Connectivity

V. Connectivity

A snapshot of comments from Sidney Survey Respondents.

"We need more walking paths close to all neighborhoods. I get frustrated I have to drive to walk."

"There need to be more bicycle racks for people to safely lock. I notice there are citizens and children who use their bikes for more than exercise. Sidney needs to be more bike-friendly."

"Improve the Riverwalk area! We have the beautiful Miami River cutting right through our town and we under-appreciate or utilize its presence. Most towns would make it a priority to set up local shops along the river bank on both sides."

Improved pedestrian connectivity and a complete streets model is recommended for segments to Hoewisher Road to promote better east-west connectivity.

Introduction

It is important to consider transportation systems when planning for the future to ensure these systems can support future goals, such as pedestrian connectivity, changes in land use, and economic development. Transportation as it applies to Sidney includes not only the road system, but other means of non-vehicular mobility, and these additional modes of transportation are addressed in this chapter.

During the planning process, a majority of the survey respondents indicated a desire to improve the City's existing roads and improving pedestrian connectivity in the community. This chapter provides solutions to these issues and aims to provide residents with a full range of transportation choices.

Planning Conditions

Roadway infrastructure is a vital asset the City has been aggressively improving for the past few years. In November 2014, voters in the City of Sidney approved a 0.25 percent increase to the municipal income tax, with the proceeds from this increase being used exclusively for the "construction, reconstruction, resurfacing and maintenance of streets, alleys,

bridges, and related curbs and gutters" within the City. The city expects to spend more than $15 million solely for street improvements during the five-year period the additional 0.25 percent income tax is being collected. Street repairs are made according to a capital improvement plan guided by a pavement condition report. Streets that can be repaired with lower cost repaving or micro-surfacing are being addressed first, while those streets that will require full reconstruction will be completed in later years.

The City commits other non-tax levy funds for street repair as well as pursues grant funding. While not financed by the new income tax levy funds, West Avenue from North Street to Court Street, and Port Jefferson Road from Russell Road to Wells Drive were reconstructed in 2015.

A major connectivity goal of the 2008 Plan was on strengthening the link between downtown and I-75 and enhancing SR 47. This goal was met in 2016 when the Ohio Department of Transportation (ODOT) agreed to pay 95% of a project that will improve the safety and pedestrian connectivity of SR 47 from Fourth Street east to Walnut Street.

Existing Transportation Systems

Sidney contains a number of high profile natural and man-made corridors, most notably I-75, CSX/Norfolk Southern (NS) railroads, and the Great Miami River as well as SR 47, SR 29 and CR 25A.

The City is served by four interchanges with I-75. The interchanges are located along the west side of the City and connect to (from north to south) Wapakoneta Avenue (CR 25A), St. Marys Avenue (SR 29), Michigan Street (SR 47), and Fair Road. The interstate generally separates the industrial area and regional commercial areas of the City from the residential and downtown areas. The Michigan Street interchange is by far the most heavily traveled, due to the concentration of regional business venues along Michigan Street from I-75 to Kuther Road and on Vandemark Road from Michigan Street to Russell Road. The Wapakoneta Avenue and St. Marys Avenue interchanges continue to be underutilized.

Improvements that would redistribute traffic to these interchanges, and reduce the traffic at the Michigan Street interchange, would be beneficial. More specifically, a reduction in east-west traffic flow across the Michigan Street Bridge over I-75 is envisioned.

Natural Corridors

Natural corridors serve a variety of functions as open space elements, wildlife corridors and in the case of streams, as conduits for stormwater. Natural corridors likewise help to define a community's overall character, as well as smaller portions or neighborhoods (as boundaries). The major natural corridors include the Great Miami River and several related tributaries including Brush, East Turtle, Mill, Tawawa and Plum creeks.

Functional Classification System

The City's road system is classified based on function, providing for main thoroughfares (with proposed main thoroughfares), secondary thoroughfares, collector streets and local streets. A map accompanying this chapter shows the current Thoroughfare Plan *(See Map: Thoroughfare Plan).* This map also highlights the City's plans for future road extensions.

Pedestrian Connectivity

While most of the City's neighborhoods are served by a sidewalk network, there is a need to expand the standards to require sidewalks on all City streets with sidewalk width minimums that are appropriate for the functional classification of the street as well as adjacent uses. In addition, the broader community is underserved by formal multi-use path and bike lanes. In regard to multi-use paths, there are several facilities that connect existing park/recreational areas *(See Map: Pedestrian Connectivity Improvements)* throughout the community. These existing multi-use paths are generally located at Tawawa Park, and along the canal feeder trail. Linking the community and Tawawa Park to the Great Miami River Trail was a goal that was expressed by many residents during the planning process, as was improving the visibility and linkages to existing parks via signage, bike lanes, and other pedestrian connectivity methods, some as simple as providing more bike racks.

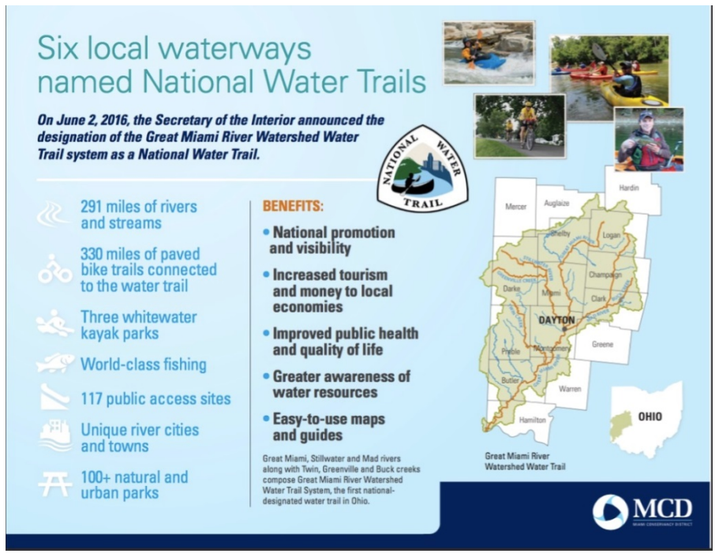
Great Miami Riverway Placemaking Initiative

The Great Miami Riverway is a 99-mile, mixed-use district of charming river towns connected by land and water trails from Sidney to Hamilton. At the present time the river is underutilized and no collective marketing of it exists.

The brand and placemaking effort is an outgrowth of the 2014 study done by the U.S. Army Corps of Engineers (USACE) of recreational assets on the Great Miami River. The Miami Conservancy District is helping to coordinate this effort with Sidney. Sidney is a partner in this effort, along with multiple other cities, counties, park districts and universities.

Among the goals of the Great Miami Riverway Placemaking Initiative is to develop and implement ongoing marketing, planning, and programming to:

- Increase use of recreational, historical, and cultural assets.
- Increase tourism.
- Grow private investment.
- Strengthen river corridor neighborhoods.
- Improve workforce attraction and retention.



Traffic Impact Studies

Although not codified or officially part of the site planning process, city officials may require a traffic impact study as part of the access permit process to address on site-generated traffic, the directional distribution of traffic and the assignment of the site traffic onto existing and/or proposed roadways. In certain circumstances, for Traffic Impact Studies, the Public Works Director may require the inclusion of off-site traffic from other proposed developments that will impact area roads. The studies should be completed in accordance with the standards published by the Institute of Transportation Engineers in its latest Manual of Transportation Engineering Studies.

A Traffic Impact Study is required when:

- All developments that can be expected to generate more than 100 peak-hour vehicle trips on the adjacent street, or for a lesser volume when the developments are in high accident locations, currently congested areas or areas of critical local concern.
- When the original traffic impact study is more than three years old, access decisions are still outstanding, and/or changes in development have occurred in the site conditions.
- The study is to be prepared under the supervision of qualified traffic engineers with specific experience in the preparation of traffic impact studies.

Transportation Resources

Shelby Public Transit is a publicly sponsored transit system that serves Shelby County. Transit services are provided through a cooperative arrangement between the City of Sidney and Shelby County and staffed and managed by City employees. Everyone is eligible to use the transportation service and consumers do not have to pre-qualify. The system directly operates a public transportation service that is demand responsive. Shelby Public Transit operates a fleet of 11 vehicles. Shelby Public Transit provides door-to-door and curb-to-curb service to city and county residents.

In 2015, Shelby Public Transit provided over 48,270 trips, logged over 15,841 hours of service and over 234,137 miles with 11 vehicles. This is an average increase of 1% from 2014. They also added a new connector route with Miami County that takes and picks up passengers from Piqua to transfer between the two County systems.

The organization is guided by a master plan it developed in 2008. One item that surfaced during the development of the Coordinated Public Transit-Human Services Transportation Plan was that area employers were not familiar with the services provided, and only 9 of 68 employers responded to the plan survey.

Wayfinding

Wayfinding is limited in the community to only a few public locations and not coordinated. A comprehensive wayfinding system is recommended to improve site accessibility and to improve community branding.

An adequate level of wayfinding is achieved by developing a consistent signage system that points travelers in the direction of their destination. It is important that all these signs look similar as the sign becomes the community "brand". Gateways and other signage previously discussed are also a form of wayfinding because it indicates an arrival to the destination.

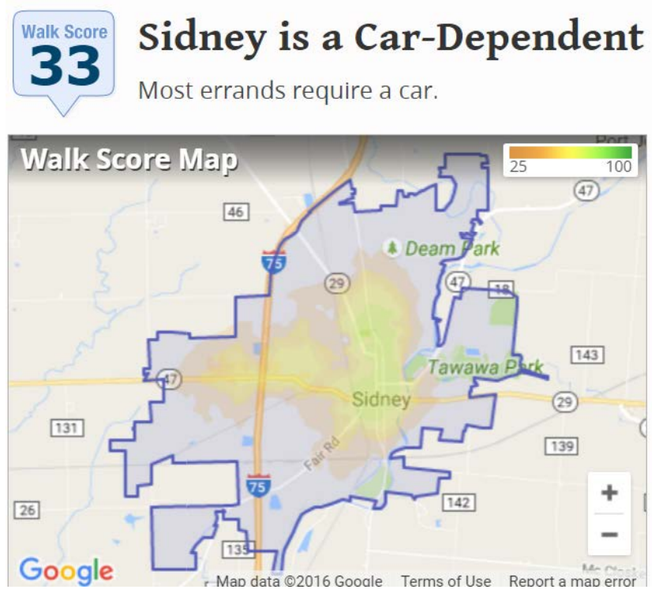
Strategies

The planning stakeholders selected the following strategies for implementation:

1) **Require new developments to provide adequate automobile and multi-modal transportation facilities.**

Providing bike path connections from major developments to the nearby City's bike paths should be made a requirement for site approval. This requirement must also ask for proper location of bike racks inside parking lots of the development. Officials should also remain firm in requiring subdivisions to connect to adjacent developments and, most importantly, public destinations. Bike lanes or "sharrows" could be added to roads in subdivisions where sidewalks are not present and road width allows.

According to the American Association of State Highway and Transportation Officials (AASHTO), neighborhoods with 1500 average daily trips (ADT) or less are suitable to provide for safe, on-street cycling. Anything above 1500 ADT should require a separate bike lane. *See Map: Average Daily Traffic,* for a better understanding of the City's traffic levels.



** Walk Score of 33/100 means that most people have to drive to access goods and services in the community (according to walkscore.com).*

In addition to ensuring a comprehensive system of sidewalks, pathways, and bike lanes, Sidney officials can accommodate non-motorized transportation by:

- Improving signalization specifically for pedestrian crossings.
- Ensuring curb ramps at all corners.
- Installing/improving crosswalks at intersections and mid-block.
- Consistently maintaining facilities to fix cracks, holes and other issues.

- Requiring site plans be designed to ensure the pedestrian will feel comfortable walking within a site or to neighboring properties.
- Reducing vehicle speeds to create a more walkable and pedestrian friendly environment in appropriate locations.
- Providing for bike racks inside parking lots of the development.

2) Improve bicycle and pedestrian infrastructure.

The City should expand its current on-street bike route to additional major corridors and off street bike path system. This would provide an expanded bike route system to access parks and other recreational places, especially if it connects with the Veterans Memorial Walkway, and extensions along the Great Miami River. In addition, the City should make an effort to make the bike route a transportation route, not just a recreation corridor. This will promote the use of bicycles as alternative transportation sources reducing traffic and pollution generated by automobiles, and encourage healthy lifestyles.

The City may consider formally designating pedestrian and bike lanes along key routes when and where feasible *(See Map: Pedestrian Connectivity Improvements).* Often road diets can be utilized to provide for an on-street designated bicycle lane. A road diet involves looking at ways to provide for a 4 to 8 foot wide lane within the existing pavement width by a combination of considerations such as reducing lane widths, eliminating on street parking, and removing two way center turn lanes. Various types of pedestrian & bicycle facilities are described briefly below:

<u>Sidewalks</u>

Sidewalks are usually a 5-foot to 8-foot wide concrete surface along one or both sides of a public street for the purpose of providing pedestrian circulation. Walkways are normally separated from the street by a buffered distance of 4-6 feet or more when right-of-way allows for such a separation. If a sidewalk is to be utilized for both pedestrians and bicycles, it should be enhanced to a 10-foot wide facility. Sidewalks should be utilized for all new developments and redevelopment areas.

<u>Multi-Use Paths</u>

Multi-use pathways can accommodate higher volumes of pedestrians than sidewalks and are more appropriate for other types of non-motorized travel such as joggers and bicyclists. The federal standard for all new multi-use paths is a 10-foot wide facility. This type of facility should be pursued for all new developments/roadways within the City, as well as those areas undergoing redevelopment (if right-of-way allows for such).

The multi-use paths are typically a separated facility from roadways and are used to link pedestrian & bicycle traffic generators together to promote healthier and more environmental friendly forms of transportation.

<u>Bike Lanes</u>

A bike lane is usually a 4 to 8 foot wide portion of a street designated for exclusive use by bicyclists. The lane is distinguished from the automobile travel lanes by paint stripes, signs or other similar devices. One way of designating an on street bike lane is through the use of green asphalt (as shown by picture to the right). This green asphalt lane helps motorists become more aware of the

lane that is set aside for bicycles. Often there is also white pavement marking bicycle symbols within this bicycle lane or accompanying bicycle lane signs.

Share the Road Signs & Sharrow Pavement Markings

On roadways where existing pavement width and limited right-of-way prohibits designated bike lanes from being incorporated into the roadway, the use of "Share the Road" signs and "Sharrow" pavement markings can be utilized on designated pedestrian and bicycle connectivity corridors. These types of treatments are not as desired as an actual designated bicycle lane or separated multi use path, however they still provide enhanced notification to motorists that the roadway facility is a designated bicycle corridor. In addition to these signing and pavement marking enhancements, such corridors could also be augmented with some of the traffic calming techniques discussed previously.

The community survey and public input from residents indicated a strong desire to improve existing pedestrian/bicycle facilities as well as develop more facilities that would enhance the linkages within the community. The *Pedestrian Connectivity Improvements Map* shows existing multi-use path locations as well as conceptual planned pedestrian and bicycle connectivity routes that should be explored within the City. These future facilities involve incorporating pedestrian/bicycle facilities into existing roadways as well as on potential future roadway connections. These connectivity routes would involve a mix of the various types of facilities mentioned above depending on right-of-way availability.

Additional transportation planning and outreach efforts should be combined with recreational planning to help build a unified approach in planning and funding road improvements. Additional planning initiatives that should be embraced to implement this strategy are:

- Develop a transportation master plan to address vehicular, bicycle and pedestrian mobility, as well as the long-term capital improvement planning of the City's road and riverfront infrastructure.
- Prepare a sidewalk inventory identifying sidewalk conditions and areas where gaps exist in the network.
- Align the existing phased repair and replacement plan utilizing a combination of local, CDBG, and private funds from participating homeowners. Some of Sidney's neighborhoods are located in Census Block Groups that are designated as low and moderate income (LMI) and therefore eligible for grant funding.
- Continue to enforce existing city codes relative to sidewalk repair.
- Work with interested stakeholders in connecting Sidney to the Greater Miami River Trail and Miami Valley Bike Trail System. These assets are severely underutilized and could be accentuated and better linked (see illustration on the following page).
- Team with local schools (Christian Academy, Lehman Catholic and Sidney City Schools) in developing a School Travel Plan and participating in ODOT's Safe Routes to School Program. This program will provide up to $500,000 in funds for improvements that assist K-8 student's bike and walk to school.

- Sidewalk construction requirements should be enforced on all new development.
- Consider timed “walk” signals in key locations, especially new public facilities and schools.

Plan Solutions - Connectivity

Bicycle Network

Potential
Trail Alignment
Along Feeder Canal

Plan Solutions - Connectivity

Water Trail

Trailhead @ Johnston Drive

3) Continue to utilize the pavement conditions rating system to prioritize street improvements.

Road infrastructure around the City is in dire need of repair and replacement, and voters in 2014 approved a 0.25% income tax levy to generate $15 MM for road repairs. However, this levy is temporary and will expire in 2019. The community survey and forum results indicate that road improvements are critically important to residents. It is recommended that City officials could continue to utilize the Capital Improvement Program (CIP) and PCR system to rank and prioritize road improvements and repairs, and also increase the public's awareness of how the money is being spent.

4) Proactively pursue alternate funding sources for transportation improvements.

Sidney officials should continue to pursue transportation funding to revitalize their transportation infrastructure. Outside grant funding resources plays a large role in the SR 47 $3.6 million dollar project. In addition, Port Jefferson Road from Russell Road to Wells Drive was also reconstructed with monies received from an ODOT Small Cities Grant in the amount of $1,372,000, and an Ohio Public Works Commission (OPWC) Grant in the amount of $200,000. The City is using Municipal Bridge funding to fund Michigan, Park, and Jefferson Streets bridge replacements. The City also recently received $2.5 MM from ODOT for safety improvements and "road diet" solutions along SR 47 east to Walnut Street. This will help to implement this Plan's recommendations (see illustration on following page).

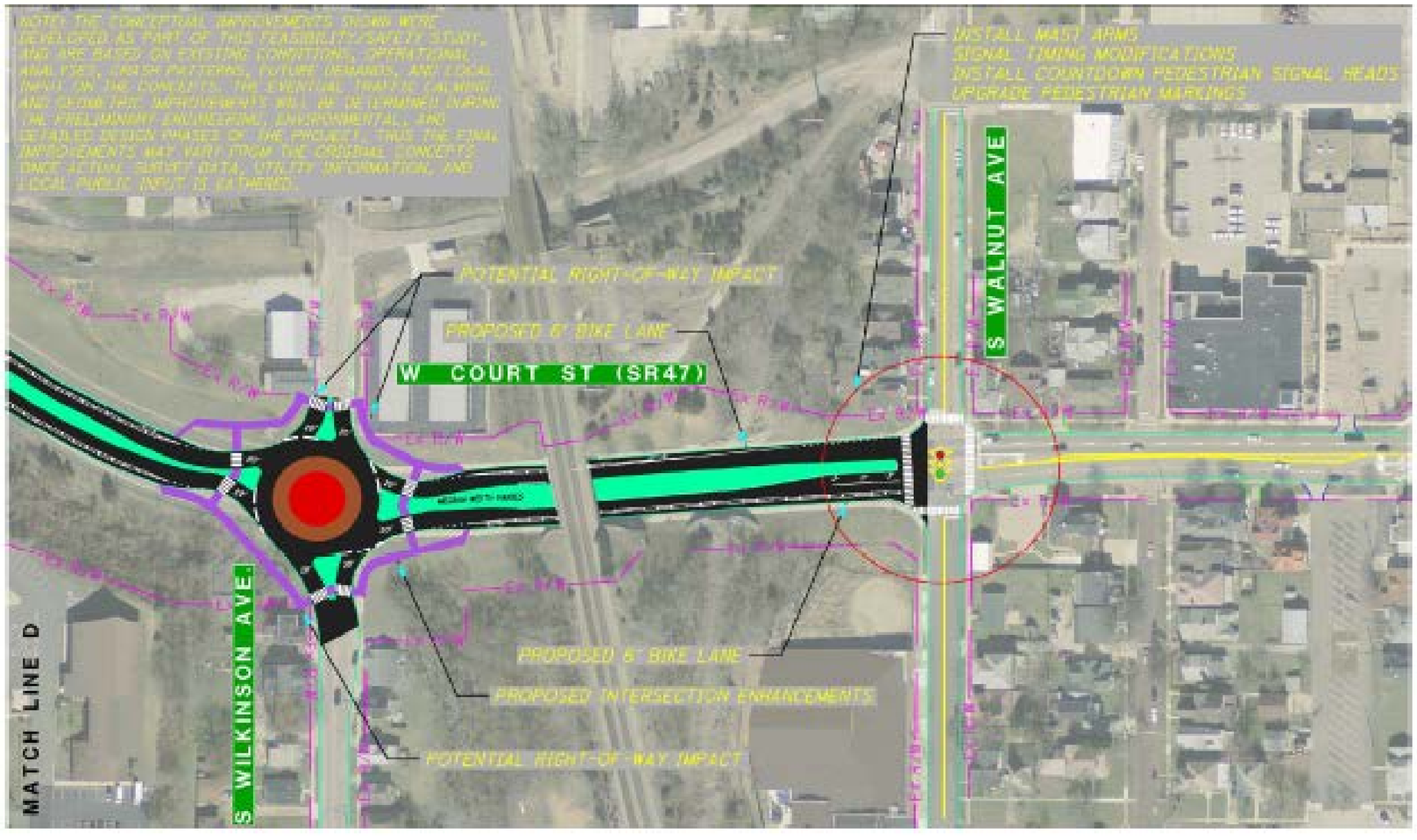
Some programs like ODOT's Transportation Enhancement program will provide up to 80% of the total construction cost for the project, including construction engineering, inspection and testing.

In addition to grant funds, it is recommended that City officials could also investigate and establish a Transportation Improvement District and local infrastructure funding pools or special improvement districts for continued street improvements. As it has in the past, Jobs Ohio's 629 program should be pursued in cases where job creation or retention is occurring near or adjacent to the needed transportation improvement area.

It is recommended that City officials could also pursue other funding sources like Clean Ohio and Ohio Department of Natural Resources' (ODNR) Recreational Trails Program to extend and connect the City trails to new destinations locally and regionally.

Plan Solutions - Connectivity

Complete Streets – SR 47 Road Diet



5) Time transportation network improvements to correlate with capacity improvement and economic development initiatives.

The CIP should be utilized to identify, prioritize, and evaluate capital needs and financing options to ensure transportation improvements are balanced with long-term mobility needs and the fiscal capacity of Sidney. Other thoroughfare improvements discussed in prior planning efforts that could reemerge in the future include:

- **Various Hoewisher Road extensions**: Increasing residential land use in the northeast corner, and industrial land use west of I-75 may require the extension of Hoewisher Road. Connecting the existing Hoewisher Road on the east side of the City, and Vandemark Road on the west side; and extending Fourth Avenue on the north to join Hoewisher Road extension are part of this Plan. This requires two overpasses (CSX and I-75) and possible signals at Vandemark Road and SR 29. The improvement, which would require residential property acquisition, could exceed $5 MM or more.
- **Stolle Avenue**: In order to improve the level of service of Vandemark Road, and the intersection of SR 47 and Vandemark Road, an alternate link for Vandemark Road between SR 47 and Russell Road is recommended. The extension of Stolle Avenue from the current terminus, north to Russell Road, is the most appropriate alternative to create this link, and would provide alternative access to the congested commercial area.
- **Fourth Avenue**: Fourth Avenue should be extended north from its present terminus at Russell Road, to St. Marys Avenue, to connect to the Hoewisher Road extension. This would provide improved access on the east side of I-75, and open up “development-ready” land.

Access management guidelines should be utilized to consolidate multiple access points/curb cuts and redesign poorly designed access points along their main corridors like SR 47, SR 29, Wapakoneta Avenue, St. Marys Avenue and Russell Road. Greater on-street parking setbacks from private drives will help to ensure adequate visibility, and the use of combined access drives to limit high-volume curb cuts should also be pursued.

While priorities can change depending on unique circumstances, general priority should be given to operational maintenance, handicap accessibility (ADA compliance), safety improvements, capacity improvements that are cost-effective (such as signalization and light sequencing upgrades, turn lanes, and signage) and increasing the level of service. Another equally important variable- return on investment- should also be considered when prioritizing improvements.

6) Evaluate Feasibility of Roundabouts for Problematic Intersections.

Roundabouts can provide traffic calming to a roadway facility as they require motorists to slow down to negotiate the roundabout. A roundabout is currently being planned at SR 47 at S. Wilkinson Road, as part of a larger project to improve safety along the stretch of SR 47 from Fourth Street to Walnut Street. The community officials should also consider the feasibility of additional roundabouts within the City to address existing and future traffic congestion, high crash intersections, and air quality issues. However, such a task will require additional planning and acquisition of

additional right-of-way and/or property at locations that are considered.

Roundabouts are circular intersections with specific traffic control features such as channelized approaches, appropriate geomantic curvature to slow speeds (typically less than 30 mph), and yield control of all entering traffic. Modern roundabouts when properly applied can have significant advantages over traditional signalized intersections. Notable benefits of using a modern roundabout instead of a traditional signalized intersection include improved safety, increased vehicle capacity, and improved aesthetics as roundabouts are natural focal points.

Roundabouts are not the perfect fit for all locations and any consideration of constructing a roundabout will need to be evaluated for both operations and feasibility due to the large right-of-way footprints required for these types of facilities.

7) Other Strategies

Improve access management regulations.

Access Management preserves and restores the capacity of roadways. The City should work to minimize the number of access points on higher classified streets, to preserve the functional capacity, and to carry higher speed traffic, and trips of longer length. This is especially true along SR 47 where traffic is high. As such, it is recommended that City officials review, revise and improve- where appropriate- the City's access management standards in order to ensure safe and efficient access to properties in the City.

Enforce truck weight limits.

A study is recommended to determine whether there are trucks that use Sidney streets as alternatives to avoid weight limitations on more direct and preferred routes. A request can be made to the State Highway Patrol to carry out this study. Current permitting of oversize and overweight trucks is being permitted at no cost through the Street Division and enforced by the City Police Department.

Continue to evaluate and provide transportation needs for elderly from Sidney to other cities/counties, etc. The City's public transportation authority should continue to coordinate with other public transportation authorities in the surrounding counties and cities to provide these services, and also work to heighten awareness of the transit services to local employers.

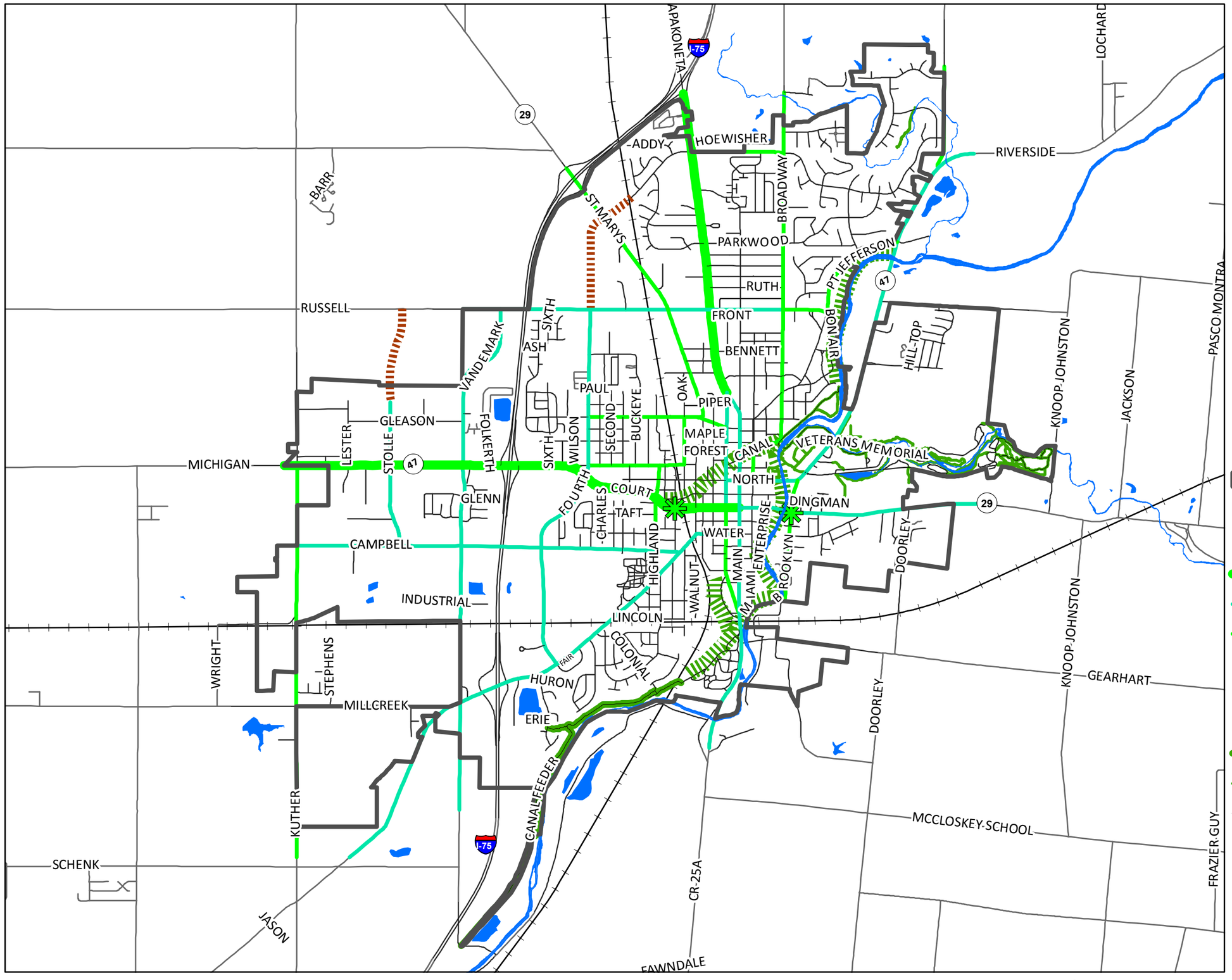
Restoring and maintaining alleys.

While major roads are improved in the City, it is also important to restore and maintain alleys. The City should continue to fund and implement its alley maintenance program.

Minimize the impacts of development.

Developers should be responsible for any traffic impacts that will degrade the level of traffic services on the existing street system. All required improvements that restore the level of service of the street system should be undertaken concurrent with the development. Where necessary, additional funds should be escrowed to ensure required improvements are completed to the City's satisfaction.

Thoroughfare Plan



Legend

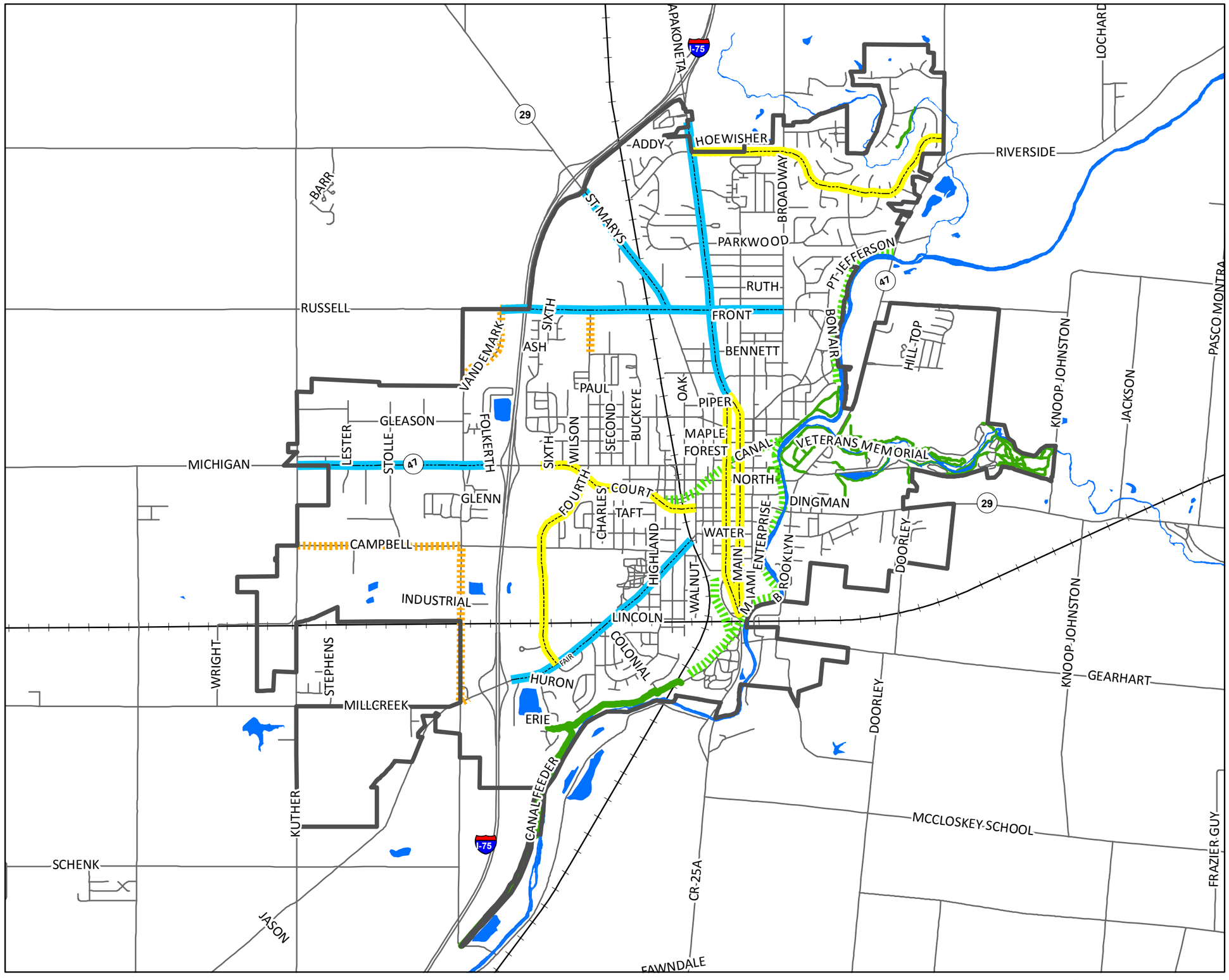
- Corp Boundary
- Great Miami River / Open Water
- Potential Roundabouts
- Primary Arterial
- Minor Arterial
- Collector
- Residential Streets
- Future Road Extensions (Project Based)
- Future Trail Extensions
- Canal Feeder Walkway
- Park Trails
- Streets

0 0.25 0.5 1 1.5 2 Miles

Source: City of Sidney; ODOT; Reveille

Reveille
PLANNING + GIS + ECONOMIC DEVELOPMENT

Pedestrian Connectivity Improvements



Legend

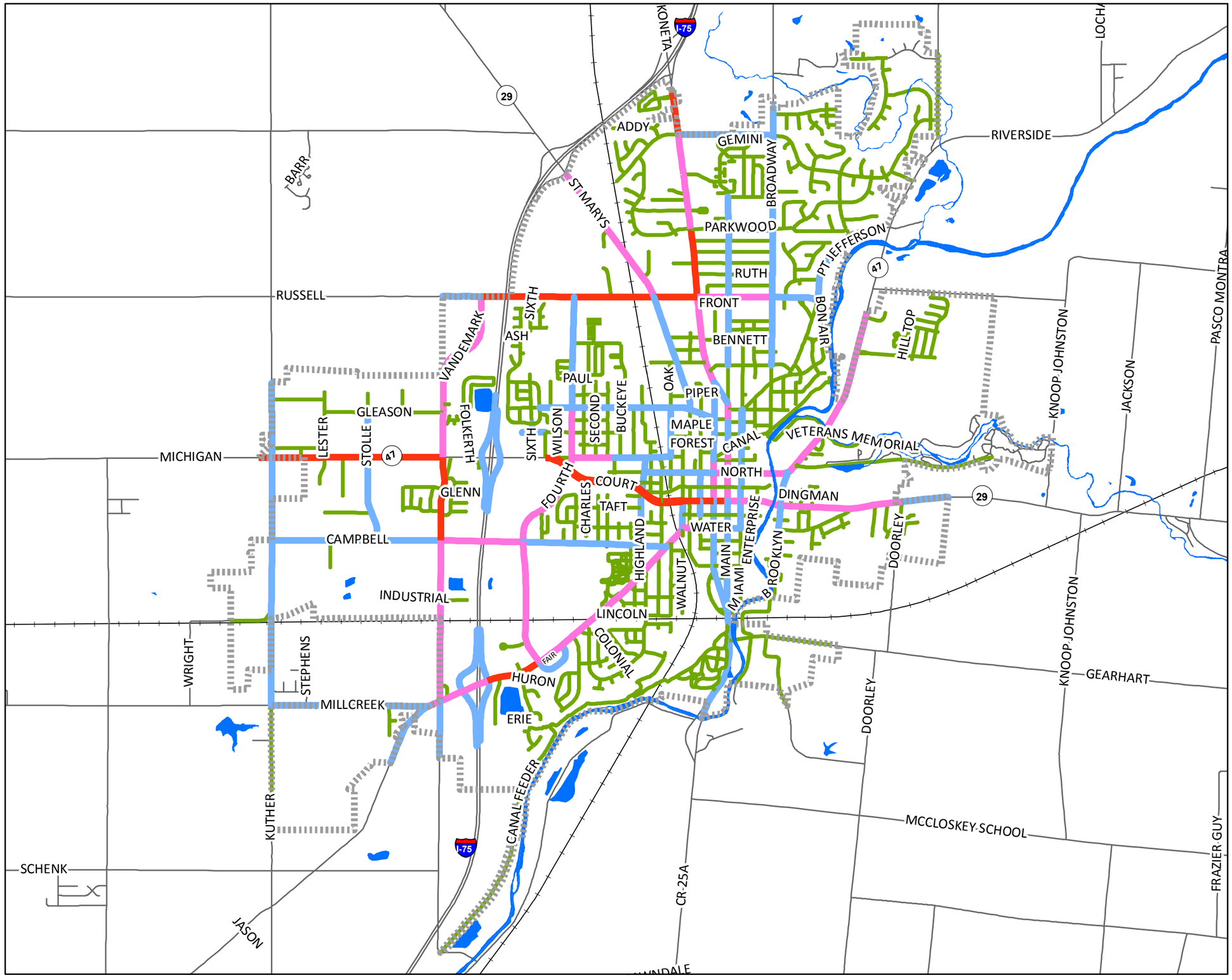
- Corp Boundary
- Great Miami River / Open Water
- Potential "Complete Streets" Corridors
- Potential Corridor Overlay Zones
- Improved Pedestrian Connectivity
- Future Trail Extensions
- Canal Feeder Walkway
- Park Trails
- Streets

0 0.25 0.5 1 1.5 2 Miles

Source: City of Sidney; ODOT; Reveille

Reveille
PLANNING + GIS + ECONOMIC DEVELOPMENT

Average Daily Traffic



0 0.25 0.5 1 1.5 2 Miles

Source: City of Sidney; ODOT; Shelby County Auditor; Reveille

Legend

- Corp Boundary
- Great Miami River / Open Water

Average Daily Traffic (ADT)

- 10,000 - 20,000 Vehicles Per Day
- 5,000 - 10,000 Vehicles Per Day
- 2,000 - 5,000 Vehicles Per Day
- Under 2,000 Vehicles Per Day
- Streets

Reveille
PLANNING + GIS + ECONOMIC DEVELOPMENT