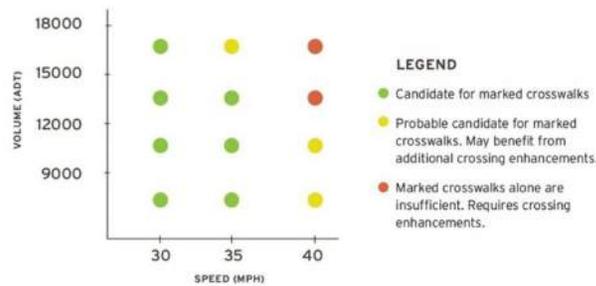


Figure 5.17 - Conditions suitable for crossing types

Source: *Small Town and Rural Design Guide - Shared-Use Path*: <https://ruraldesignguide.com/physically-separated/shared-use-path>

crossing types. Figures 5.18, 5.19, 5.20, and 5.21 show different types of shared-use path crossing treatments.

The Enhanced Crossing Treatments section of the FHWA Achieving Multimodal Networks 2016 and BIKESAFE 2014 is a good point of reference for how to implement crossings for shared use paths.

## BIKE LANE TO SIDEPATH TRANSITION

Some parts of the recommended network involve transitioning from bike lanes on opposite sides of the road to a sidepath on one side of the road. Designs for this transition should consider the potential conflict points from crossing the roadway. In most cases, it is best to use median islands and horizontal deflection of the roadway travel lanes to both slow motor vehicle traffic and provide safe and comfortable crossing conditions for cyclists. Busier roads may require the use of a rapid flashing beacon or pedestrian signal. Figure 5.18 provides a visual example for how to implement such a transition.

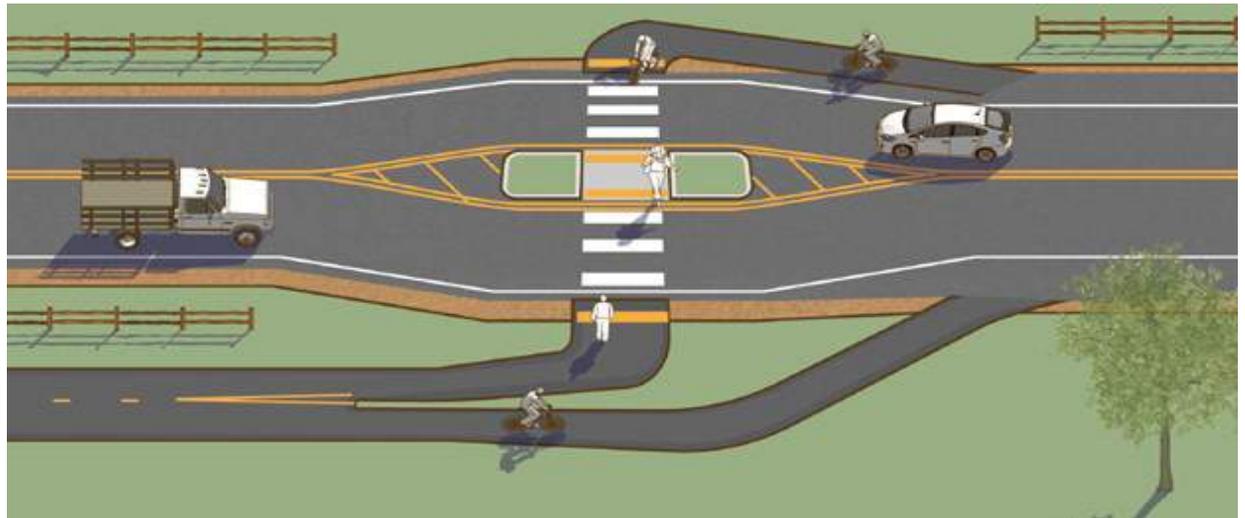


Figure 5.18 - Sidepath to bike lane or bikeable shoulders transition

Source: *Small Town and Rural Design Guide - Sidepath*: <https://ruraldesignguide.com/physically-separated/sidepath>

## RAILROAD CROSSINGS

The AASHTO Bike Guide 2012 – Section 4.12.1 provides excellent information on accommodating railroad crossings for different bikeway types. Best practice to avoid bicycle wheels getting caught in tracks is to orient the approach of the bikeway so that it crosses the track at or close to a right angle.

If the crossing is at an off-street facility like a sidepath or a shared-use path, the crossing safety measures should be the same for bicyclists as they are for motorists. For example, where there is a crossing gate (rather than a buck) for motor vehicles, a crossing gate should also be located on the sidepath or shared-use path.

## CURRENT PROJECTS

There are several projects currently planned that will assist in providing a safer way to bike in Marion. Two of these are intersection improvement projects that will include pedestrian and bike accommodations. These include the 5th Street Extension Project which will extend 5th Street south from Main Street to Cherry, and the Court and Wildcat Roundabout, which will convert turn the T-junction at this intersection into a roundabout. The third project is a mid-block crossing across DeYoung Street that aims to improve safety for pedestrians and bicyclists crossing DeYoung at Ray Fosse Park.

### MID-BLOCK CROSSING – PEDESTRIAN ACCESS TO RAY FOSSE PARK

This project (Figure 5.22) would involve the development of a mid-block crossing of IL-13/E

DeYoung Street between Washington Street and Whitman Street to provide a pedestrian refuge island with rapid flashing beacons and signage. Once completed this project will allow pedestrians easier access to the park from the south side of DeYoung, the busiest arterial in the city, without having to make a circuitous route to State Street, the closest street with pedestrian crossing facilities, a quarter mile away.

### 5TH STREET EXTENSION

This project (Figure 5.23) reconfigures the orientation of North 5th Street at West Main Street and extends North 5th Street south of the intersection where it will connect with West Cherry Street. This project will create both a more direct route to a recommended calm street facility on Cherry Street from Main Street as well as better pedestrian and bicycle accommodations across Main Street. However, the improvements were planned before the bikeway network in this plan was recommended and additional facilities for cyclists may need to be added to increase comfort and safety.



Figure 5.22 - Plan view of proposed mid-block pedestrian crossing across DeYoung to Ray Fosse Park



Figure 5.23 - Plan view of proposed 5th Street extension project at reconfigured intersection with W Main Street

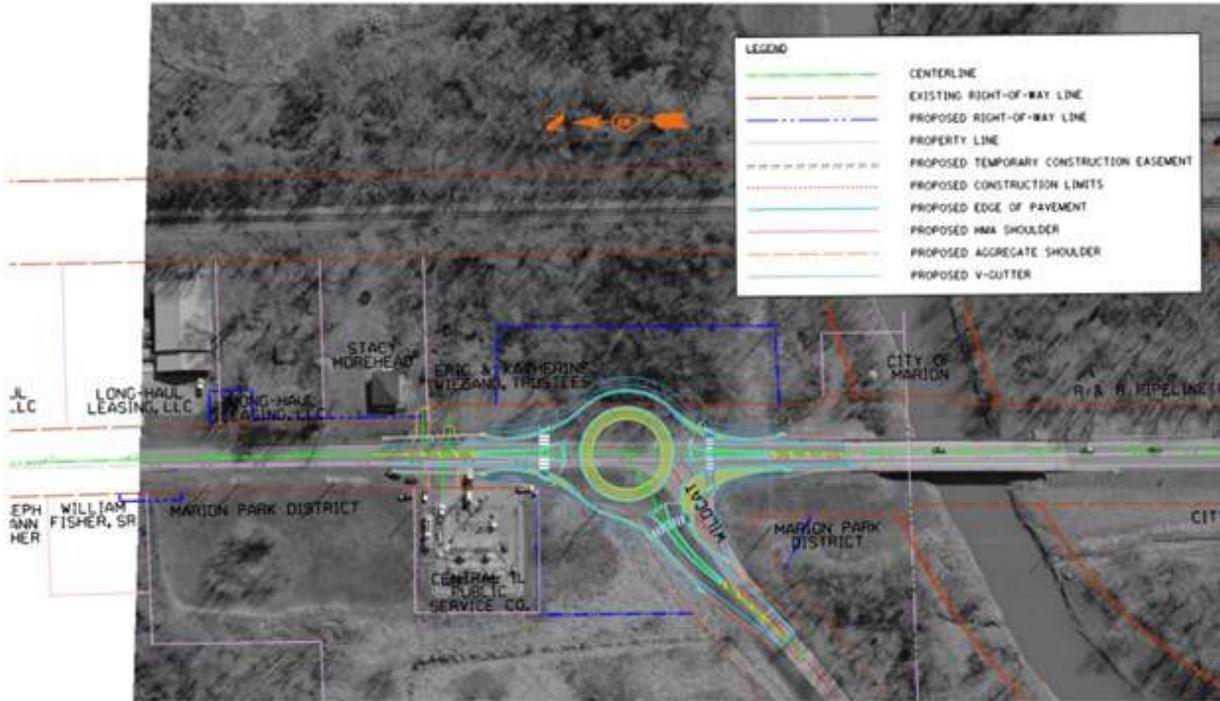


Figure 5.24 - Plan view of proposed Court and Wildcat Roundabout

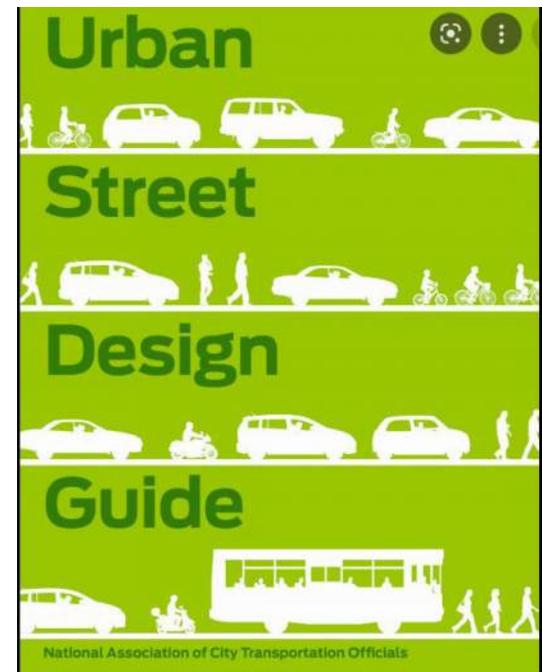
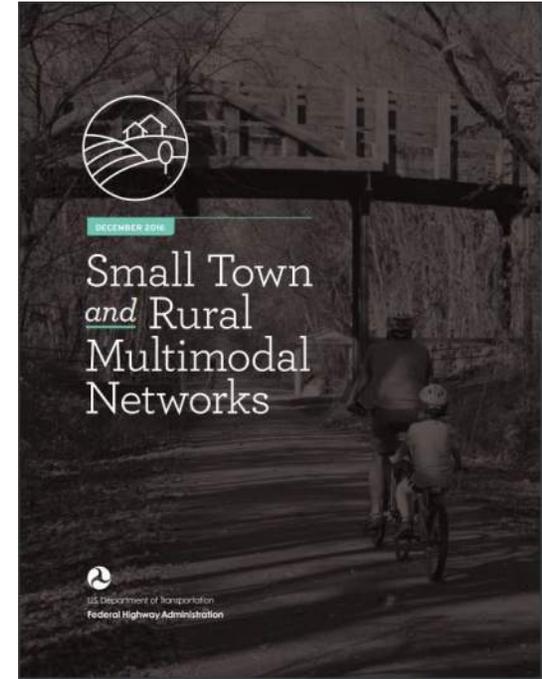
## COURT AND WILDCAT ROUNDABOUT

This project (Figure 5.24) transforms the existing T-junction at the corner of S Court Street and Wildcat Drive to a roundabout configuration. This will produce a traffic calming effect and create a safer bike and pedestrian crossing. Two segments of the recommended bike network, a sidepath on Wildcat and bike lanes on Court, meet at this intersection. The completion of this project will be important to ensuring this section of the recommended bikeway network is safe and comfortable for cyclists.

## FURTHER READING AND DESIGN GUIDANCE

The bikeway design recommendations in this plan have been informed by guidance from two publications: The Federal Highway Administration's *Small Town and Rural Multimodal Networks* guide and the National Association of Transportation Officials' *Urban Street Design Guide*. These publications should be referenced to gain a greater depth and knowledge on specifics of the recommended treatments outlined earlier in this plan.

Furthermore, as implementation of the recommended network continues, these guides can inform implementation of more nuanced, site specific treatments.



# PROGRAM AND POLICY RECOMMENDATIONS

Implementing and operating the proposed network requires supplemental programs and policies to be successful. This includes enacting a complete streets policy, bike parking policy, as well as encouragement, enforcement, educational, and economic development programs.

## COMPLETE STREETS POLICY

What are Complete Streets and what is the benefit for the City of Marion? The National Complete Streets Coalition (NCSC) defines Complete Streets as “streets for everyone”. Complete Streets the outcome of an approach to planning, designing, building, operating, and maintaining streets that enables safe access for all people who need to use them, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. NCSC also states that incomplete streets are the result of a planning and design process that fails to consider the needs of people outside of vehicles and the access streets provide for all people. When applying antiquated measure of success, the resulting street is one that is uncomfortable to downright deadly for those not using a car.

Since 2015 there has been a 45% increase in people being struck by vehicles and killed while walking in the US according to NCSC. Fortunately

in Marion, there has not been recorded a pedestrian death since 2015 (to 2019), but pedestrians continue to be struck by cars on an annual basis. Speeding is the number one cause of these deaths, with alcohol impairment, roadway factors, and vehicle type contributing to the increase. Only 19% of the US population lives in rural areas but 49% of all traffic deaths occur in rural areas

Today, there are over 1,600 Complete Streets Policies that have been adopted in the United States including 35 state and other commonwealth policies. In June of 2010, Illinois Department of Transportation (IDOT) finalized its Complete Streets Policy. This policy is a law that requires that IDOT’s design criteria for infrastructure projects comply with the complete streets requirements. The Illinois Complete Street Law (Illinois Highway Code; Sec. 4-220) states the following:

- *Bicycle and Pedestrian ways shall be given full consideration in the planning and development of transportation facilities.*
- *In or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with construction, reconstruction or other change of any State transportation facility.*

The IDOT policies apply to Illinois State Routes. If real change in our street design is to occur, complete street policies for City and county-owned roads are vital. The National Complete Streets Coalition (NCSC) provides guidance for

jurisdictions to do this. They have identified ten elements of a comprehensive Complete Streets policy to help communities develop and implement policies and practices. NCSC’s ideal Complete Streets policy includes the following:

1. **Vision and intent:** include an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
2. **Diverse users:** benefits all users equitably, particularly vulnerable users and the most under-invested and underserved communities.
3. **Commitment in all projects and phases:** applies to new, retrofit/reconstruction, maintenance, and ongoing projects.
4. **Clear, accountable exceptions:** makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
5. **Jurisdiction:** requires interagency coordination between government departments and partner agencies on Complete Streets.
6. **Design:** directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
7. **Land use and context sensitivity:** considers the surrounding community’s current and expected land use and transportation needs.

- 8. **Performance measures:** establishes performance standards that are specific, equitable, and available to the public.
- 9. **Project selection criteria:** provides specific criteria to encourage funding prioritization for Complete Streets implementation.
- 10. **Implementation steps:** includes specific next steps for implementation of the policy.

The criteria of the ten elements are also used in the Scoring Methodology by NCSC. Jurisdictions work with NCSC to review and score the policy to encourage the adoption of strong policies integrated with jurisdictional ordinances, oversight, and leadership priority.

The recommendation of the Marion Bike Plan identifies opportunities to transform Marion's streets into Complete Streets. A logical next

step is to discuss a Complete Streets Ordinance with city leadership using the ten elements as a framework for discussion. The policy should be shaped by community engagement and be tailored for Marion to need the needs of its community. It is critical that City staff consult the master plan prior to scoping each roadway project in the City to look for ways to integrate the bikeway recommendations. This is also the time to look for Complete Streets opportunities.

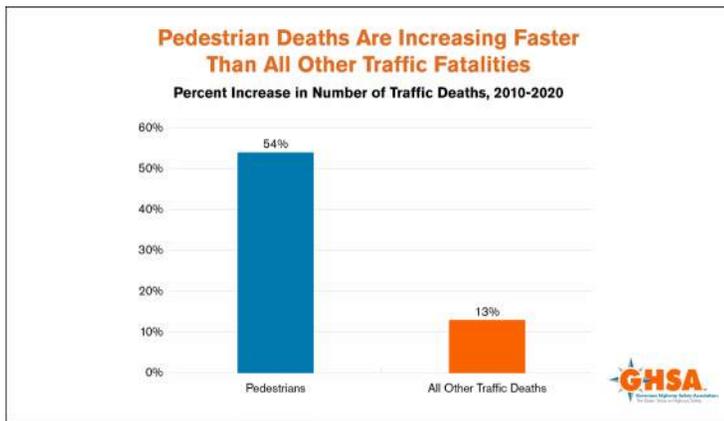


Figure 5.25 - Example of Bike Lockers

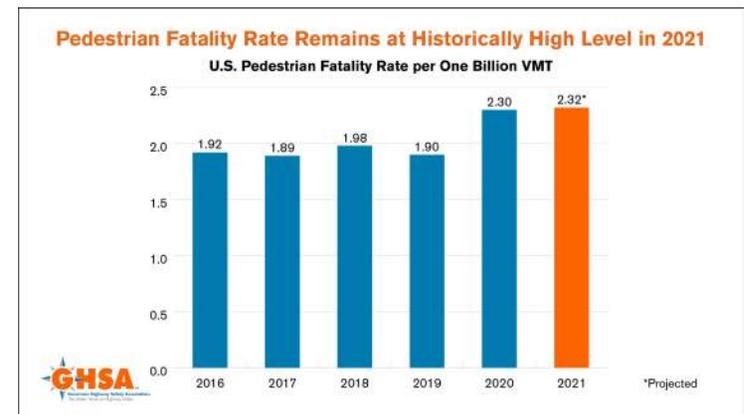


Figure 5.26 - Example of Bike Lockers

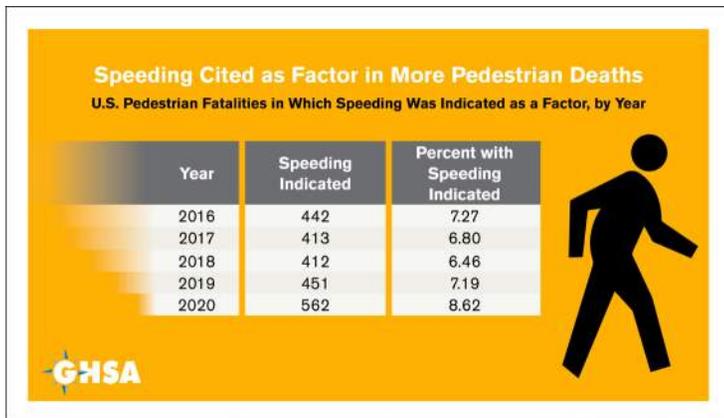


Figure 5.27 - Example of Bike Lockers

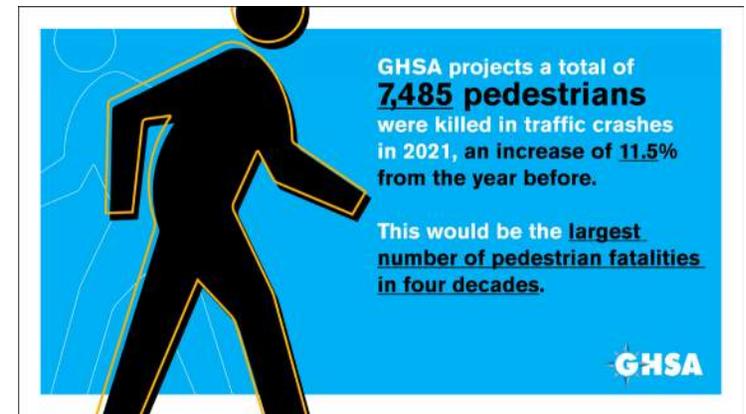


Figure 5.28 - Example of Bike Lockers

## BIKE PARKING POLICY

An important component of any bicycle network is having parking facilities at destination points. Not only does convenient bike parking encourage people to ride, but it is also good for business, promotes an orderly streetscape that preserves the pedestrian right-of-way, and legitimizes bicycling as a transportation mode. The Association of Pedestrian and Bicycle Professionals (APBP) has produced several guides on proper bicycle parking, including *Essentials of Bicycle Parking and Bicycle Parking Guidelines 2nd Edition*. These guides provide the following overview for bicycle parking and its application in the City of Marion.

It should be noted that even where there are existing bike parking facilities in Marion they may not be the most conducive to encouraging ridership. The below information should also be considered for improving existing facilities.

Criteria	Short-term	Long-term
Parking duration	Less than two hours	More than two hours
Fixture types	Simple bicycle racks	Lockers, racks in secured area
Weather protection	Unsheltered	Sheltered or enclosed
Security	Unsecured, passive surveillance (eyes on the street)	Secured, active surveillance
		Unsupervised:
		"Individual-secure" such as bicycle lockers
		"Shared-secure" such as bicycle room or cage
		Supervised:
		Valet bicycle parking
		Paid area of transit station
Typical land uses	Commercial or retail, medical/healthcare, parks and recreation areas, community centers	Residential, workplace, transit

Figure 5.29 - Criteria for implementing bike parking types

## BIKE PARKING TYPES

There are two types of bicycle parking – short-term and long term. Figure 5.29 details criteria for implementing each type:

### Short-term

Short-term bike parking often attracts infrequent users, so effective short-term bike parking has two main factors: 1) proximity to the destination and 2) ease of use. It is best practice for short-term parking to be visible from and close to the entrance of the location that it serves – 50' or less is ideal. It does not necessarily have to be sheltered from weather though shelter does increase viability of bicycling year-round. Good lighting and securely installed racks provide a level of security.

With the current absence of bike parking ordinances in Marion, it will be up to the administrator of a given bike parking facility to determine demand. Starting with small

quantities of racks is fine but it is best to keep space options available to add more racks as demand increases.

### City of Marion Bike Rack Standard

An early action project in this master planning process was to select, design, purchase, and implement short-term parking facilities in strategic locations around the City. A style of bike rack called the Inverted U was selected given that it is both easiest to lock multiple bikes to and has space within the U for personalization. Four racks were purchased to start with anticipation that more will be purchased in the future. Below is a concept drawing showing what the racks will look like with customization to recognize the Rotary Club's donation.

Figure 5.30 shows what these bike racks will look like.



Figure 5.30 - Example of Marion inverted U bike rack



## ENCOURAGEMENT ACTIVITIES

This plan identifies a range of new policies and programs that are aimed building a stronger, more and more integral culture of bicycling in the City of Marion. The programs and policies listed in the table below, and described in greater detail in this chapter, reflect the needs and values of the community residents.

### EARN-A-BIKE PROGRAM

One of the many outcomes of this plan will be improvements in safe riding conditions for Marion children, whether so they can ride to school, to an extracurricular activity, with the family, or getting around without the need for a parent or guardian to drive them there. However in Marion, as with many communities, not all children have access to a bicycle. One solution to addressing this issue is by creating an Earn-a-Bike program. Participants in the program will learn basic bike maintenance and bicycling skills as well as how to read mapping materials and plan a route. Most importantly though, these programs are often designed to teach participants how to build an entire bicycle and, as a reward for completing the program, get to keep the bike they build or a similar, refurbished bike along with a helmet, lock, and lights.

A successful Earn-A-Bike program requires knowledgeable volunteers from local advocacy groups and/or bike shops who lead the classes and donate bicycles and bicycle parts. At the time of writing there are no bike shops within the City of Marion, though several can be found in nearby communities like

Carterville, Carbondale, and Benton. Non-profit and business partnerships are encouraged to explore the feasibility of beginning and maintaining an Earn-A-Bike program with special focus on leadership and resource availability.

### COMMUTER SUPPORT NETWORK

For many, commuting to work, school, or to run errands by bike sounds like a pleasant idea – no traffic, fresh air, and getting a little exercise doing something that’s normally a headache. However there are challenges and anxieties, particularly for novice bike commuters, that can outweigh the pleasantries. It can be difficult to know which route is going to be the safest and most comfortable or if there will be bike parking available at the destination. One solution to this dilemma is to develop a commuter support network (AKA Create-A-Commuter Program). Potential elements of a Commuter Support Program could include:

- Bicycle skills and maintenance training courses
- Route mapping that aligns with comfort level of the given rider
- Mentorship pairing with experienced cyclists or cycling commuters in one’s neighborhood

### ORGANIZED THEME RIDES

A fun way to build confidence and knowledge in bicycle riding in Marion is to organize a theme ride. Theme rides provide the tools necessary to choose bicycling for short, daily trips. The possibilities for theming are endless. For example, it could be a weekly ride to a

specific destination such as a restaurant, ice cream shop, or local landmark. Or it could occur every time there is a full moon, with a varying array of destinations. Another option is for it to occur on certain holidays or anniversaries – a Thanksgiving Day ride or a ride on the anniversary of the founding of Marion. Target audiences will depend on the theming. A consideration for the demographics of Marion or the population that could be best served by an organized theme ride will be necessary, but it can vary from families to senior citizens, to young adults, to people of a certain ethnicity and everything in between.

Marion should coordinate with local advocacy organizations and other community partners to explore opportunities for organized theme rides as essential tools to encourage active transportation and recreation.

### OPEN STREETS PROGRAMS

Open Streets events create temporary opportunities for recreation and transportation by shutting down roads normally open to vehicle traffic and opening them to bicyclists, walkers, joggers, roller skaters, skateboarders, and strollers. Sometimes they go beyond simply opening the street and include dancing, yoga, food vendors, and family activities. They are often paired with larger festivals or community events that capture a regional audience. An open streets program can include a single street or a series of interconnected streets depending on the street layout and destinations involved. The City of Marion should consider hosting regularly scheduled Open Streets events and explore potential partnerships, logistics, routing, and other factors. The initial step

would be to create a committee of City staff and others involved to organize and facilitate such events.

## BIKE TO SCHOOL DAY

The National Center for Safe Routes to School hosts National Bike to School Day (AKA Walk, Bike & Roll to School Day) every year during the second week of May. They are done in alignment with National Bike Month, promoted by the League of American Bicyclists and celebrated annually since 1956. In 2022, 45 entities in the State of Illinois sponsored a Bike to School Day event, though none were in or around Marion.

A Bike to School day can be a big event, a small event, or can increase or decrease in size over time. They are often sponsored by local schools but can be an initiative for the whole community as well. The event should resonate with a cause local families, the school(s), and broader community care about. This could be encouraging ways to stay healthy, building a sense of community, increasing traffic safety, etc.

One component of a Bike to School Day can be a bicycle train. A bicycle train is a group of children riding to school together, chaperoned by several parents, allowing parents and other community members to be actively involved in supervising children on their way to school. It is a way to address personal security concerns while offering time to socialize.

## BIKE TO WORK EVENTS

Similar to Bike to School Day is Bike to Work Day (or week), which typically occurs during the third Friday of May (or third week). Similar to Bike to School events, they can be big or small events that often begin or end with a festival

that includes snacks, decorations, and/or a speaker. Some events may include a celebrity group ride that includes a local politician, or well-known face in the community with a designated start time. They are most often facilitated by an employer or the local bicycle organization but can be assisted (or facilitated) by the City.

## EDUCATION PROGRAMS

### GENERAL CLASSES

Providing various classes and workshops can encourage cycling by building confidence, skills, and knowledge in cyclists. These can be provided to cyclists of a variety of skill and confidence levels can be used to enhance understanding of the benefits bicycling for transportation and recreation and provide a supportive learning environment where participants that encourages asking questions and addressing concerns. Classes can be generalized or specific to certain populations. Some examples include:

#### General:

- Basic Bike maintenance and repairs
- Safe riding and traffic skills training
- Running errands by bike
- Commuting to work by bike
- Group riding
- Living without a car: getting around by bike and other alternative transportation networks

#### Population Specific:

- Youth safety and skills training
- Biking as a family
- Employer-based workshops

To maximize potential, the City of Marion should partner with local advocacy groups such as the Marion Illinois Cycling Club and Ride Illinois to host workshops and classes. The City of Carbondale and Southern Illinois University can act as a resource as well – they have been established as a Bicycle Friendly Community and Bicycle Friendly University respectively by the League of American Bicyclists. Workshops should be held at lunch time, in the evening, or on weekends to accommodate work and school schedules.

## BICYCLE SAFETY AND AWARENESS CAMPAIGNS

A safety and awareness campaign can be a good way to educate citizens on the necessity of sharing the road safely between bicyclists and motorists. A successful campaign would deliver an easy-to-understand message to a wide range and large number of people, including both motorists and cyclists.

Studies show that a road safety campaign can be effective if it is one where emotions play a role. Campaigns that are information-laden and contain too many acronyms are easily forgettable. While fear is often the most effective emotion to evoke in a campaign, bicycling already has a strong association with fear, which discourages people from riding bikes. A campaign to personalize and humanize cyclists are ideal – one that reminds motorists that bicyclists are their friends and relatives.

The campaign should also speak to both motorists and cyclists in a way that makes cycling look like more of a mainstream, ordinary mode of transportation. Indirectly encouraging bicycling is best as the more cyclists there are, the safer cycling gets.

## **RIDING SAFE CAMPAIGNS**

A ride safe campaign promotes bicyclist safety and should target both new and long-time cyclists. As much as motorists need to consider cyclists' presence, cyclists need to apply certain safety precautions to mitigate the impact that any sort of incident could have. A good rule of thumb is to concentrate on five critical safety points:

- Protect your head- wear a good helmet
- Be visible- use bike lights front and back, reflectors, and light-colored clothing if riding at night
- Pick bike-friendly routes – stick to trails or roads with established bike infrastructure
- Be predictable – don't surprise drivers or other cyclists by making abrupt maneuvers that may be unexpected and/or don't allow for sufficient reaction time
- Ride defensively – don't expect that other drivers or cyclists are paying much attention to you and be cautious of maneuvers they may perform

Getting the word out can be done in a variety of ways, including:

- Posting the information on billboards
- Buying ads on local TV and radio
- Posting ads/bulletins in local publications
- Social Media ads/content on city and community partner social media sites

It's often best to partner with local schools and bicycle associations to help with the appropriate targeting and areas of focus.

Holding a complementary event catering to bike safety and maintenance is a great way to assist in implementing the initiatives from the campaign. These can be used to teach cyclists good practices in the five critical safety points. Having someone on hand who can provide knowledge in bicycle safety and maintenance will be key and can be done through partnering with a local bicycle association and/or bike shop.

## **COMMUNITY POLICING**

### **BICYCLE FOCUSED TRAINING FOR LAW ENFORCEMENT**

While law enforcement officers receive annual training to stay current on local and state laws, there is little focus on laws related to bicycle safety. To bridge the gap in training, the City of Marion should consider implementing a supplemental training program for local

officers that discusses the local laws on bicycle safety and proper enforcement of them. These educational programs should be supportive in advancing bicycle and other alternative forms of transportation. Funding for such training programs has been available from a variety of state and non-profit advocacy organizations.

One alternative to placing the responsibility of enforcing bicycle safety laws on busy police officers is to designate enforcement duties to trained staff or community service officers. Such staff or officers would not have any police powers of arrest and would concentrate their efforts on enforcing laws supporting the safe interactions among bicyclists, motorists, and other means of transportation.

### **POLICE BIKE PATROLS**

As part of the enforcement efforts, the City of Marion should consider instituting a bike patrol unit within the city's police department. They can be part of the community service officer initiative and can enforce the laws and safety measures related to bicycling. The visibility and interaction that bike patrols have with Marion residents can foster relationship building with the community. Community Bike patrol officers can also serve as role models for other bicyclists by demonstrating proper riding techniques and can help promote safety initiatives by distributing bicycle safety information to motorists and bicyclists.

## ECONOMIC CONNECTIONS TO WALKING AND BIKING FACILITIES

Marion is one of the fastest growing cities in southern Illinois with growing community of cyclists. City has a priority to make the streets safe for all levels of cyclists and is dedicated to creating a bike-friendly city through its initiatives. This makes smart business sense. Studies of cities that are investing in bicycle infrastructure are receiving significant economic benefits including:

- **Increase in real estate values** – studies show that median home values are higher and commercial properties are in greater demand and capture higher lease rates when directly adjacent or near trails, paths and bike routes.
- **Attraction of companies and talent** – progressive companies are looking for locations in cities with bicycle/pedestrian infrastructure and seeking young talent that is looking for the same.
- **Encouragement of bike commuting, health and productivity** – well connected bike networks allow people to choose to walk, bike or use micromobility to get to work, school, and recreation. People with active lifestyles are less likely to have costly health conditions and less sick days.
- **Increase in retail store visibility and sales revenue** – when priority is given to walking and biking facilities near stores, people are going at speeds that allow for more attention to be paid to the retail and restaurant offerings. They are more likely to stop in and spend money. Trail-oriented developments can be attractive, active, and bustling places where the presence of people outside of cars attracts more people.

- **Infrastructure savings and reduction in congestion** – when bike networks are developed at a high level, they provide the opportunity for people to choose to use modes of transportation other than vehicles. This reduces traffic, traffic emissions, and the need for larger roadways.
- **Increase in safety and reduction in vehicle and pedestrian collisions** – appropriately designed facilities for walking and biking reduces or eliminates the interaction of bicyclists and pedestrians with vehicles. There is significant reduction in injury and death. Providing safe routes to schools is one of the most important benefits of a walking and biking network when children and older adults are more likely to be critically injured or killed in a crash with a vehicle.

There are four active initiatives in the City of Marion implementing walking and biking improvements that will contribute to economic opportunities in Marion:

1. **Development of the Bike Marion Master Plan** – the recommendations contained in this Master Plan support the vision and goals of Marion and those who are tasked with planning, operation and maintaining the transportation network. The plan lays out a coordinated network of on-street and off-street walking and biking routes that connect neighborhoods with their schools, parks, recreation, retail, services, and cultural destinations. At the heart of the community is the Tower Square in downtown Marion. This biking and walking network is designed to connect Marion residents and visitors to the square with intuitive, safe, and low stress facilities for walking, biking and micromobility to encourage local investment, tourism, and pride in one's community.

2. **Implementation of the Crab Orchard Greenway** – the Illinois Department of Transportation recently approved \$4 million for the design and construction of almost 6 miles of the Crab Orchard Greenway (COG). The greenway will provide access to Crab Orchard National Wildlife Refuge, Marion High School Sports Complex, Historical Village on John A. Logan's College Campus, RIDES Mass Transit, schools, homes, and businesses. The Crab Orchard Greenway is a proposed shared use path that is parallel IL 13 between Marion and Carbondale. Future trail segments will complete the connection of the greenway to existing trail segments at the Wolf Creek overpass near Carterville and Crainville and westward to Carbondale.

When completed, the COG trail will extend for 17 miles with approximately 10 miles of the trail will be within wildlife refuge providing a safe and convenient way for local residents to experience the scenery and wildlife. Planning efforts are underway to connect the trail to provide access to recreational activities within the wildlife refuge such as the visitor's center, hiking trails and wildlife viewing areas. The City of Marion is the east anchor of the trail with multiple trailheads. The Bike Marion Master plan outlines the local network residents will use to connect to this regionally significant recreation opportunity and how trail users will access Marion's businesses, Tower Square, and other destinations for mutual benefit.

3. **Downtown Marion Mobility Improvements** - the city of Marion was awarded \$1,580,180 in Illinois Transportation Enhancement Program (ITEP) funding for improvements in the downtown area focuses on vehicular, pedestrian, cyclists, and accessibility accommodation. Downtown Marion Mobility projects will transform Tower Square with

a new round design and is transforming the center of the Square to accommodate year-round civic events. The existing on-street parking around the square will be designed to be flexible outdoor public spaces for events with removable bollards, decorative paving, pedestrian light fixtures, bike racks, and landscaping. A separate funding source is implementing improvements to the circle in the middle of the square which include a summer spray pad play area, ice rink, new planters and landscaping. These improvements will enhance the appeal of Tower Square and downtown Marion as a local and regional destination. Additional retail/restaurant traffic will support healthy businesses, a health downtown, and encourage new business development.

- 4. Bike Lanes on Illinois State Routes** – Illinois Department of Transportation (IDOT) completed their Bicycle & Pedestrian Accommodations Study at the end of 2019 to guide the accommodation of bikes and pedestrians along Illinois roadways. In conjunction with IDOT's Complete Streets Policy put in place 2010, Illinois law states that bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities and in or within one mile of an urban area, bicycle and pedestrian ways shall be established in conjunction with construction, reconstruction or other change of any State transportation facility. As a result, state route projects in the Marion municipal boundary are including bike lanes and off road accommodation that will contribute to the Bike Marion network and

assist in providing bike/ped accommodation adjacent, over or under busy routes that are barriers to connectivity. Current projects include:

- **Route 13/W DeYoung Street Mid-block Crossing** – a crossing is planned at Route 13 and Ray Fosse Park. The crossing is planned between N Washington Street and N Whitman Street with a striped crosswalk and rapid flashing beacon to accommodate bike and pedestrian crossing of the state route to connect north and south sides of Marion for greater cross access around the city and connecting residential to commercial businesses on Route 13. .
- **Illinois 37 Resurfacing Project** – the project consists of milling and resurfacing the existing two-lane road, constructing 8-foot shoulder, new ditches, and extending or replacing culverts. The project begins just north of Wildcat Drive and continues south to near Illinois 148. In Marion, a roundabout at Route 37/S Court Street, Wildcat Drive, and Pyramid park is in early design stages. A bike lane on the west side of Route 37 is planned north of the roundabout. The bike lane will transition to an off-road side path around the roundabout and provide future connection to shared use paths planned on Wildcat Drive in the master plan. This project to contributes to the desired bicycle and safety infrastructure recommended in the plan. With the master plan in place, strategic

coordination with IDOT can take place to ensure that transportation improvements can be consistent with the plan and that funds for bicycle improvements can be focused for mutual benefit.

- **Crab Orchard Greenway IL 148 and Transit Connection** – the \$2,000,000 ITEP project involves construction of approximately 2.5 miles of the proposed Crab Orchard Greenway from the eastern terminus on the east side of Interstate 57 to the Marion High School Connection.
- **Crab Orchard Greenway Marion High School Connection** – the \$2,000,000 ITEP project consists of construction of approximately 3.3 miles of the proposed Crab Orchard Greenway from the western terminus on the west side of Interstate 57 to the IL 148 and Transit Connection project.

These two projects are examples of coordinated planning with the Wildlife Refuge, IDOT and Marion's goals to achieve important walking and bicycling connections to and from the Wildlife Refuge. There are cross marketing opportunities for both the City of Marion and the Wildlife Refuge to encourage visitors to frequent both on their visit.

The recommendations of this master plan provide the next set of priority projects to implement for the benefits of connectivity and economic benefit.



# 6. IMPLEMENTATION ACTION PLAN

# IMPLEMENTATION

The implementation plan is where the recommendations for the bike network and accompanying policies and procedures are combined with community priorities to create an action plan that is achievable over time. This section outlines activities that will demonstrate action towards implementation and a methodology for prioritizing recommendations for the plan.

The Implementation Action Plan defines the phasing and prioritization of projects to allow the City to focus attention on incremental

implementation and funding sources for priority projects. The network has been divided into segments that create logical projects based on bikeway facility type, function in the network, and connectivity goals. The numbers on the map correspond to projects that are described in this chapter.

Through engagement with the City and the advisory groups, the priority of early projects have been determined. However, the plan is flexible. As priorities change or there is an opportunity to take advantage of an active

infrastructure project that can incorporate all or a portion of a planned project.

An action agenda has been developed to determine the activities that will demonstrate action towards implementation, including policies and programs as well as a responsibility matrix that will outline responsibilities for ongoing plan implementation.

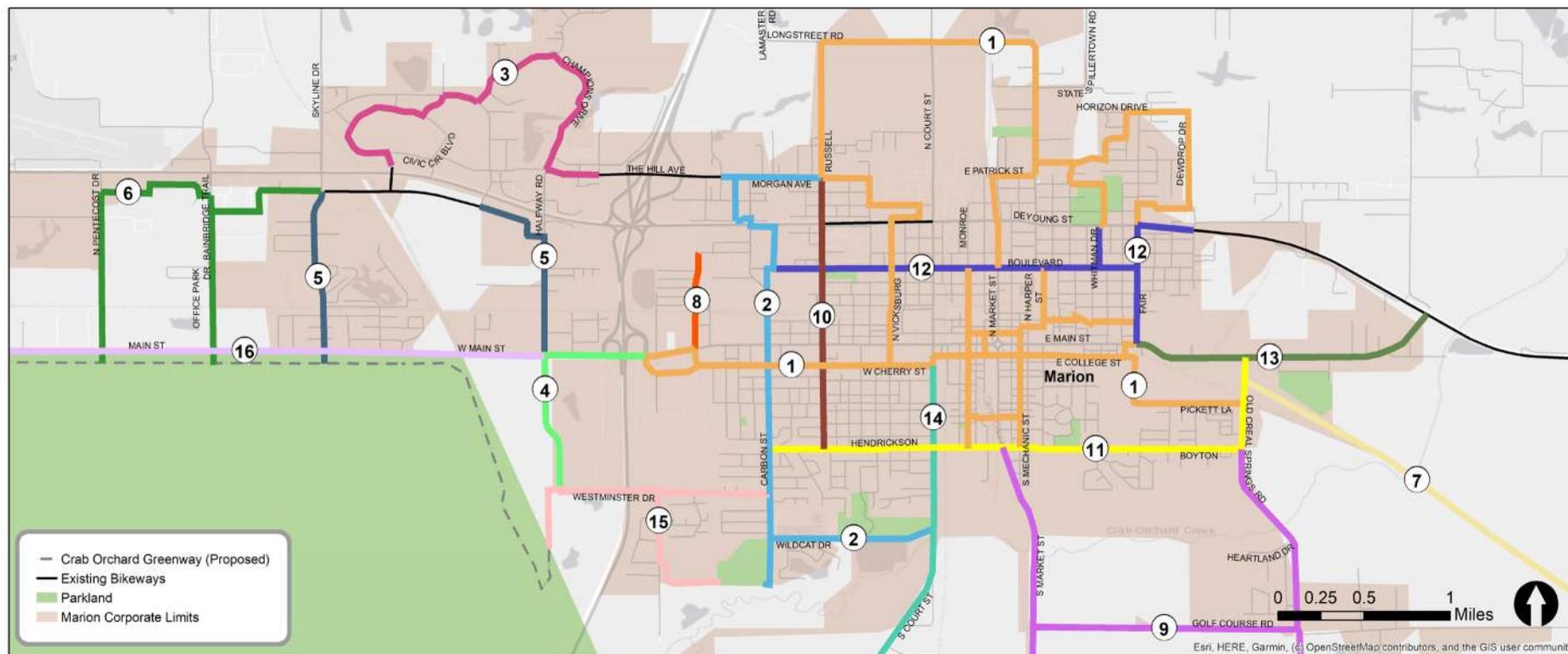


Figure 6.1 - Projects of the Recommended Network

# PROJECT PHASING

The recommended bike network for the City of Marion is extensive and comprehensive and requires that implementation be complete by phasing projects, including prioritizing projects that will serve as catalysts for getting the network started to provide immediate economic and transportation value to Marion residents.

## PRIORITY PROJECTS

The success of this plan will depend on the effective investment of local tax dollars and as such it is important that residents see a maximized return on investment. A prioritized list of projects was developed to assist with implementation. To determine project priority, a survey was assembled and sent to members of both the Study Oversight and Technical Advisory Committees, requesting their completion.

## PRIORITIZATION SURVEY

The recommended network was divided into 16 projects assembled from segments of the network that could be linked together to form corridors and that could stand on their own in some capacity in providing connections to points of origin and destinations. Figure 6.1 shows the projects that were assembled.

The projects were then divided into off-street and on-street projects depending on how much of the project length is off-street or on-street (some segments had both on- and off-street components).

To prioritize projects within the recommended network, prioritization criteria was assembled. The criteria uses a binary scoring system that reflects the goals and vision of the plan and would support orderly growth of the bicycle network. The criteria are shown in Figure 6.2.

The two highest scoring on-street projects and highest scoring off-street projects from each returned survey were tallied and the projects receiving the most tallies were deemed priorities. The results of the survey were discussed with City leadership to ensure that they are feasible and in alignment with the City's goals.

Among the resulting three priority projects from the survey, the City is planing to pursue ITEP funding for an additional fourth priority project that would link the proposed Crab Orchard Greenway with the recommended bike network.

The following is an overview of each recommended project and the materials and costs necessary to complete:

Criteria	Description	Score
<b>Proximity to Schools</b>	Project is within ¼-mile of a public or private K-12 school	0-1
<b>Proximity to Parks &amp; Community Centers</b>	Project is within ¼-mile of a park or community/senior center	0-1
<b>Proximity to Commercial Districts</b>	Project is within ¼-mile of a commercial district or hub	0-1
<b>Proximity to Town Square</b>	Project is within ¼-mile of Marion Town Square	0-1
<b>Connection to Transit</b>	Project is near RMTD Bus Station	0-1
<b>Improves High-Crash Corridor and/or intersections</b>	Project corridor has had at least one crash involving a pedalcyclist within the past five years	0-1
<b>All Ages and Abilities</b>	Project provides a high level of comfort for people bicycling and walking	0-1
<b>Connection to Existing Bike and Pedestrian Facilities</b>	Project intersects one or more existing facilities	0-1
<b>Ability to leverage Public Property</b>	Public property is available to use for the project so that private property will not need to acquired	0-1
<b>Railroad Crossings</b>	Project does not cross any active rail lines at-grade	0-1
<b>Frontages</b>	The impact that intersecting driveways will have on the project	0-1
<b>Fundability</b>	Project is poised to successfully achieve funding through at least one outside funding source.	0-1
<b>Total Possible Score</b>		<b>0-12</b>

Figure 6.2 - Prioritization criteria

## PRIORITY 1: MARION CALM STREET NETWORK

The primary priority project is Project 1 in Figure 6.3. It involves constructing the majority of the proposed calm street network located in the central and north parts of the City. At 11.5 miles, the project is the longest of the 15 projects recommended in this plan, but the cost of the materials and infrastructure necessary to construct are low.

Starting with this project will allow Marion to establish a substantial part of the recommended network straightaway in areas with some of the highest concentrations of residents and points of origins and destinations, including the Square and surrounding downtown area, to quickly build momentum for biking in the city. The highlight of the calm street network is the east-west spine on Cherry Street which traverses the residential core of Marion and provides access to many east-west connector calm streets.

Included with the calm street network is a 3,200 foot long, 10 foot wide, multi-use path that will provide access to the city's Bus Depot near the corner of 7th and W Main Streets (Figure 6.4). As mass transit options increase in Marion and the rest of the southern Illinois region, access to the bus depot will be crucial in providing a true multi-modal regional transportation network.

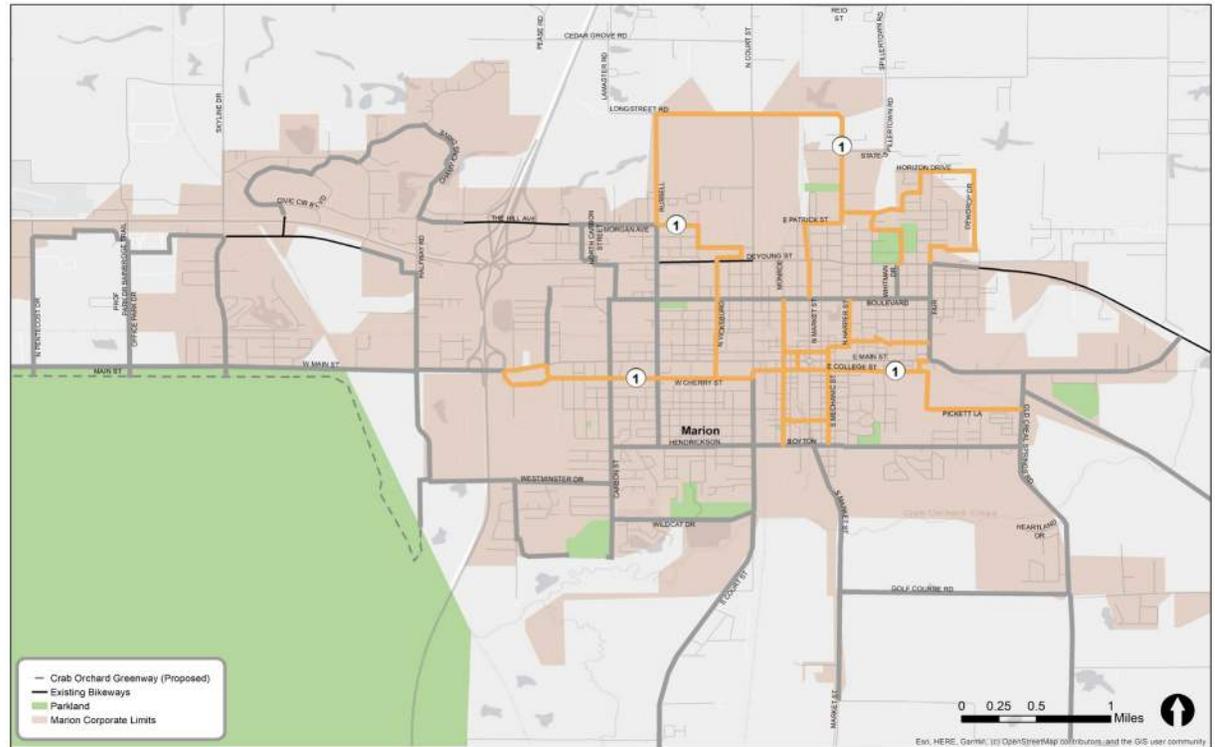


Figure 6.3 - Priority 1 - Project #1



Figure 6.4 - Priority 1 Multi-Use Path

Estimated Project Cost	
Project Component	Estimated Cost
Calm Street Network	\$ 60,000
Multi-Use Path Transit Center Connection (Optional)	\$ 600,000

## PRIORITY 2: BOULEVARD STREET SIDEPATH

The second priority project is Project 12 in Figure 6.5 and involves adding a sidepath, mainly along Boulevard Street between Carbon Street and Fair Street. This project also includes a sidepath on Fair Street between DeYoung Street and Main Street, a Calm Street on Washington Street between DeYoung Street and Boulevard, and a bike lane on DeYoung Street between Fair Street and Broeking Road/Radcliffe Street. This project nearly is nearly 3 miles in length, including 2.7 miles of sidepath and 0.25 miles of calm street treatment.

This sidepath provides a safe east-west connection through the middle of Marion. It provides a direct connection to two highlighted destination points - Harrison Bruce-Park and Jefferson Elementary School - and connects with the rest of the proposed network in 10 locations, including six with the Calm Street Network that is Priority 1.

A sidepath was chosen for this project as it would provide the most safety benefit as an off street facility that parallels the Cherry Calm Street.

Estimated Project Cost	
Project Component	Estimated Cost
Multi-Use Path/Calm Streets	\$2,400,000

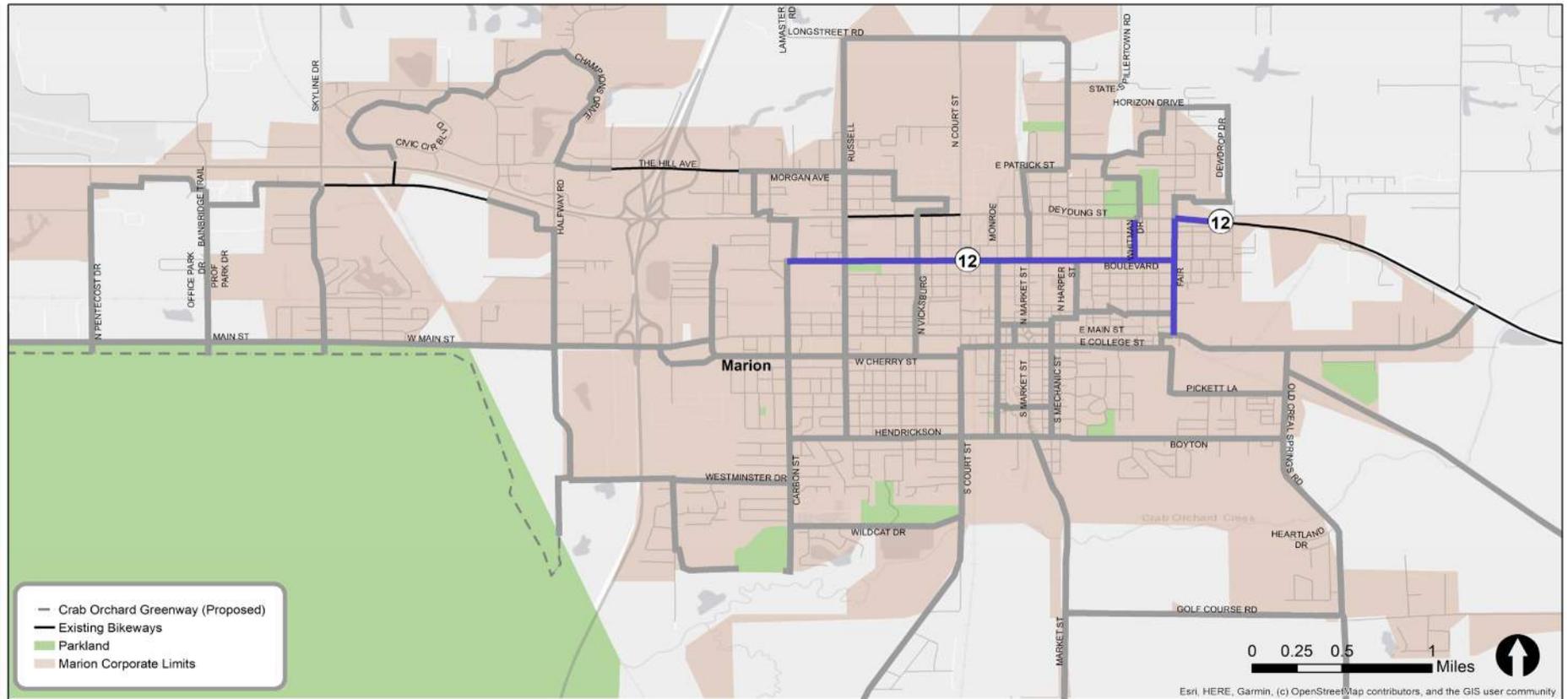


Figure 6.5- Priority 2 - Project #12

### PRIORITY 3: CARBON STREET SIDEPATH

Priority 3 involves creating an off-street, north-south connection on the city's west side. The primary route utilized is Carbon Street between The Hill/Morgan and where Carbon ends at the Harry L Crisp Sports Complex. There are several spurs along Morgan, Westminster, and Wildcat that will connect the main portion of this project along Carbon to other recommended projects within this plan, as well as the Crab Orchard Greenway.

One of the main benefits of prioritizing this project is the number of origin and destination points that it will pass. Perhaps most significantly is Marion High School. This project on its own provides several access points to the high school from nearby residential areas, not to mention the connectivity that will be available as the network continuous to be built out. This project will also provide access to commercial districts along DeYoung and The Hill, offering both customers and employees alike an additional transportation option not currently available.

Estimated Project Cost	
Project Component	Estimated Cost
Wildcat Drive Sidepath (From Carbon to Court)	\$ 900,000
Carbon Street Sidepath (From Cherry to Wildcat)	\$3,000,000
Carbon Street Sidepath (From The Hill/Morgan to Cherry (along Stanford, Bittle, DeYoung, and Chenoweth)	\$5,000,000

Near DeYoung, the alignment for this project is less linear than in most parts given the complexity of dealing with the auto-centric retail found in this area. Utilizing city and state ROW as well as choosing alignments along roads less traveled by vehicular traffic allow for an

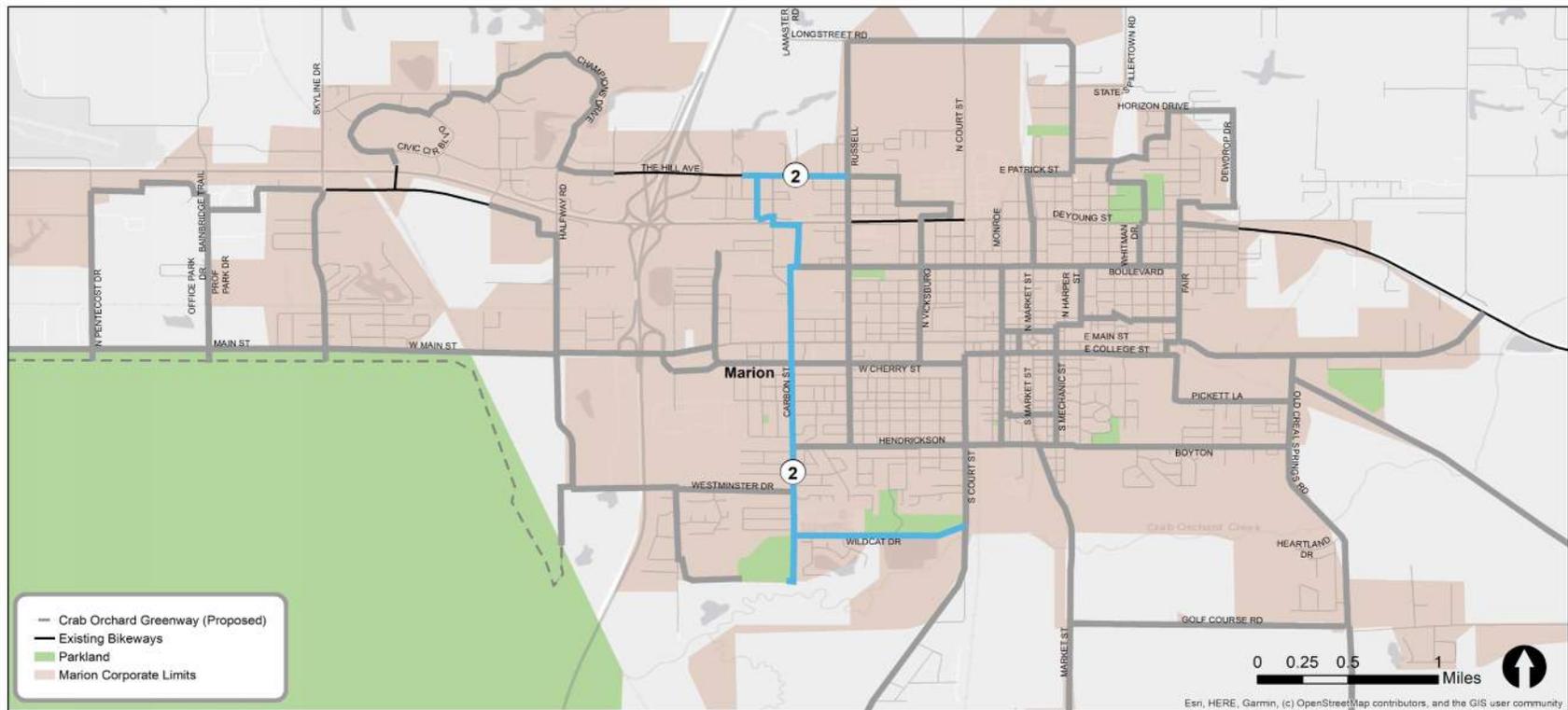


Figure 6.6 - Priority 3 - Project #2

alignment that maintains a high level of comfort and safety for riders of all ages and abilities.

Note that this route will leverage existing infrastructure found on The Hill Avenue that provides bicycle access to areas west of I-57.

## ONGOING PLAN IMPLEMENTATION

The previous three projects, in addition to the Crab Orchard Greenway, will provide a significant start creating a culture of biking in the City of Marion. Further implementation of the plan need not follow a rigid schedule, particularly given that as this is the first bike plan in Marion, there should be room for dynamism and pivoting where necessary as biking culture gets off the ground. Thus, there are two ways that the plan can be implemented long-term: 1) implementing elements of the plan when major road construction takes place where there have been plan recommendations for an alignment and 2) responding to demand. While a culture of biking continues to grow in Marion, the first method of implementing biking infrastructure when major road work occurs will be the most likely method for implementation. Many of the projects contained in this plan may require significant alteration to the roadway and the acquisition of easements and ROW. These are expensive and often complex tasks that are best rolled into other projects if possible.

The second method is more reactionary, but in cases where demand for bicycling infrastructure is strong thought should be put to foregoing the wait for a major reconstruction project along a given roadway and prioritize the given bicycle infrastructure, ensuring that riders don't lose interest over time and discontinue cycling on the account that high demand infrastructure was not implemented in a timely fashion.

## PLAN REVISION PROCESS AND METHODOLOGY

It is important that the managing body of this plan periodically monitor and evaluate implementation efforts to document trends and outcomes, identify implementation strengths and weaknesses, and realign strategies of investment in plan-related projects and programs. Programs like annual bicycle counts, bicycle-related crash analyses, and completing the annual report card (discussed later) will highlight efforts to support bicycling improvements made.

### PERFORMANCE MEASURE REPORTING AND EVALUATION

Evaluating performance measures and reporting progress of plan implementation is an effective way to keep track of and communicate efforts to integrate bicycling into the fabric of the community. A template reporting document has been included as part of this plan in Appendix 3. It allows the managing body of this plan to record accomplishments to ensure they are tracked and recorded and should be completed on an annual basis.

### ANNUAL REPORT CARD

A report card captures plan successes and highlights the where goals and objectives may need to be reevaluated. The city may want to disseminate this information to the public to ensure the community remains aware of implementation successes and continued progress in an engaging way. The document can be posted on the City's website, shared via social media, and printed for distribution at public facilities and community events.

Resident surveys, economic impact analyses, and other tools to communicate the value and benefits of bicycling can also be used supplemental to the annual report card for ensuring that the public and stakeholders are kept informed on all the benefits and positive byproducts of the plan.



# 7. APPENDICES

# APPENDICES

## APPENDIX 1 - COMMENTS RECEIVED FROM INTERACTIVE MAPPING TOOL

Use of the interactive mapping tool yielded four comments from the public:

1. Comment Type: General

Location: Northeast of Boulder St and Meadowlands Pkwy

Comment: Extend the bike path that runs along Crab Orchard and John A Logan. It could run along old 13.

2. Comment Type: General

Location: The Hill Ave, east of I-57

Comment: This is not a good environment.

3. Comment Type: Opportunity

Location: The Square

Comment: Connect Bikeways to Square

4. Comment Type: Opportunity

Location: East side of Old Creal Springs Rd between E Boyton St and Heartland Dr

Comment: Bike path along Old Creal between Heartland Drive and Boyton to provide access for Colonial Hills and adjoining residential areas to access Marion via biking, walking, or jogging. No viable nor safe alternative exists. Thanks!

## **APPENDIX 2 - COMMENTS RECEIVED FROM SURVEY/COMMENT CARD**

# Comment Card

Comment Number	What are you most excited about?	What are you most concerned about?	Level of Support for the Vision	Level of support for the stated goals
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## 1st Meeting - November, 2021

1	Potential to connect Carbondale, Carterville (JALC), and Marion Connection of sections that allow safe biking at all levels throughout city	Cyclist safety, motorist awareness	5	5
2	Safe biking on Marion streets. Connection from Marion to Crab Orchard	Safety Riding right next to cars. Like motorcycles, cars do not see us either	5	5
3	A close bike trail to enjoy with my children	No concerns	Agree	Agree
4			5	5

## 2nd Meeting - April 27, 2022

5	Biking and getting to dining and other community events	Having access to town thru biking to jobs	5	5
6	Safe access to a network of pathways and trails	Safety	5	5
7	Safe bike paths that connect local areas of interest	Treatment of intersections. Raising driver awareness of bike presence	5	5

# APPENDIX 3 - PERFORMANCE MEASURE REPORTING AND EVALUATION

# Bike Marion Plan

## Annual Performance Measure Reporting and Evaluation

Year: \_\_\_\_\_



Annual activity goals met (Y/N)

### Performance Measures

Activities Completed

#### Goal 1: Engineering

The Bike Plan for Marion will emphasize the use of current best practices to implement bicycle infrastructure that is accessible and usable by people of all ages and abilities.

Adopt the NACTO Bike Guide and FHWA Small Town and Rural Multimodal Network Guide for use in design, operations and maintenance of bikeways by 2023.

Implement 50% of the planned network of Calm Streets by 2025, and 100% by 2029.

Implement priority elements by 2025 and the majority of the other elements by 2035.

Implement traffic calming procedures and policies that encourage traffic calming devices as necessary and a mechanism for the public to request traffic calming measures.

#### Goal 2: Encouragement, Enforcement, Education

The City of Marion will promote the increased use of bicycling in Marion as a mode of transportation and foster an environment of responsibility and mutual respect among people walking, bicycling, and driving with activities and programs that promote benefits of bicycling, as well as bicycle safety.

Promote and support two or more bicycle events for the general population annually that promotes bike plan implementation. (Mayor Bike Ride, Community Bike Ride, etc.).

Promote and support two or more bike safety trainings will be offered annually and documentation of number of bicyclists trained documented.

Bike **safety** classes will be offered to elementary and middle school students annually.

Offer bike safety classes within the elementary and middle school students annually.

Obtain supplemental training for law enforcement in the laws that govern biking as well as motorist interactions with cyclists.

#### Goal 3: Evaluation

The City of Marion will establish and monitor specific performance targets to document results of the implementation of the Bike Plan.

Monitor mode shift for increasing bicycling on an annual basis

Prepare a report card of progress measurement of the bike plan annually as reported to the City Council to document progress and effectiveness of the plan.

#### Goal 4: Equity

The City of Marion will establish the network and programs that focus on all ages and abilities and income levels to establish a network that focuses on connectivity to all areas of the community reaching all residents.

Adopt a **complete street policy** by 2023.

Adopt a **bike parking** ordinance by 2025.

Achieve a **Bicycle Friendly Community Status** of Bronze by 2025, and Silver by 2029.

#### Goal 5: Economic Benefit

The City of Marion will retain and attract residents and businesses and support growth.

Plan and adopt a bicycle wayfinding plan by 2023 and implement elements of the plan annually on each new bikeway segment installed annually.

Promote Marion as a destination and base camp for regional cycling in regional publications during spring and summer months.

