



The CORBIN Bikeway Master Plan



DRAFT

August 21, 2013

Cycle Corbin

The Bikeway Master Plan

TABLE OF CONTENTS

Introduction

- A. Goals and Objectives of Cycle Corbin Bikeway Master Plan
- B. Inventory and Analysis of the Community's Biking Resources
- C. Cycle Corbin Priority Routes
- D. Bike Routing Scenarios
- E. Education and Encouragement
- F. Cycle Corbin Plan of Action
- G. Acknowledgements and References

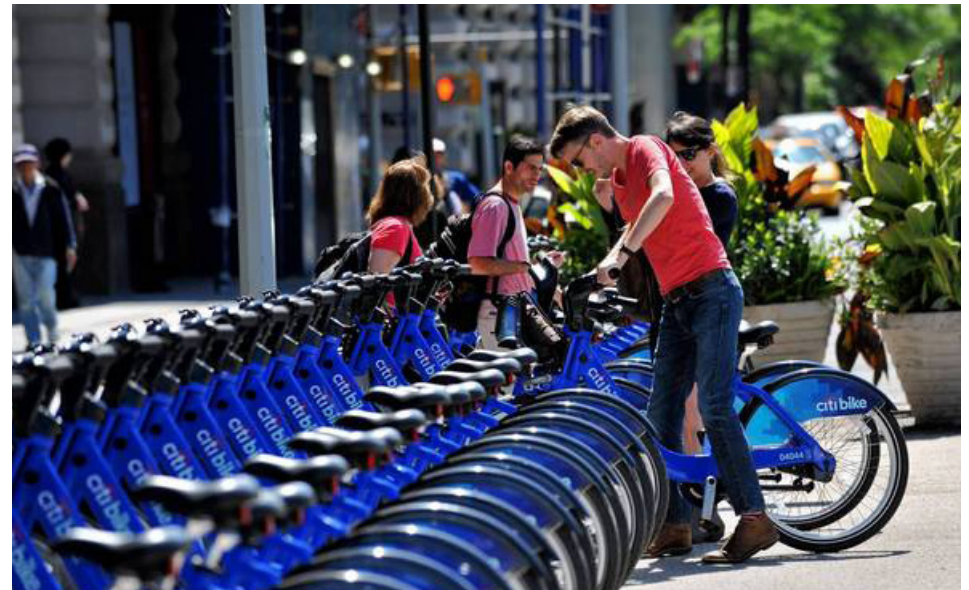


Introduction to the Cycle Corbin Bikeway Master Plan

The purpose of the Cycle Corbin Bikeway Master Plan is to determine primary routes, alignment, scope and development strategies for passive and active bicycling in the community.

This Plan will address the following:

- Determine the best priority alignments for bikeway routes in the community.
- Investigate available right-of-way and access for the bikeway through neighborhoods.
- Identify property owners involved or affected by bikeway development and identify strategies for the best methods for securing right-of-way for the project.
- Identify possible environmental impacts, engineering and permitting issues including FEMA, Division of Water and US Army Corps of Engineers involvement.
- Inventory and assemble data that define ecological resources, historic, archaeological and cultural resources, popular destinations, hazardous materials, floodplains, adjacent land uses, geological features, topography, vegetation and social or economic factors based on site visits.
- Provide alternative alignments along with typical sections and profiles.
- Provide standards for bike routes that will create the safest means for travel while integrating vehicular and pedestrian movement with biking.
- Communicate bike route assessments, suggested priority routes and standards for implementation that will guide the community towards a successful plan.
- Create a framework that will stimulate public education and encouragement for biking and cycling as a recreational option for the community.



Objective

Create a Unique Sense of Place

The Cycle Corbin Bikeway offers a potential array of environments with vast opportunities for interpretation. Through sensitive environmental and cultural planning, the team will develop a framework that embodies the uniqueness of the Cycle Corbin Bikeway and the community in which it is located. This “sense of place” can be accomplished through the celebration of the bikeway’s resources and enhancement of its active recreational facilities.



Objective

Reveal to Distinctive Cultural, Natural and Historical Elements of the Bikeway through Creative Interpretation

The diverse environments are not only unique but are representative of the valuable natural resources in the community and adjacent destination areas. These resources need to be translated and interpreted for users and visitors for understanding and celebration. A “branded” interpretation will create excitement and enhance the controlled destination for Cycle Corbin Bikeway.



Objective

Ensure Ecologically Sensitive Areas of the Bikeway are Protected and Revered

The CARMAN team will identify environmentally sensitive areas and create a framework for enhancement, education and interpretation. Human intervention will be evaluated to insure minimal invasion and maximum protection of the natural resources of The Cycle Corbin Bikeway’s public education regarding these ecological systems will be critical to their enhancement and protection.



Objective

Create Mutually Symbiotic Relationships with the Surrounding Land Uses of the Bikeway

The Cycle Corbin Bikeway can be a great source of pride for this region of and its surrounding neighborhoods. The CARMAN team will analyze surrounding bikeway facilities to determine if there is redundancy in land uses and recreational activities and through the public outreach process determine if there are missing elements that could be provided. The CARMAN team will evaluate and address current compatibility issues. Throughout the master planning process, the team will continually confirm that proposed improvements do not create incompatible relationships between the bikeway and surrounding uses.



Objective

Propose Plans and Solutions that are Sustainable Over Time

All principles of sustainability will be utilized in the siting and alignment of the CORBIN Bikeway. Maintenance implications of proposed improvements will be considered to ensure sustainability of the bikeway elements over time. Low impact development for bikeway activities will help in-sure protection of natural and cultural resources. These principals will insure a lasting, sensitive bikeway environment that can be managed over time.



B. Inventory and Analysis of Community's Biking Resources

As with any planning study, a complete assessment of conditions, attitudes, opportunities and constraints must be developed so that recommendations are in complete context with the outcomes of the study. To this end, the CARMAN team has completed several layers of assessment and inventory of Corbin's resources that will become the "ingredients" for the Cycle Corbin Bikeway Master Plan. Efforts for the biking assessment for the community include the following layers:

- Community Stakeholder Meeting to discuss objectives, goals and outcomes
- Meetings and tours of the community with City administration
- Site visits and community tours by the CARMAN staff to observe potential biking routes and environments, determine route adequacy, photograph conditions and document conditions of potential community biking routes

Community Tour with City Administration

The City administration including the City Manager and the Downtown Development Director provided insight into the objectives of biking in Corbin by touring the community with CARMAN. This tour highlighted the areas of the community that could be considered biking environments. These environments included bike paths and shared use trails that currently exist, routes of known interest within the community and observations of areas of interest or destination areas within the community that are of significance to both Corbin's residents and visitors to the community.

The outcome of the community tour led to the development of strategic timelines, goals and objectives for the Cycle Corbin Bikeway Master Plan, in addition to an initial formulation for bikeway connectivity within and around the community and specifically the need for integration of bikeways with pedestrians and vehicles.



Community Stakeholder Meeting

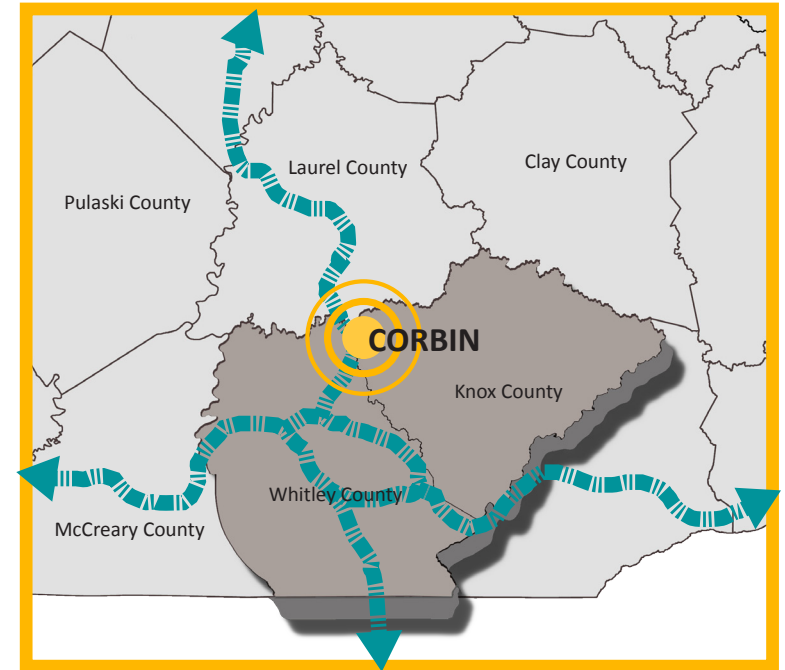
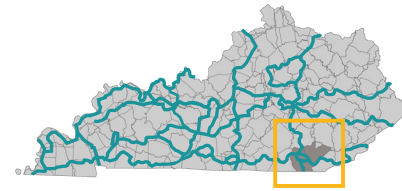
The CARMAN office conducted a Community Stakeholder Meeting for the purpose of gathering input from various representatives of the biking community in the Corbin area. The following were represented at the Community Stakeholder Meeting.

- City Administration including the City Manager and the Downtown Development Director
- Area Bike Shop and Retail Establishments
- Representatives of Biking Groups in the Community
- The Tourism Commission

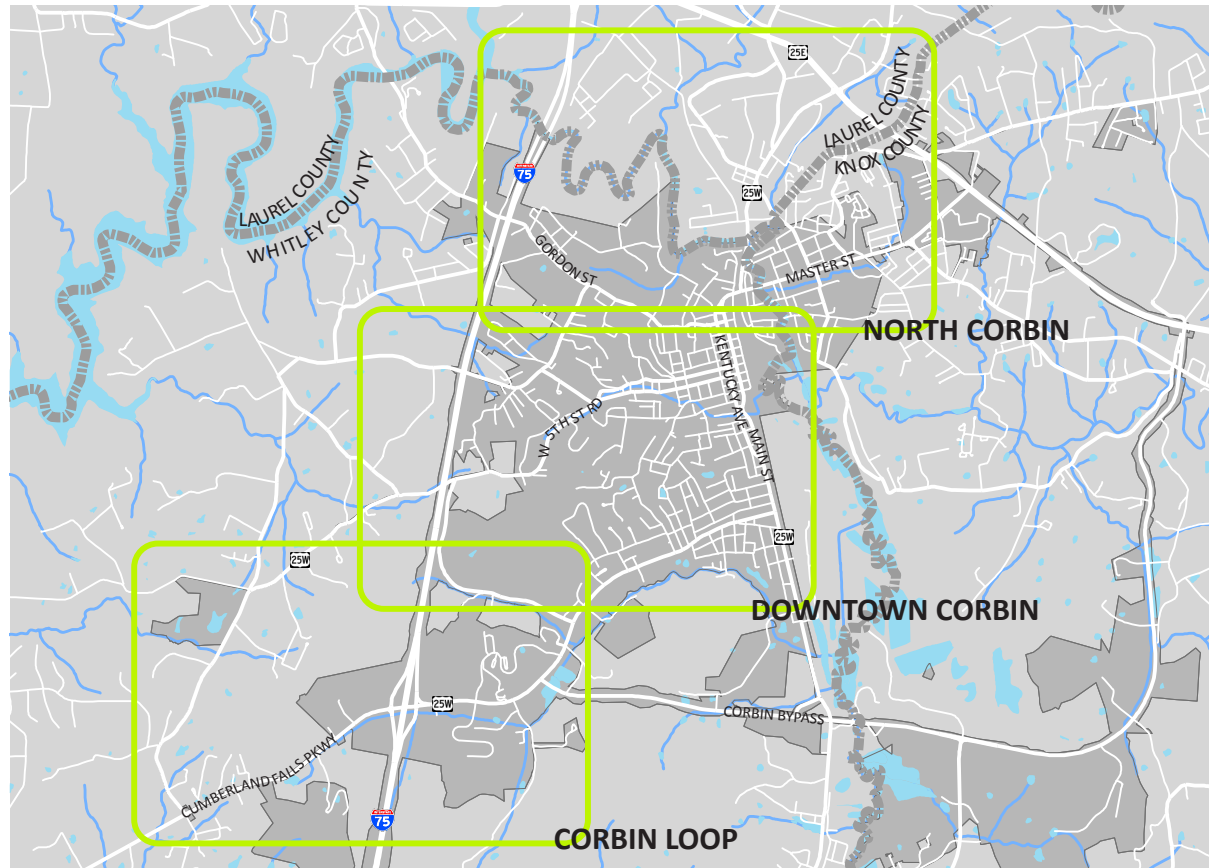
The CARMAN office presented Goals and Objectives that had been formulated for the Cycle Corbin Bikeway Master Plan that will be revealed in this report. In addition, the CARMAN office reviewed various physical characteristics of potential biking environments. The stakeholder group reviewed City mapping and provided input on bike routes that were currently being used in the community in addition to potential routes. The discussions provided a framework for considering both internal community bikeways and the need to consider connectivity to external biking influences that extend beyond the boundaries of the community. These would include interests of the biking community at large to include Corbin in regional biking activities, particularly in context with the extensive cultural and environmental tourism industry of the area.

Regional Biking Environments and Influences

Kentucky Bike Tours is a comprehensive bike route system connecting Kentucky's beautiful historic and environmental landmarks. Corbin is situated east of the Bluegrass Tour, a path that snakes through the foothills of the Appalachian Mountains, running north and south from Lexington into Tennessee. Portions of this trail extend into the eastern edge of the Corbin community and will overlap with proposed routes suggested by this study. The Southern Lakes Bike Tour is located less than 20 miles south of Corbin, running parallel to the Kentucky/Tennessee border. Corbin's prime location to these popular bike tours makes Corbin an ideal destination for bikers who wish to experience Kentucky's natural and man made attractions. More information about Kentucky Bike Tours can be found on the Kentucky Transportation Cabinet's website at <http://transportation.ky.gov/bike-walk>.

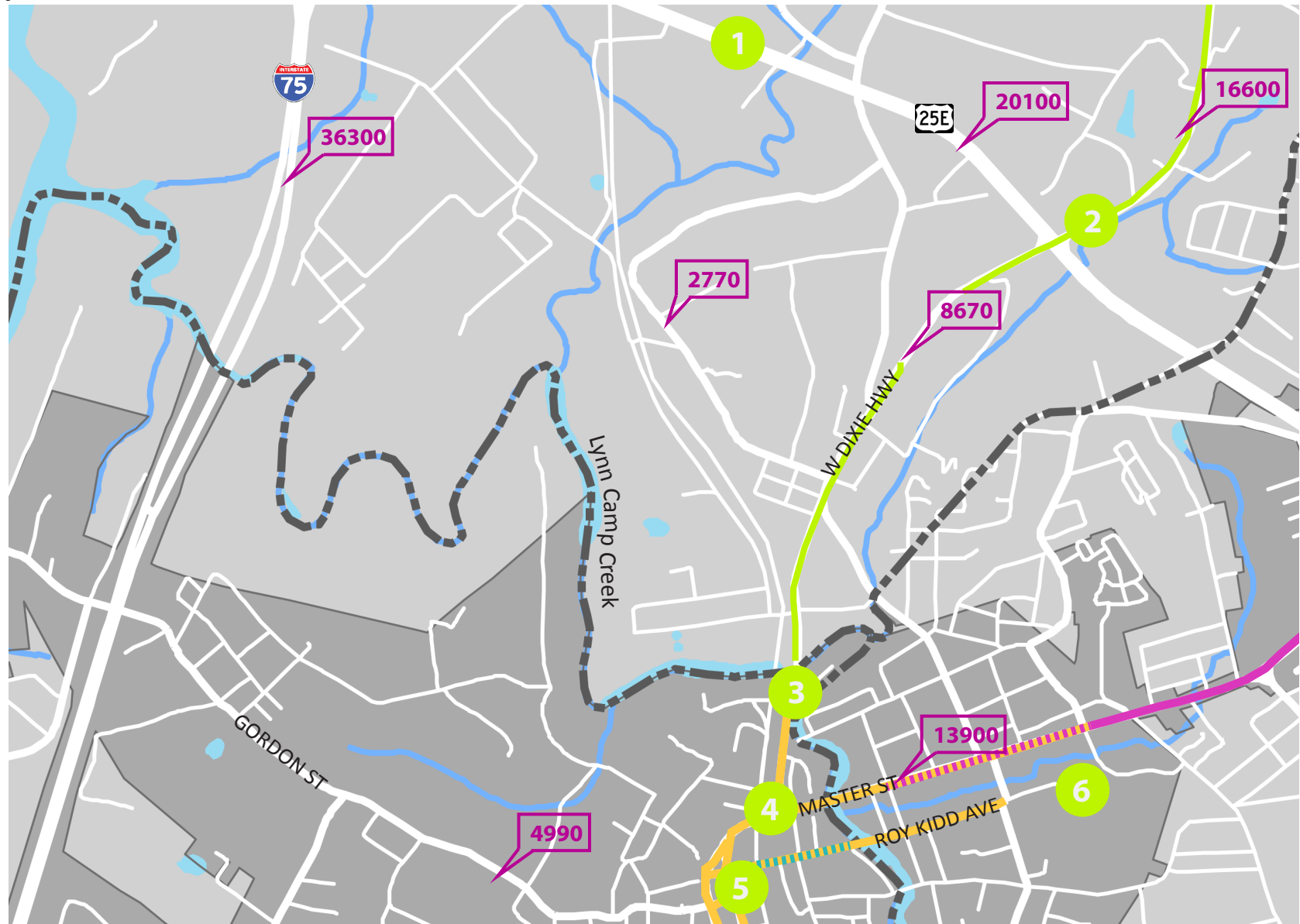


Bikeway Environment's Site Assessment



In order to provide a clear assessment of Corbin, an inventory of traffic patterns, circulation patterns and existing transportation infrastructure was gathered using GIS spatial data and Kentucky Transportation Cabinet's website. Site visits and a photographic inventory, along with information gathered at the Community Stakeholder Meeting, help provide a thorough assessment of Corbin's existing infrastructure and community desires. The locator map above shows the three main sections of Corbin. The following pages graphically depict the information that was gathered during the inventory process in order to provide a comprehensive assessment of Corbin. The site assessment highlights biking constraints and opportunities throughout Corbin, allowing for best fit recommendations for proposed bikes routes and bike path types.

Bikeway Environment's Site Assessment



- 1 Observation Point
- 1000 Traffic Count
- Sidewalks
- Designated On-street Parking
- Sidewalks + Designated On-street Parking
- No Shoulder (or less than 2')
- Sidewalks + Shoulders (+2' width)
- Shoulder (+2' width)

NORTH CORBIN



Bikeway Environment's Site Assessment

NORTH CORBIN

OBSERVATION POINTS

1. Main exit from I-75 into Corbin. High traffic volume. 12' lane widths, with four lanes plus turning lanes.
2. Two lane highway entering Corbin. High traffic volume. 12' lane widths, with 2' shoulder widths.
3. Laurel Avenue. Access to pedestrian bridge and bike path.
4. North Depot Street. 36' wide road
5. Main Street. 37' wide road, 11' lane widths, 7.5' on-street parking
6. St. Camillus Academy. 18' wide entrance. Possible destination point. No stripes on pavement.

PLANNING OPPORTUNITIES OR CONSTRAINTS

North Corbin consists of roads with a wide range of traffic levels, ranging from 20,100 on 25 East to 8,670 on West Dixie Highway. With higher traffic volumes, frequent curb cuts and turning lanes, cyclists are not recommended on 25 East. However, West Dixie Highway, which connects Corbin to London, is a possible cyclist route for intermediate and advanced cyclists. Incorporating signage and sharrows along the route is recommended to help make drivers aware of possible cyclists.

Master Street connects the north end of downtown Corbin and residential neighborhoods to a major shopping center. In order to incorporate cyclists safely on Master Street, re-striping of the road, including a designated bike lane, is recommended.

Located just off of the existing bike and pedestrian path that intersects Roy Kidd Avenue, Saint Camillus Academy provides an opportunity for a destination for cyclists. Re-striping on Roy Kidd and the entry road to the academy are recommended to better accommodate cyclists. More suggestions for implementing bike routes in North Corbin can be found in the subsequent chapters, Cycle Corbin Priority Routes and Bike Routing Scenarios.



Laurel Avenue @ North Bell Avenue



West Dixie Highway @ Highway 1223

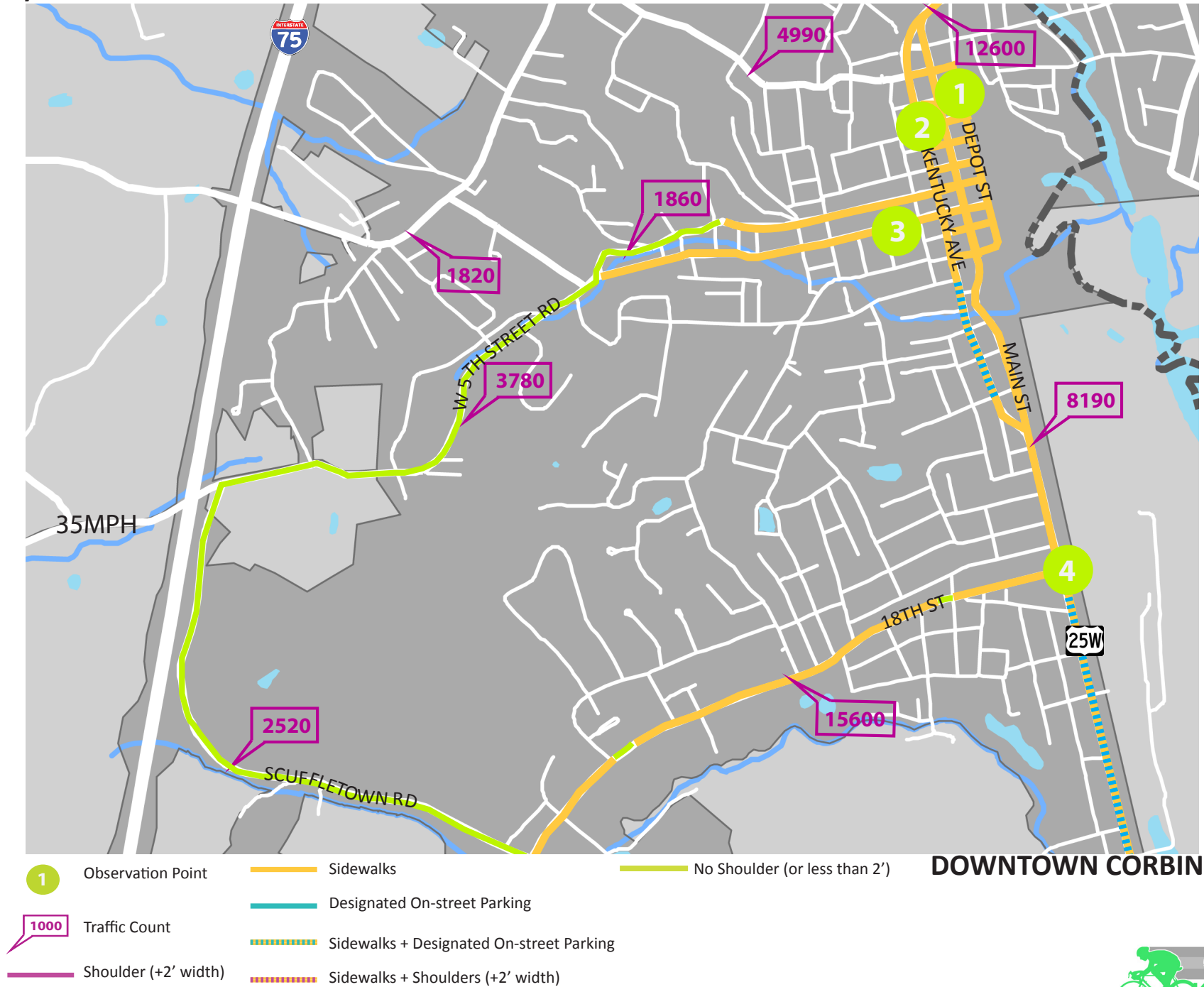


West Dixie Highway @ Highway 1223



Saint Camillus Academy Entrance

Bikeway Environment's Site Assessment



Bikeway Environment's Site Assessment

DOWNTOWN CORBIN

OBSERVATION POINTS

1. North Depot Road. Low traffic volume. Access into downtown from Laurel Avenue.
2. Kentucky Avenue. One way street. 34' wide with 2 lanes. No on-street parking is denoted before 9th Street.
3. 5th Street. One way street leading into downtown. 18' wide street, striped with 6' side walks. 25 MPH
4. 18th and South Main street. Connection to Cumberland Falls Highway. 44' wide road. 2 lanes and on-street parking on each side.

PLANNING OPPORTUNITIES OR CONSTRAINTS

Downtown Corbin has many opportunities for incorporating bike lanes. With low traffic counts, low speed limits and wide lane widths, the area is ideal for the implementation of bike lanes. Depot Street and Kentucky Avenue are prime routes for commuter cyclists in the adjacent neighborhoods. Re-striping these main roads is essential to providing cyclists with a safe route.

Forth and Fifth Street, both one way streets, are wide enough to accommodate a bike lane. Marking a clear bike lane is recommended on each street.

Further south at 18th Street sharrows, and signage or bike lanes can be installed to warn motorists of potential cyclists. This street, which connects downtown to the proposed Outer Loop is made up of three 12' lanes, providing enough width for incorporating bike lanes. More suggestions for implementing bike routes in Downtown Corbin can be found in the subsequent chapters, Cycle Corbin Priority Routes and Bike Routing Scenarios.



25West @ 20th Street



Depot Street

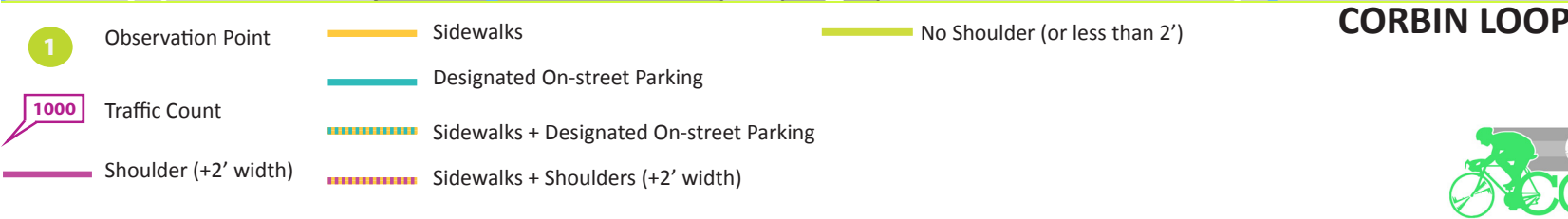
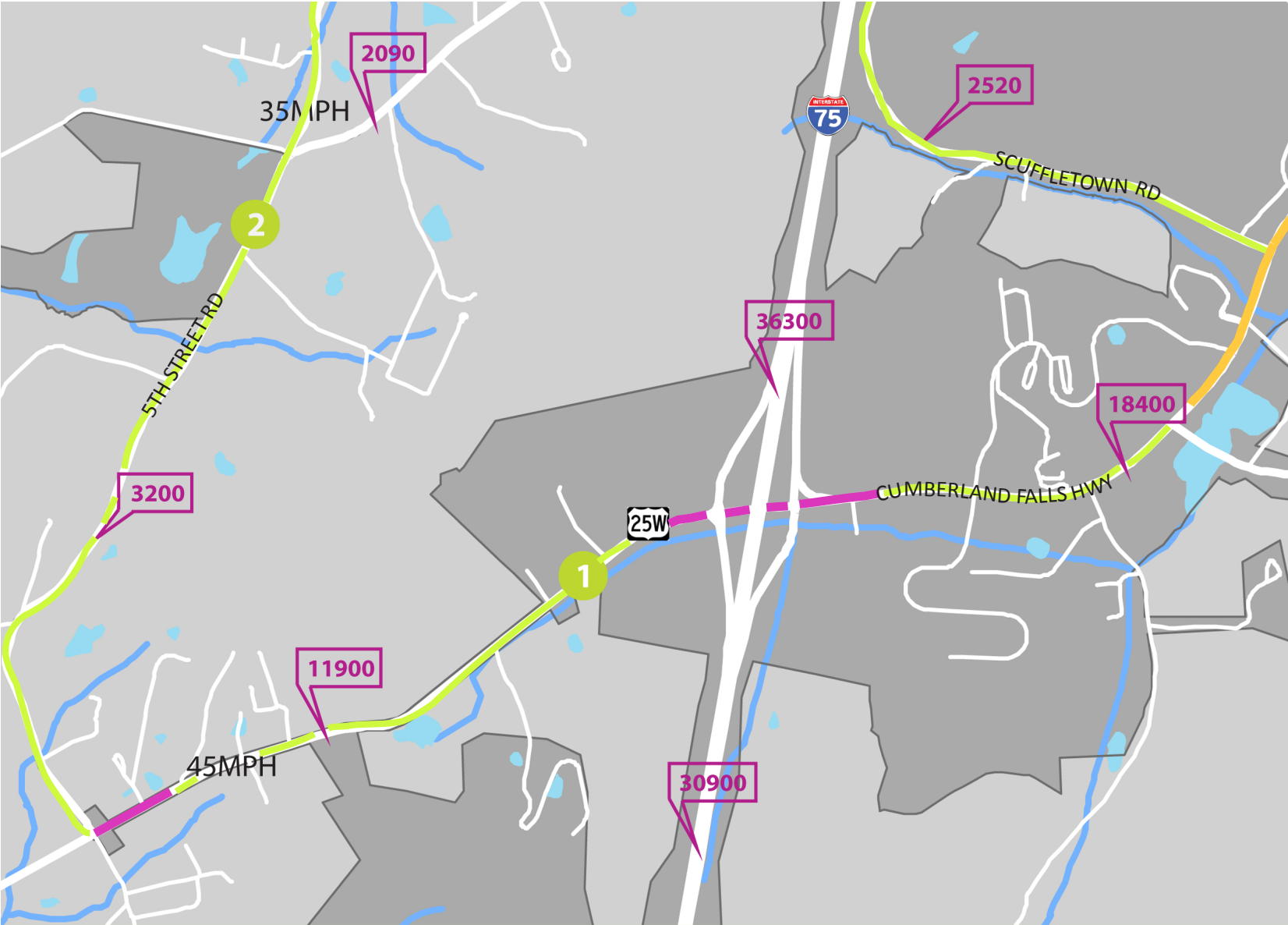


Main Street @ 4th Street



Kentucky Avenue @ Monroe Street

Bikeway Environment's Site Assessment



Bikeway Environment's Site Assessment

CORBIN OUTER AND INNER LOOP

OBSERVATION POINTS

1. Cumberland Falls Highway. Access to I-75. 20' wide road with two lanes. Speed limit 45-55 MPH. Rural, curvy. No shoulder. Access to Bacon Creek.
2. Corbin Primary School. Speed limit drops to 35 MPH. 20' wide road with two lanes and no shoulder.

PLANNING OPPORTUNITIES OR CONSTRAINTS

The Corbin Outer Loop is divided by Interstate 75, running north and south through Corbin. Cumberland Falls Highway is the southern portion of Corbin's primary access to the interstate, and thus a busy highway with traffic counts up to 18,400. Reducing the speed limit, currently 45 mph, to 35 mph, implementing signage and sharrows are recommended to make this primary route more cyclist-friendly. Currently this route is recommended for more advanced, experienced cyclists.

Fifth Street Road, connecting Cumberland Falls Highway to downtown Corbin, is a more rural route with narrow lanes and an appropriate speed limit of 35 mph. Although Fifth Street Road is not wide enough for designated bike lanes, signage and sharrows along the road make a safer route for cyclists. More suggestions for implementing bike routes along the Corbin Loop can be found in the subsequent chapters, Cycle Corbin Priority Routes and Bike Routing Scenarios.



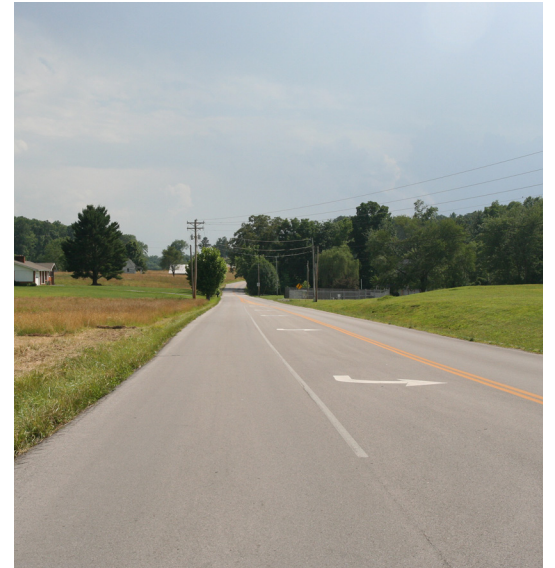
Bacon Creek @ South Lake Avenue



West 5th Street Road @ Corbin Primary

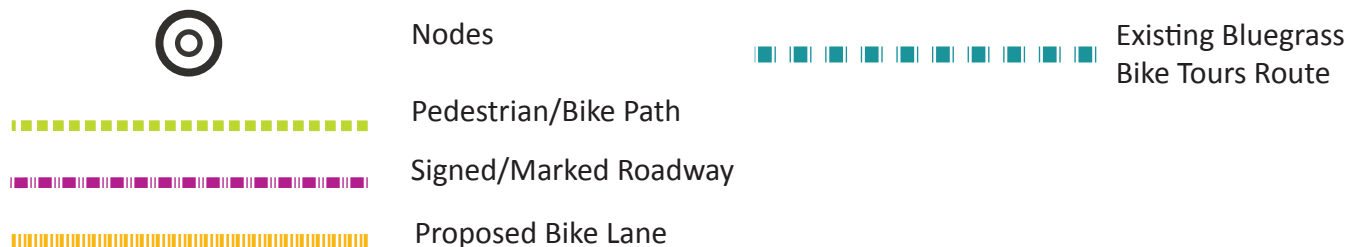
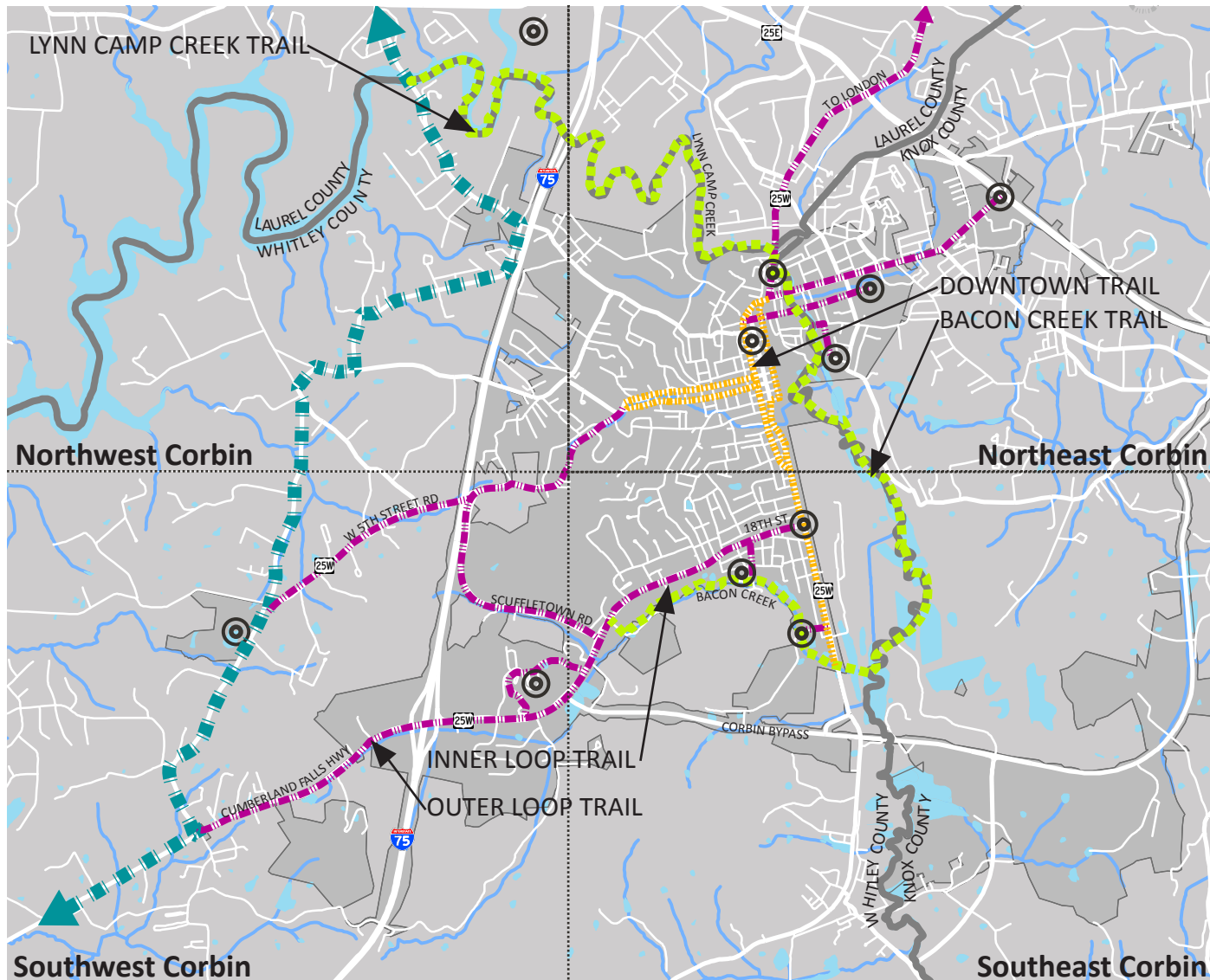


West 5th Street Road @ Family Circle



West 5th Street Road @ Corbin Primary

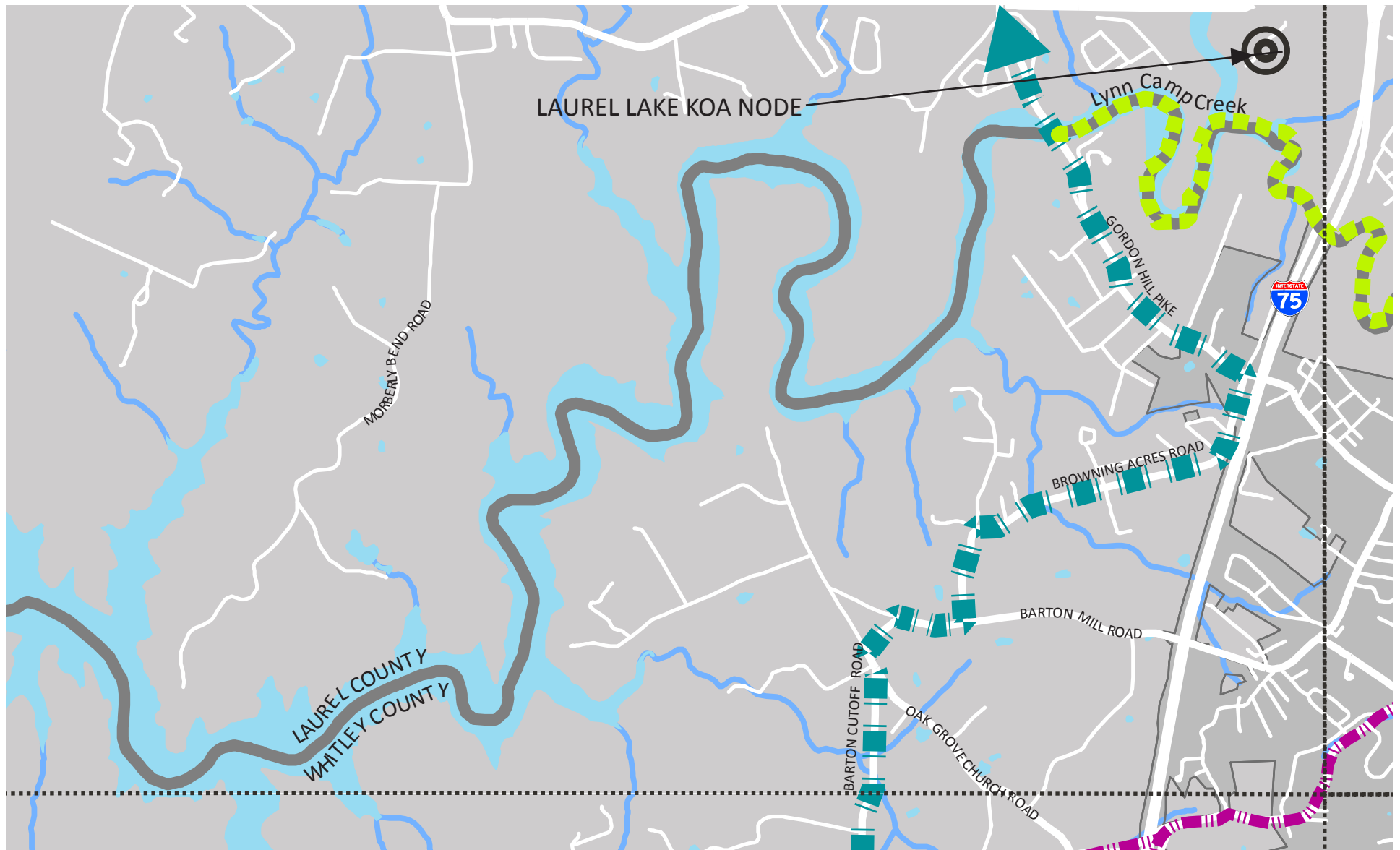
C. Cycle Corbin Priority Routes



Cycle Corbin consists of three main types of proposed bike routes. The first route, shown on the map with the green dashed line is restricted to cyclists and pedestrians only. The second type of route, drawn in an orange dashed line, safely combines vehicular traffic with cyclists by incorporating a 4'-6' wide striped bike lane on the right hand side of traffic. The third type of bike route provides signage along the road and marked sharrows on the pavement. This type of path is recommended more for advanced cyclists. This map of priority routes is divided into four sections in order to provide a clearer visual understanding of the proposed route connections.

Each trail consists of **nodes** that mark destination points with special interests along the bike route. A node could become a trailhead, rest stop or gathering point for cyclists. Each node should contain signage with information about the trail such as distances to other nodes or directions to local attractions. More information about signage can be found in Section D under Design Elements.





Nodes



Existing Bluegrass Bike
Tours Route



Pedestrian/Bike Path



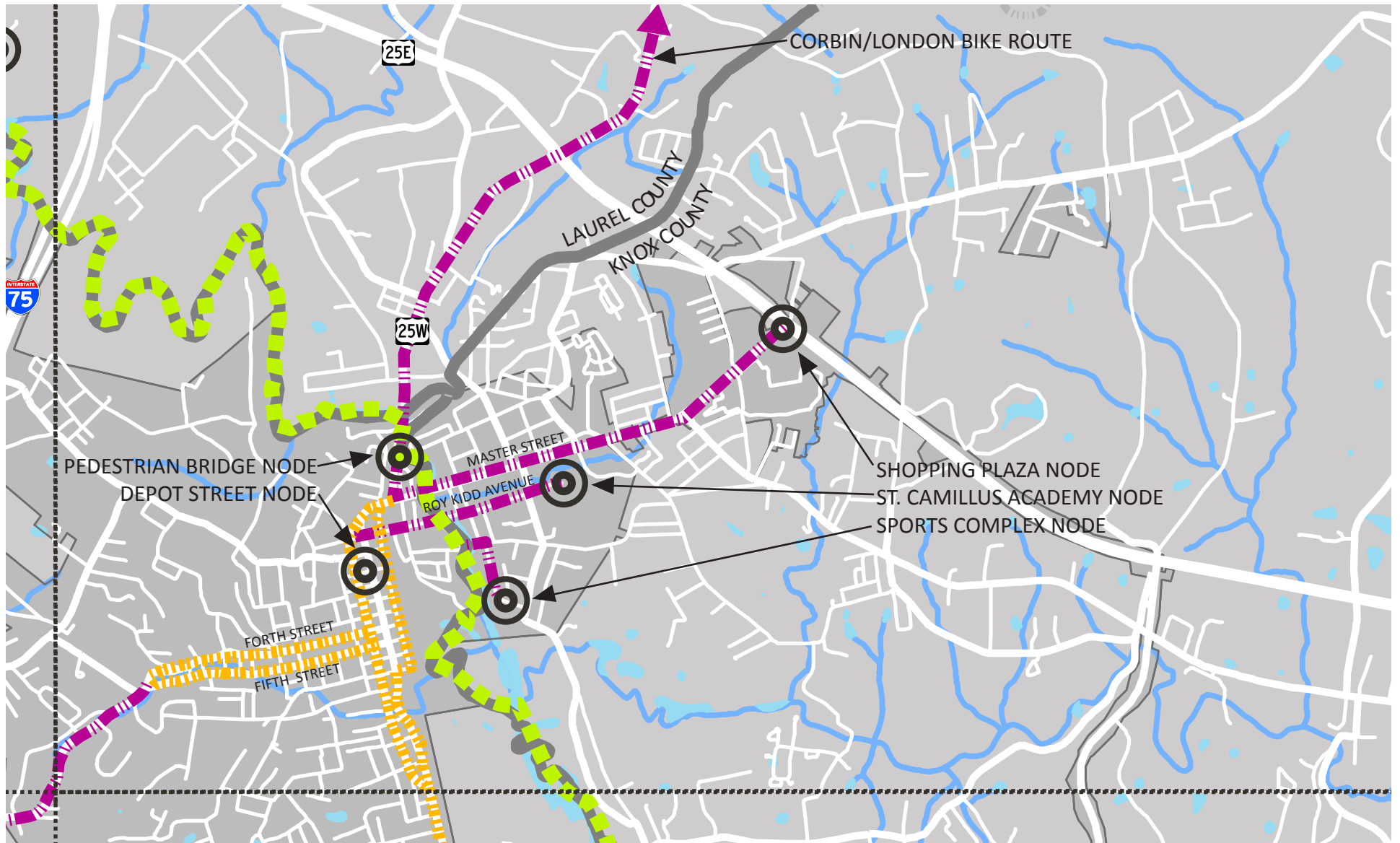
Signed/Marked Roadway



Proposed Bike Lane

NORTHWEST CORBIN





Nodes



Existing Bluegrass Bike
Tours Route



Pedestrian/Bike Path



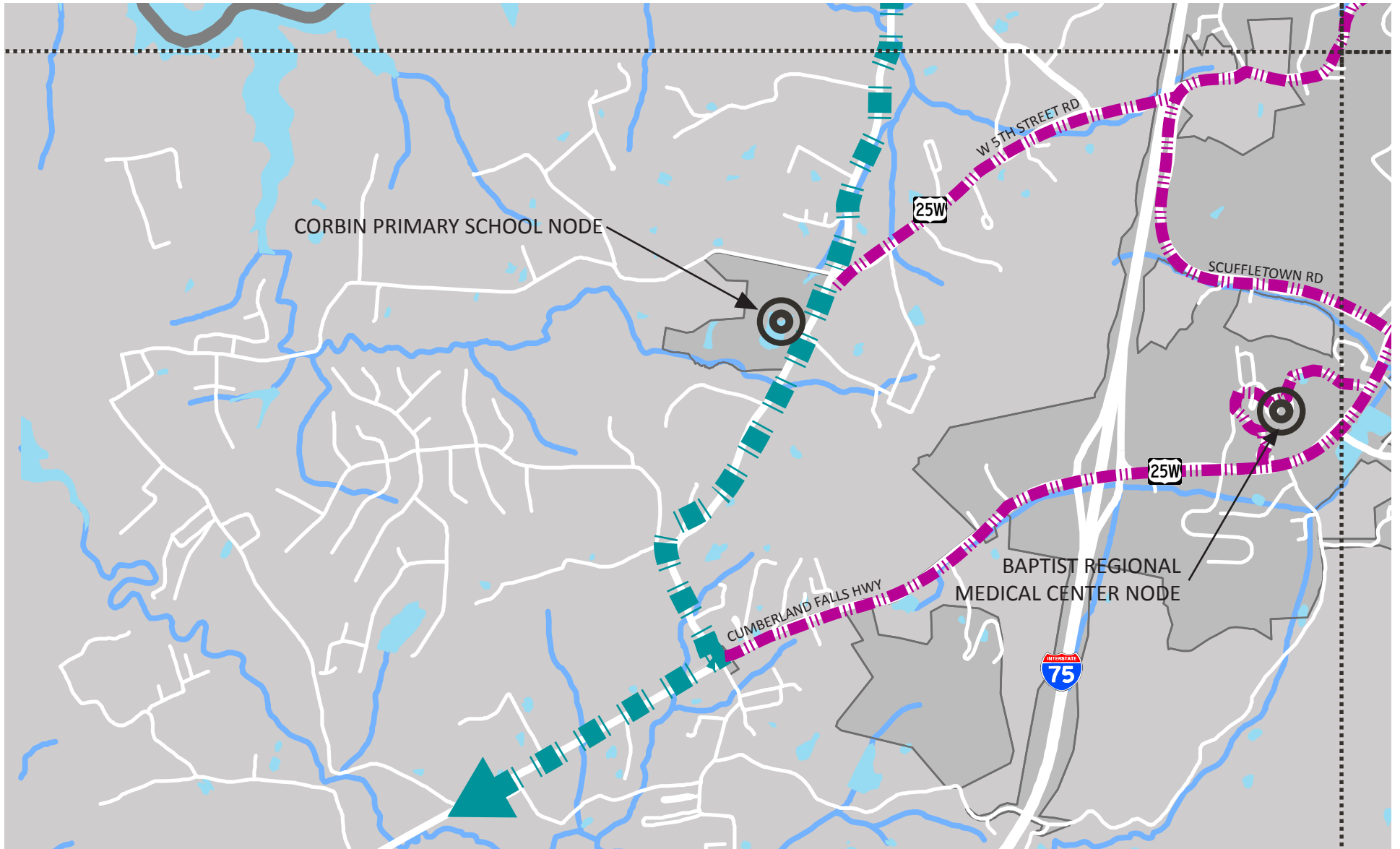
Signed/Marked Roadway



Proposed Bike Lane

NORTHEAST CORBIN





Nodes



Existing Bluegrass Bike
Tours Route



Pedestrian/Bike Path



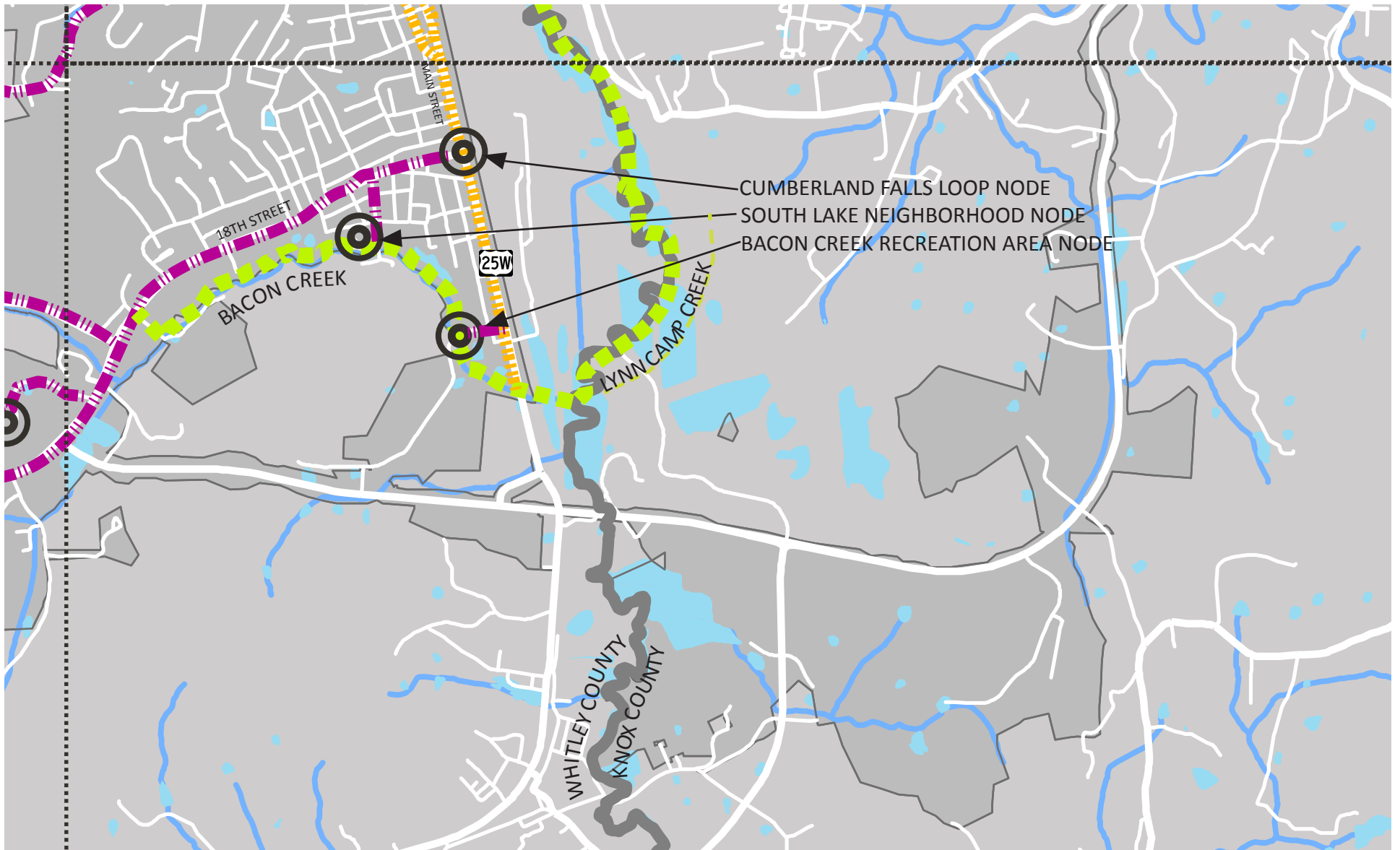
Signed/Marked Roadway



Proposed Bike Lane

SOUTHWEST CORBIN





Nodes



Existing Bluegrass Bike
Tours Route

SOUTHEAST CORBIN



Pedestrian/Bike Path



Signed/Marked Roadway



Proposed Bike Lane



D. Biking Routing Strategies

After analyzing Corbin's existing infrastructure and determining the best possible route locations and types for Cycle Corbin, a more in depth analysis is needed to strategically incorporate bike lanes, propose a low-impact bike trail system and suggest site-specific features throughout the bike route network. Incorporating the appropriate signage, traffic calming devices and site amenities help create a safe, fluid bike route system. Installing public art and landscaping at carefully selected points of interest along the trails creates a visually appealing and inviting setting for visitors.

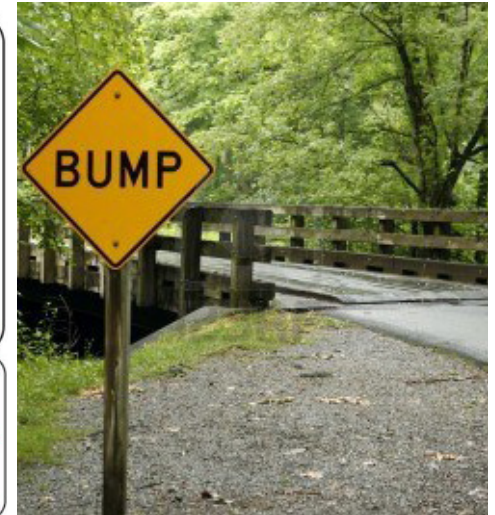
Design Elements for Bike Paths and Bike Lanes

SIGNAGE

Identification signs mark the bicycle route network. These signs are used to help identify safe routes for cyclists. Identification signs should consist of a distinctive logo or symbol that is unique to Cycle Corbin's bike path system. **Wayfinding signs** should also be used along bike paths and bike routes to denote distance of loop routes, distances to specific destinations or direction of travel. **Warning signs** alert cyclists of any potential danger ahead, like bumps, sharp turns or hidden intersections. Each type of signage should be clear and visible to cyclists. It is important to keep signs clear of vegetation and the use of reflective material is recommended, especially for warning signs. **Pavement markings** are used to supplement identification signs and wayfinding signs. Pavement markings, such as sharrows, show direction of travel for cyclists and help remind motorists to share the road with cyclists. On bike paths with non-motorized travel, pavement markings help identify routes and remind cyclists of pedestrian activities.

TRAFFIC CALMING DEVICES

Curb Extensions or **Curb Bump-Outs** help slow traffic by creating a visually narrower roadway. Curb extensions also produce a safer crossing for pedestrians and cyclists at intersections by narrowing the crosswalk distance. Striping the streets with center lanes and shoulders visually narrows the road as well, encouraging drivers to reduce speeds.



Design Elements for Bike Paths and Bike Lanes

SITE AMENITIES

Site amenities such as trash cans, benches, bike racks, informational kiosks and street lights create an inviting, human-scale space. Particularly downtown and along bike/pedestrian paths, these amenities provide visitors with feelings of comfort, safety and cleanliness.

PUBLIC ART

Incorporating public art into the main nodes of the bike route network creates culturally and historically distinctive destination points. Involving local artists, schools or businesses in design competitions can help get the community involved and excited about the bike network. Using multi-functional art installations, such as sculptural benches or bike racks, can greatly enhance the character of the space.

LANDSCAPING

Adding year-round interest by installing trees, shrubs and annual plantings improves the quality and beauty of a space. Not only does landscaping add visual interest, plantings can reduce temperatures in hot summer months, aid in stormwater management and improve air quality. Street trees can be planted in curb bump outs at intersections and mid-way between blocks to create shady nooks with benches, encouraging visitors to linger downtown.

Public art does not have to be costly. Below is a bike rack wrapped in colorful yarn, creating a unique piece of art that draws attention to a new bike rack installation. Partnering with schools to create art installations, like this rain barrel below, can also excite the community about advancements in downtown Corbin.



Design Elements for Bike Paths and Bike Lanes

Engineer Street Bridge on Laurel Avenue



The Engineer Street Bridge is a prime example of a bike path node, creating a destination for bikers and pedestrians in Corbin. Along the bridge there are benches and planters, making the space feel inviting and comfortable. Just off of Laurel Avenue, a gazebo provides shade and a space for picnicking for visitors. Just off of the path, a seating nook with a water fountain and trash cans encourages visitors to rest and re-hydrate. The short retaining wall and planters also provide extra space for seating.

The pedestrian bridge utilizes many of the design elements discussed earlier and is a great blueprint for future nodes along the Cycle Corbin Bikeway. Considerations for widening the sidewalk from 6' to at least 8'-10' should be given to better accommodate multiple types of users.

Bikeway Scenarios

The Cycle Corbin Master Plan consists of three main types of proposed bike routes. Many factors determine the type of proposed bike route, such as, traffic volume, speed limit, road width and changes in elevation. The first bike scenarios, **shared lanes**, is recommended for advanced cyclists and is typically adopted in more rural settings. Shared lanes are often incorporated in roadways that have no shoulder and narrower widths. It is important to promote this bike scenario to cyclists who are familiar with bike laws and procedures.

The second bike scenario shown is a **designated bike lane**. Designated bike lanes are more common in urban areas where speed limits are relatively low. In some cases narrowing lane widths and on-street parking widths will leave enough space to stripe a designated bike lane. In other instances, cities may choose to eliminate one lane of on-street parking or one driving lane in order to create a bike lane. Designated bike lanes can be used by a wider range of cyclist than routes with shared lanes. Inexperienced riders feel more comfortable knowing they have a designated lane for bikes only.

The final type of bike scenario proposed in Corbin is a separate **bike path** designated to non-motorized vehicles and pedestrians only. This scenario is completely separated from traffic and often wider than designated bike lanes on roadways. This type of trail is commonly incorporated along streams or old railway systems and often connects existing parks to neighborhoods or schools. Bike paths are recommended for any level of cyclists, from young children to advanced cyclists. The images on the subsequent pages show before and after scenarios along the proposed routes.



Shared Lane



Bike Lane



Bike Path

Bikeway Scenarios- Shared Lanes



Before

Cumberland Falls Highway

Striping roadways can reduce traffic speeds by visually decreasing lane widths.

Incorporating vertical signage warns drivers of potential cyclists on the road.



Horizontal roadway signage, like sharrows, provides drivers with visuals and help increase the allotted passing space. They also and remind cyclists where they belong on the road.

The Corbin Outer Loop connects with Bluegrass Bike Tour Route, inviting cyclists from Tennessee or Northern Kentucky to stop and tour in Corbin.



Bikeway Scenarios- Shared Lanes

Cumberland Falls Highway



Before

Utilizing existing billboards can help promote cycling and can encourage drivers to safely share the road.



Avid cyclists are invited to share the road along Cycle Corbin's bike friendly route on Cumberland Falls Highway.



Bikeway Scenarios - Bike Lanes

South Main Street



Before

Re-striping the street will help cyclists and drivers know where each belongs on the road.

Designated on street parking is provided and used as a buffer between car lanes and bike lanes.

Providing 5' wide bike lanes along South Main Street will help promote safe biking practices and encourage more cyclists to enjoy the roadways.



South Main Street becomes a family friendly bike route leading cyclists into downtown Corbin.



Bikeway Scenarios - Bike Lanes

5th Street



Before

Street signage is used along 5th Street to remind motorists of possible cyclists.



On-street parking was removed to allow significant space for a bike lane along 5th street.

Cyclists and pedestrians can enjoy the West 5th Street route leading to Corbin's historic restaurant and shopping district.



Bikeway Scenarios - Bike Lanes

Kentucky Avenue



Before

Allowing 6' wide bike lanes in the downtown corridor encourages family and group cycling. The lanes are placed on the left hand side to provide safe connectivity throughout downtown Corbin. Having bike lanes on the left side of Kentucky and Depot allows bike to freely move throughout the downtown corridor. Cyclists will not have to cross oncoming traffic in order to cross on to Main Street.

Designated on street parking is recommended on the right side of the street within the downtown corridor.

Installing traffic calming devices, like curb bump outs, increases pedestrian safety, slows traffic and adds year round interest with seasonal plantings.

Wayfinding signage helps navigate cyclists throughout the bikeway.



Kentucky Avenue and Depot Street make up the core of the downtown loop with paths feeding into Main Street via designated bike lanes.



Bikeway Scenarios - Bike and Pedestrian Paths

Bacon Creek Trail



Before

Educational kiosks can be introduced throughout the trail to provide visitors with engaging resting spots.

Planting trees and shrubs along the route provides shade and visual interest throughout the trail.

Anticipate the needs of visitors by providing site furnishings such as trash cans, benches and picnic tables.

Including human scale lighting and site specific signage creates an inviting atmosphere along the trail at Bacon Creek.

Horizontal signage along the path lets visitors know to share the trail.

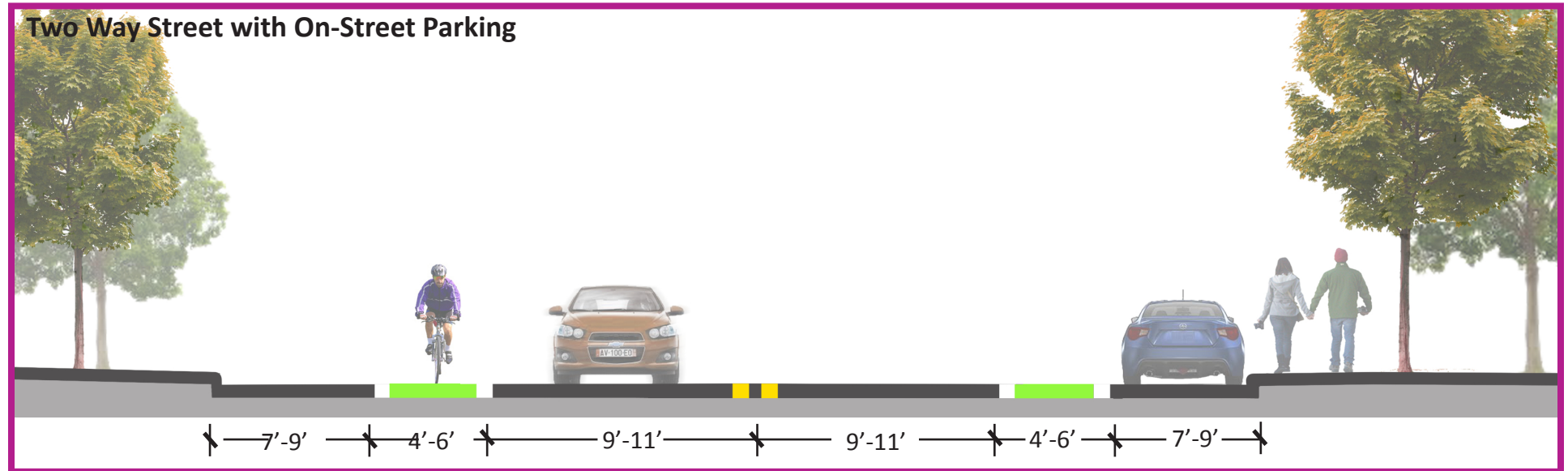
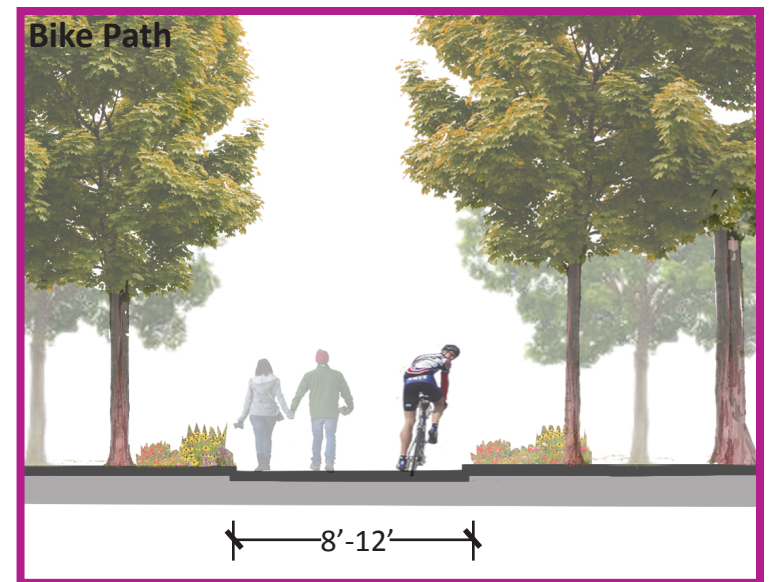
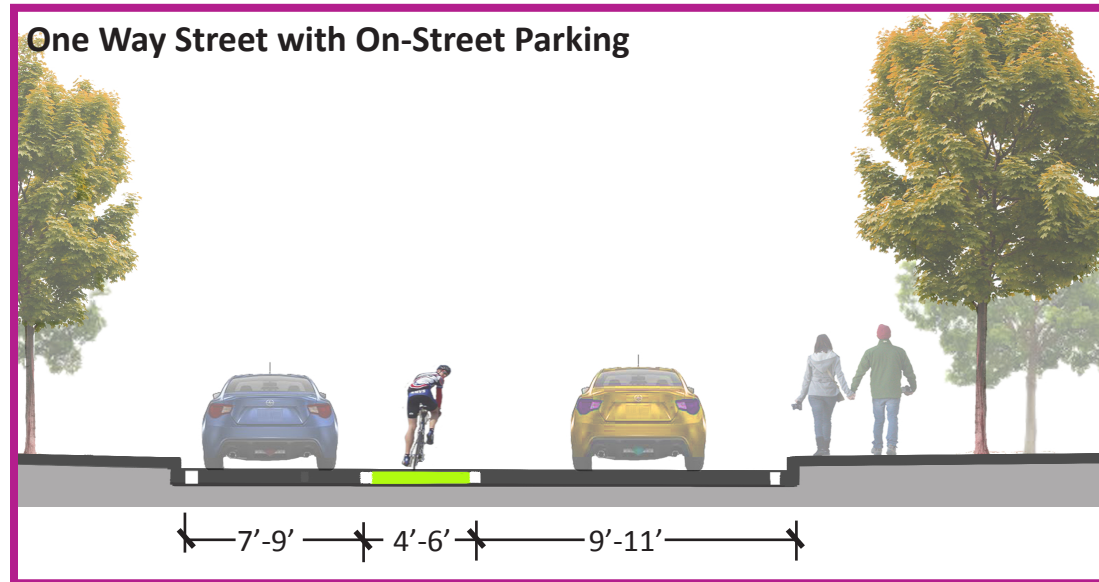


Bacon Creek Trail becomes a family friendly destination, complete with recreational and educational activities.



Bike Lane Sections

The following sections show proposed bike route scenarios with recommended widths of bike lanes, on-street parking lanes and car lanes. A combination of the widths can be used to create the best possible scenario for specific routes.



Connectivity of Downtown Corbin Bike Plan

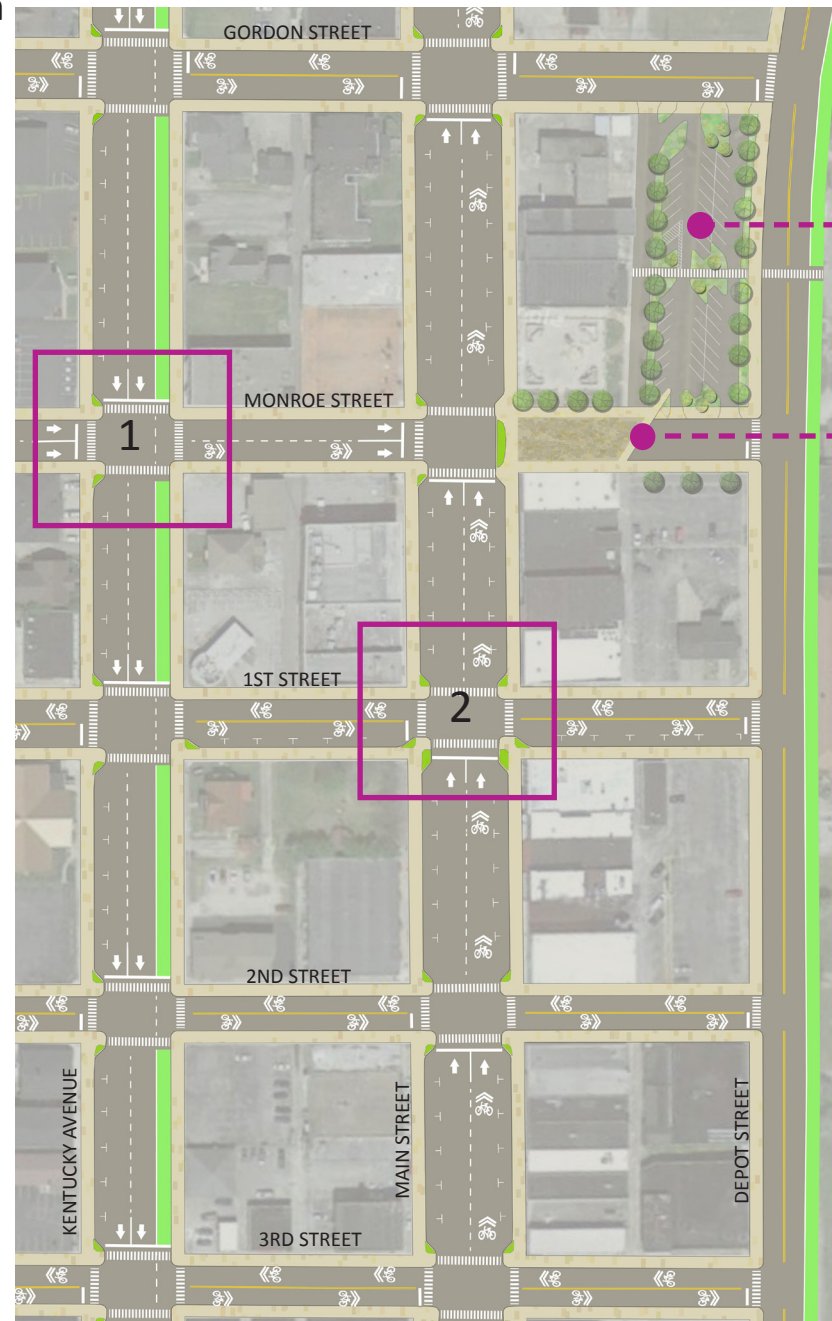
The plan of downtown Corbin on the left shows the proposed bike lanes, shared lanes and curb bump outs that provide maximum safety for cyclists and pedestrians throughout the downtown corridor. On street parking was removed on the east side of Kentucky Avenue and the west side of Depot Street and was replaced with functional designated bike lanes. Curb bump outs are introduced at every intersection, providing a safer, narrower cross walk for pedestrians.

Recommendations for Kentucky Avenue, with an existing width of 34', are: two 10' traffic lanes, one 8' parking lane and one 5' bike lane with a one foot buffer.

One option for Main Street, with an existing width of 37', is incorporating sharrows to increase awareness of cyclists on the road. In order to maintain all of the on-street parking spaces on Main Street, a designated bike lane is not recommended.

On Depot Street, with an existing width of 28', two traffic lanes with a width of 10' and one 6' foot bike lane with a 1' buffer is recommended to bring cyclists into the downtown area from the south.

The bump outs, proposed along with on-street parking, create a shorter cross walk for pedestrians. If space is permitting, installing planting beds within the bump outs creates an inviting atmosphere downtown.



- The redesign of this parking lot helps keep busy in and out traffic away from pedestrians and cyclists. In addition, use of trees and planting beds reduces storm water run off, while providing shade for pedestrians.
- Closing off a portion of Monroe Street creates a pedestrian friendly environment. This is also an excellent location for a future node for the bikeway.

Bike Path
Street Tree

Cross Walk
Sidewalk



Curb extensions, or bumpouts, create safer street crossings for pedestrians and add beauty and interest to the streetscape.

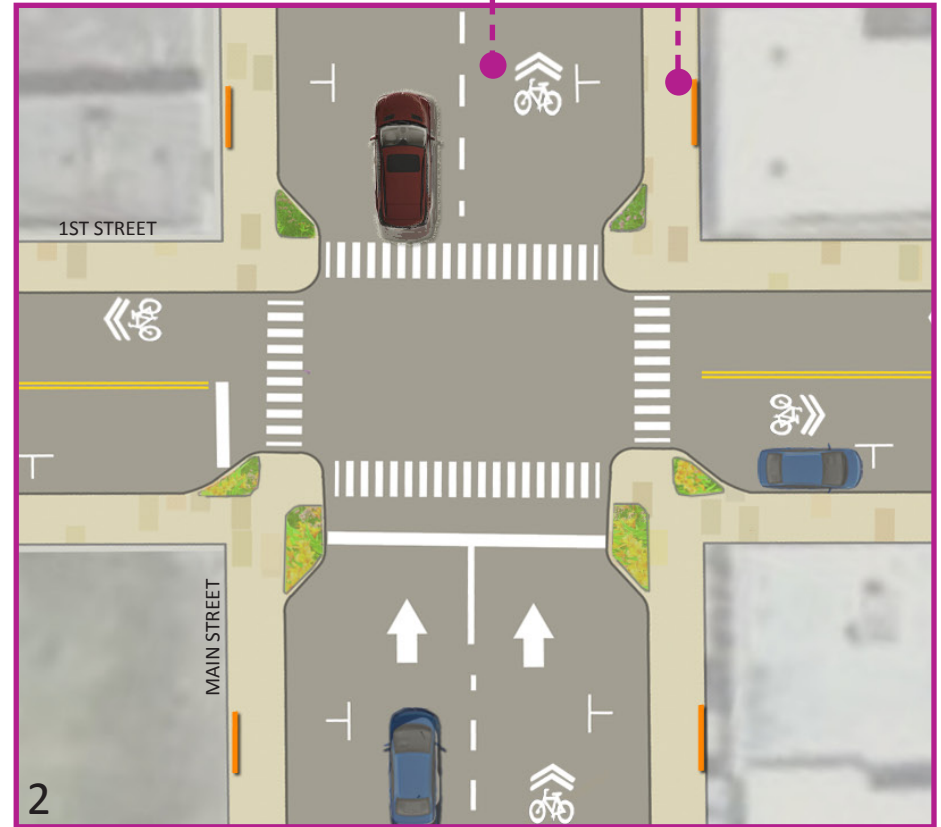
Designated bike lanes show cyclists where they belong on the road and allow for safe travel throughout the downtown corridor.



8' 20' 5' 1'

Sharrows are used throughout the downtown to remind drivers of the presence of cyclists.

Bike racks are provided in convenient locations throughout the corridor.



7.5' 22' 7.5'

E. Cycle Corbin

Biking Education and Encouragement

Creating a successful bike plan not only requires a careful analysis and pre-planning, it requires education and encouragement following design implementation. It is imperative to educate potential cyclists and motorists about new improvements to the roadway and state bike laws in order to provide cyclists, pedestrians and motorists with the safest commute possible. Education and encouragement can come from various outlets, including: local law enforcement, schools, businesses and/or government agencies. Educating the people of Corbin about the health and financial impacts of bike commuting can also boost cycle activity. Providing potential cyclists with knowledge and incentives will secure a thriving future for Cycle Corbin. The following pages suggest simple practices that can be implemented to insure the success of the bike plan.



Safe Routes to School Program

The Safe Routes to School program originated in 1997 in the Bronx, New York as a result of many fatal accidents involving children. Today, SRTS is a federally funded program in every state, helping to provide and promote safe alternative routes for children walking or biking to school. In 2012 in Kentucky, Governor Beshear supplied the state with \$1.53 million, allowing eight school systems to take huge steps towards safe alternative transportation methods. The program, although federally funded, is administered by the Office of Local Programs in the Kentucky Transportation Cabinet's Department of Rural and Municipal Aid. More information about Safe Routes to Schools funding can be found at www.saferoutespartnership.org.

The Five E's for Safe Routes to School Programs

Engineering: Create operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.

Education: Teach children about the broad range of transportation choices, instruct them in important lifelong bicycling and walking safety skills, and launch driver safety campaigns in the vicinity of schools.

Enforcement: Partner with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), and initiate community enforcement such as crossing guard programs.

Encouragement: Use events and activities to promote walking and bicycling.

Evaluation: Monitor and document outcomes and trends by collecting data, both before and after the intervention(s).

Source: Federal Highway Administration, 2007

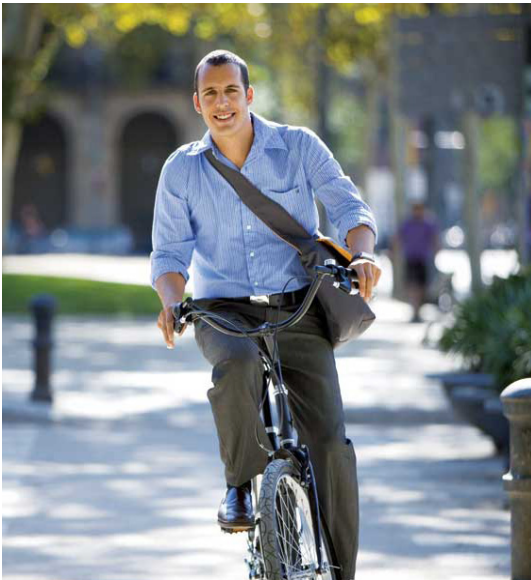




Enforcing Bike Safety/Bike Laws

Bike safety starts with educating drivers, as well as cyclists and pedestrians, insuring that no matter what mode of transportation people choose, they are doing it safely and responsibly. Increasingly, states have been adding information in driver's education classes about pedestrian and bicycle safety. Speeding can also have huge negative impacts on the safety of pedestrians and bicyclists. When incorporating new bike routes with vehicular traffic, it is important to enforce the speed limit and in some cases it might be necessary to lower the speed limit to ensure the safety of cyclists. Drivers should allow a minimum of three-feet of passing space between themselves and cyclists traveling in the same direction. Many states, including Tennessee, have passed laws to enforce the three-foot minimum passing distance. In Tennessee motorists who violate this law can be charged with a Class C misdemeanor, serve possible jail time and pay a fine of \$50.00.

Bicycles are considered vehicles and therefore, they are required to follow the same laws on the road as motor vehicles. In addition to understanding these traffic laws on the road, it is important to understand bicycle safety laws. In Kentucky, it is required by law for nighttime cyclists to use appropriate lights and reflective gear. Although not required by law in Kentucky, it is strongly recommended to wear a helmet while riding a bicycle, especially on roadways shared with motorized vehicles. More information and a complete description of bicycle laws can be found on the Kentucky Transportation Cabinet's website.



Benefits of Biking

Individual benefits for biking most significantly include health benefits and personal financial benefits. With growing obesity rates in the United States, cities like Corbin can play an important role in promoting healthy active lifestyles by encouraging alternative modes of transportation like walking and biking. Incorporating bikeways is a step in creating a healthier city, whether it is for commuting daily to work, or passive cycling in a park. There is a direct correlation between the planning of a city and effects on health. Introducing bike routes into Corbin's existing infrastructure will provide adults and children with safe and convenient means to exercise, have fun or commute to work or school. Cycling can also decrease the amount of harmful vehicle emissions, which in turns improves air quality.

Along with promoting healthier cities, bicycling has huge economic benefits on personal, local and national levels. According to commutesolutions.org, it costs approximately \$120.00 per year to operate and maintain a bicycle, compared to the nearly \$14,000.00 that is needed to operate and maintain the average vehicle driving 15,000 miles per year. In addition, incorporating bike paths and trails can raise property value. Increasingly, homebuyers are inquiring about housing located near bike paths, according to the National Association of Realtors. The overall economic benefits are also immense. Not only does bicycling support about 1.1 million jobs nationwide, it contributes greatly to the nation's economy, adding more than \$140 billion annually.





Encouraging Biking

Many steps can be taken by the City of Corbin to encourage recreational cycling and commuting to school or work. Oftentimes, people want to bike, but are nervous about safety conditions or do not know the laws for cyclists. Hosting community bike programs led by the Corbin Police Department can help encourage those who are interested in cycling to learn more about bike safety and bike laws. Leading bike tours throughout the city can show potential cyclists new bike routes and help acclimate them to road biking conditions. Corbin can also make efforts to include cyclists during festivals like NIBROC or the Moonbow Festival in order to introduce new cyclists to Corbin's improved biking conditions. In addition, the City could host special family bike night events. For example, encouraging restaurants downtown to discount customers who bike on "Corbin Bike Night" can help promote local businesses, while giving families a healthy alternative to dining out.

Bike Tourism

Bike tourism can connect cities like Corbin to a comprehensive network of bikeways statewide and nationwide. Connecting Corbin to the existing route of the Bluegrass Bike Tour, part of Kentucky Bike Tours, can potentially boost bike tourism, encouraging cyclists to stop in Corbin. Kentucky Bike Tours is also part of an even more extensive bike route system that connects bike paths all over the United States.



PRESENTS: **CITY STREETS**
APRIL
 28TH 2PM-5PM
 BRING YOUR BICYCLE DOWN TO MAIN STREET FOR:
LIVE MUSIC - FREE BIKE REPAIRS
FREE YOGA AND ZUMBA CLASSES
PRIZES AND MORE!

LIKE CYCLE CORBIN ON
 FACEBOOK FOR MORE
 INFORMATION



F. Cycle Corbin Bikeway Master Plan Plan of Action

Biking has become and continues to excel as a very popular form of recreation across many groups of persons without compromise to age or gender. Biking can be a singular form of activity for personal health or a great social form of recreation for families or larger groups. To this end, communities should become focused on promoting and advocating a form of socialization and recreation that appeals to a broad constituency of the population.

This Bike Master Plan for Corbin is a tool that can be used by the community to promote the principals of biking and advocate to Corbin's residents and visitors that Corbin is a great biking environment. There is a sound biking infrastructure for Corbin, beginning with the desire of the community with a good foundation of physical routes and amenities for a growing biking culture. The advocacy and promotion of biking programs should begin with a strong governance by adopting this plan by the City Commission through a resolution process. This adoption will speak volumes towards support and establishment of programs that will continue promoting recreation of a focused activity towards the betterment of a healthy Corbin community.

Many programs supporting biking have already begun and certainly these need to be continued and enhanced. This biking "culture" of interest and activity should begin at the grass roots level with the interest manifesting towards a more regional interest in Corbin as a biking community. Consideration should be given to immediate and simple activities to accommodate, advocating and promoting biking. The following are suggested activities and efforts that can be realized without extensive time or costs.



Sponsor City-wide Events

The City of Corbin has done an excellent job promoting Cycle Corbin; however, there is still room for the program to grow and excel. Group cycle events and family friendly events are a great way to encourage potential cyclists to utilize bikeways and introduce them to cycling on roadways. Many cities offer discounts on restaurants and shops in downtown areas for customers who choose to bike instead of drive downtown. Cities can also encourage bikeway usage by hosting events like bike races, build a bike workshops, cycling classes or cycling fairs that educate and promote cycling.

Pursue Grants on the State and Federal Level

Although budgets seem tight across the board, there are many grants available that support incorporating bike trails and shared-lane bike routes. Safe Routes to Schools, as mentioned before, is not only a useful tool to help engage local schools in planning and incorporating bikeway. SRTS allocates millions in grants annually.

Rails to Trails is another federally funded grant system that focuses on transforming abandoned railways into recreational walking and biking trails.

The Land and Water Conservation Fund matches matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities

Pursue Legislative Line-Item Funding

Establish dialogues with State and Federal legislators so that support for Cycle Corbin will be established. Continually explore line item funding opportunities for physical and programmatic improvements for Cycle Corbin. The dialogue should include discussions about economic benefits with biking programs with increased tourism and health related issues that parallel Kentucky's "Partnership for a Fit Kentucky" program.

Posting Bike Route Signage and Street Markings

Increasing signage throughout the city and along the bike routes will increase awareness and ultimately increase usage and funding. Seeking participation with the Kentucky Transportation Cabinet and Cycle Corbin can create alliances, collaborations and increased awareness of Corbin's biking activities. Signage will need to be permitted with the State KYTC prior to installation on State roads and streets.

Seek Partnerships within the Community

Partnering with all local schools, the Board of Education, health organizations and local corporations help engage members of the community at all different levels. This engagement is essential to Cycle Corbin's success and helps strengthen the community and builds relationships throughout the different organizations.

Utilize Police Force

By utilizing the local police force with a Copcycle program heightens awareness and safety along newly installed bikeways. Having a police presence with officers correctly using bike lanes and safety equipment, like helmets and lighting, shows the community that you practice what you preach. In addition, having police officers monitor new bikeways can force drivers and cyclists to follow roadway laws.

Initiating a Copcycle outreach program for elementary and middle schools can also teach bike safety and bike awareness. These educational programs have been successful in communities throughout the country.



G. Acknowledgements and References

Acknowledgements

Corbin Mayor

Willard McBurney

Corbin City Manager

Marlon Sams

Main Street Manager

Andy Salmons

Parks and Recreation Director

Wes Lanham

Corbin Tourism Commission

Sudhir Patel, Director

Tom Rose, Vice Chairman

Lauren House, Secretary/Treasurer

Participating Citizens and Biking Enthusiasts

Rebecca Lundy

Tom Lundy

Curt Hart

Ben Callahan

Mike's Hike and Bike



References

www.altaplanning.com

www.bicyclinginfo.org

http://safety.fhwa.dot.gov/geometric/pubs/mitigationstrategies/chapter3/3_lanewidth.htm

<http://www.lehibikepedplan.com>

Fundamentals of Bicycle Boulevard Planning and Design by Lindsay Walker, Mike Tresidder and Mia Birk

Encouraging Bicycling and Walking: The Legislative Role by Douglas Shinkle and Anne Teigen

<http://transportation.ky.gov/Pages/default.aspx>

<http://transportation.ky.gov/Bike-Walk/Documents/Bike%20Law%20Brochure.pdf>

<http://www.nctr.usf.edu/programs/clearinghouse/commutebenefits>

<http://www.nps.gov/lwcf>

