

CITY OF TOLEDO BIKE PLAN 2015



June 2015

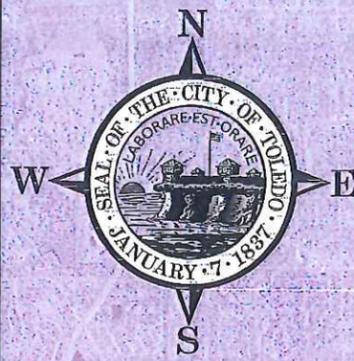
Executive Summary

The “City of Toledo Bike Plan 2015” presents a set of 13 bike trails that cross through the City connecting major destinations. These trails are recommendations of different types of facilities that can be constructed in upcoming years in the corridors defined as the trails. More than 100 miles of facilities are included in the recommended trail corridors with an estimated cost of \$32 million. The plan is a guide to future investment. Projects to implement the plan can be accomplished by themselves as funding is available or, more likely, can be developed and included as part of other street or infrastructure projects within the recommended corridor. The plan also reviews the development and public review process utilized in developing the plan. Appendices, one for each of the trails, present more detail on the recommendations in each corridor and presents cost estimates for facilities envisioned in the plan.

The Trails are listed below and included in the Figure ES-1 Primary Network of Trails :

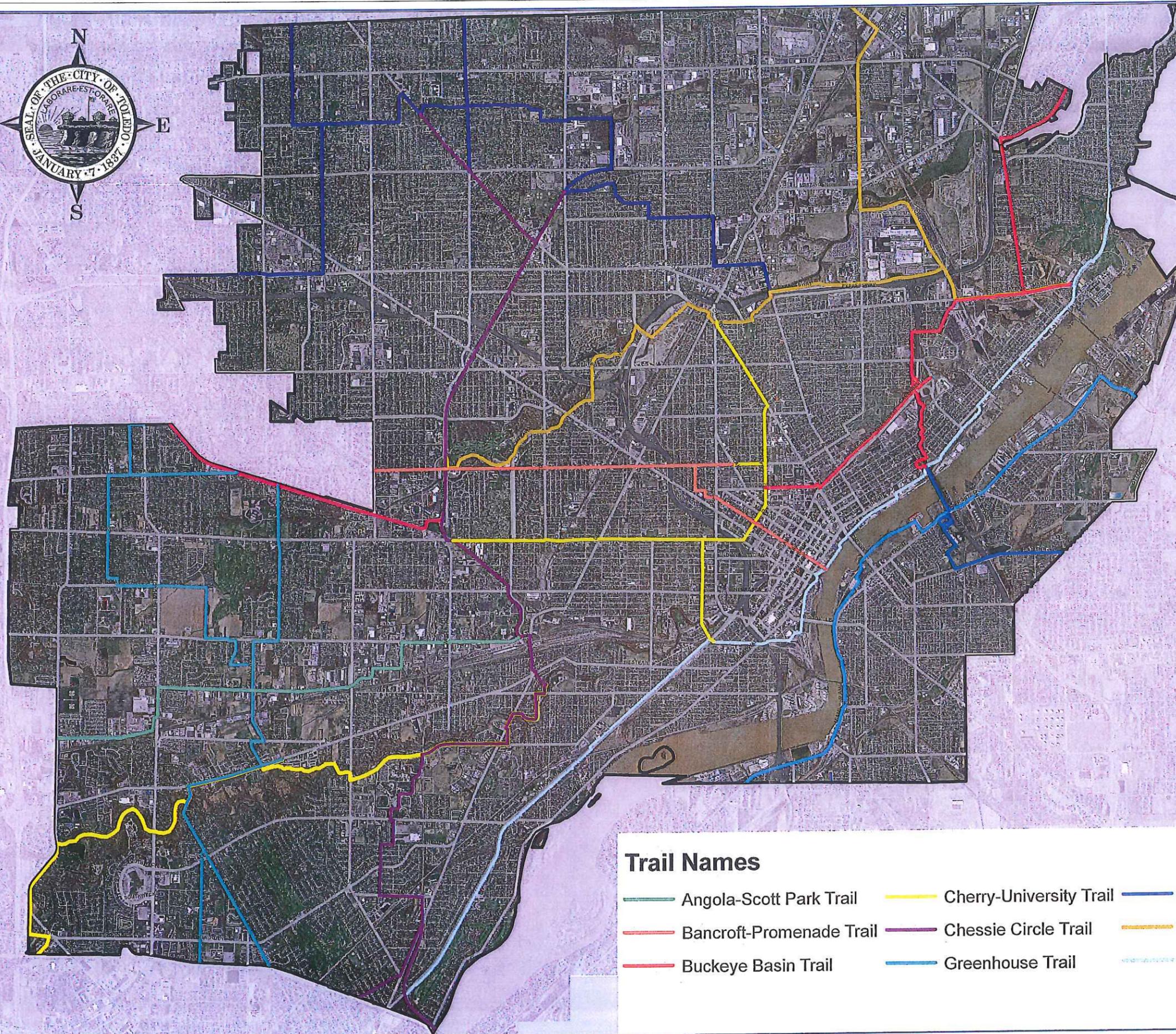
- A. Angola -Scott Park Trail – Connecting from west City limits to Scott Park;
- B. Bancroft-Promenade Trail – Connecting the University of Toledo to Promenade Park and the Riverside Trail in downtown;
- C. Buckeye Basin Trail – Connecting the Cherry-University Trail to Point Place and to the Oregon, Riverside and Riverside East Trails.
- D. Cherry University Trail – Connecting the University of Toledo Main Campus to the Uptown neighborhood and the Overland Trail and the Riverside Trail.
- E. Chessie Circle Trail – Connecting from Maumee to UT Main Campus, Ottawa and Bowman Parks and the Trilby-Washington Trail;
- F. Greenhouse Trail – Connecting from Maumee to Swan Creek Park, the Keil Farms Park (under development), the Toledo Botanical Gardens and the University-Parks Trail;
- G. Oregon Trail – Connecting the Buckeye Basin Trail to Ravine Park to the City of Oregon trail system;
- H. Overland Trail – Connecting the Chessie Circle Trail at UT to Ottawa, Jermain and Beatty Parks to Joe E. Brown Park to Chrysler Drive and to the Buckeye Basin and Riverside Trails (with a connector north to Michigan).
- I. Riverside Trail – Connecting the Chessie Circle Trail near Maumee to the Toledo Zoo, Middlegrounds Metropark (being developed in 2015) to Promenade Park along the river front to Jamie Farr Park and Cullen Park in Point Place;
- J. Riverside East Trail – Connecting from Rossford to International Park, the Marina District, the Great Lakes Maritime Museum and to the City of Oregon trail system;
- K. Swan Creek Trail – Connecting from Maumee to Anderson Belt Park, Swan Creek Metropark to Highland Park;
- L. Trilby-Washington Trail – Connecting the County system along Sylvania to Trilby Park, Jackman Park and the Chessie Circle and Overland Trails with connectors to Michigan trails.
- M. University-Parks Trail – Existing rail trail corridor from Wildwood metropark (and points west) to the University of Toledo and the Chessie Circle Trail.

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City of Toledo Bike Plan Primary Network

Date: 4/14/2015



Trail Names

- | | | | |
|----------------------------|---------------------------|-------------------|---------------------------|
| — Angola-Scott Park Trail | — Cherry-University Trail | — Oregon Trail | — Riverside Trail East |
| — Bancroft-Promenade Trail | — Chessie Circle Trail | — Overland Trail | — Swan Creek Trail |
| — Buckeye Basin Trail | — Greenhouse Trail | — Riverside Trail | — Trilby-Washington Trail |
| | | | — University/Parks Trail |

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1. Introduction

To compete for new residents and to retain existing residents Toledo must provide basic quality of life amenities that are expected of a vibrant prosperous city. Bicycle facilities are one important quality of life amenity that many leading cities in the United States have made significant investments in. Modern cities offer multi-modal transportation systems which empower residents with choices of modes for transportation.

City residents are increasingly expecting a system of designated bike facilities and connected routes as one of the basic amenities of urban living. These facilities must connect major destinations and neighborhoods in the City and provide a transportation option - not just an isolated recreational opportunity in a park. Chicago's "Streets for Cycling Plan 2020" puts it this way,

Making bicycling safer and more convenient will increase bicycling activity which will have positive impacts on the quality of life for the people of Chicago, including:

- Improved physical health
- Reduced transportation costs
- Increased economic development.

The Ohio Department of Transportation, in their "Active Transportation Guide," (October 2014) lists the benefits of active transportation (walking and bicycling) as,

- Greater economic prosperity, because workers, tourists and businesses are attracted to locations with high-quality, multimodal transportation systems.
- Better transportation choices for residents, making it easier for people of all ages and abilities to get around.
- Improved access to transit stops, local businesses and other services connecting residents to activity centers and jobs.
- Healthier communities where physical activity is a valued part of people's daily lifestyles.
- Cleaner air and water due to reduced greenhouse gas emissions and storm water contamination.
- Improved social equity created by low cost transportation options that are available to all people, regardless of income or background.

Understanding the need to develop a system of bicycle facilities the City of Toledo has endeavored to develop a vision of connected routes for the city. The "City of Toledo Bike Plan 2015" maps out a system of thirteen primary routes to connect our city's neighborhoods, major parks and many principal destinations with designated bicycle facilities in public rights of way. This system includes over 102 miles of facilities including designated paths, side paths, bike lanes and sharrows. This Plan provides a guide that will change and influence roadway project design on streets that are part of important corridors for bicycle connectivity. It lays out a framework to target investment for bicycle facilities where it will have the largest impact – to provide a connected system in our City.

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2. Developing the Plan

Plan development began with designation of major destinations thought to be most attractive for access by bicycle. Major employment destinations such as downtown, the Jeep Plant, Saint Vincent and Toledo Hospitals were mapped. Major parks such as Ottawa, Bowman, Swan Creek, Ravine, Highland and Cullen were located. Major Attractions were included such as the Toledo Museum of Art, Fifth Third Field and the Toledo Zoo. Figure 1 presents a schematic map utilized in development of the plan showing major attractors.

Next corridors connecting these destinations were generally identified. Initially these corridors were not route specific but drawn to show a general idea of desired connectivity between attractors. Then each corridor was reviewed in more detail and analyzed for practical and visionary connecting alignments that could be established. Existing rights of way were identified. Street rights of way were reviewed to see if wider rights of way were available. The regional traffic count database was consulted to obtain vehicle traffic volumes on potential streets. The Map in Figure 1 outlines the connecting corridors between major attractors and Figure 2 overlays routes and major attractors.

Route recommendations were then explored in each corridor. Routes were selected to maximize the use of the highest possible level of separation of bicycle and vehicle traffic wherever possible. Each corridor was reviewed for any existing or future separate rights of way that could be utilized for a separate bike path. Obvious existing corridors already in public ownership were recommended including the Westside corridor (being developed as the Chessie Circle Trail), the trail in International Park and the trail along the former I-280 alignment under the Veterans' Glass City Skyway. The next level of facility included side paths and again routes were directed to take advantage of many existing side paths. Where pavements were already wide enough the recommendation included bike lanes and where connections were necessary but rights of way were not readily available lower volumes routes were sought where sharrow lanes or share the road could be recommended. More information on the types of bike facilities included in plan recommendations is presented below.

The initial recommendations were then reviewed by a working of City staff with responsibilities involving streets (the informal Street Coordination Group that has been meeting). They reviewed the plan recommendations in detail in fall 2013 and discussed and agreed to modifications to the plan recommendation. The draft plan was then presented to City Council's Utilities and Public Service Committee in February 2014 and staff was directed to seek public comment. The plan was then presented at the six Community Street Forums held by the Division of Engineering Services in spring 2014 for comment. The Plan recommendations were then submitted to TMACOG's Pedestrian and Bikeways Committee and the plan was then included in the regional bike network portion of the regional transportation plan for the Toledo area, "On the Move 2015-2045 Plan." The regional plan was the focus of an extensive public

involvement process through the summer and fall of 2014 and spring 2015. Comments from that review were incorporated into the plan including the addition of several connector routes to Michigan and other adjoining jurisdictions' routes. The Final Draft Plan was then compiled and presented to the Plan Commission and City Council for approval as an amendment to the "Toledo 20/20 Comprehensive Plan."

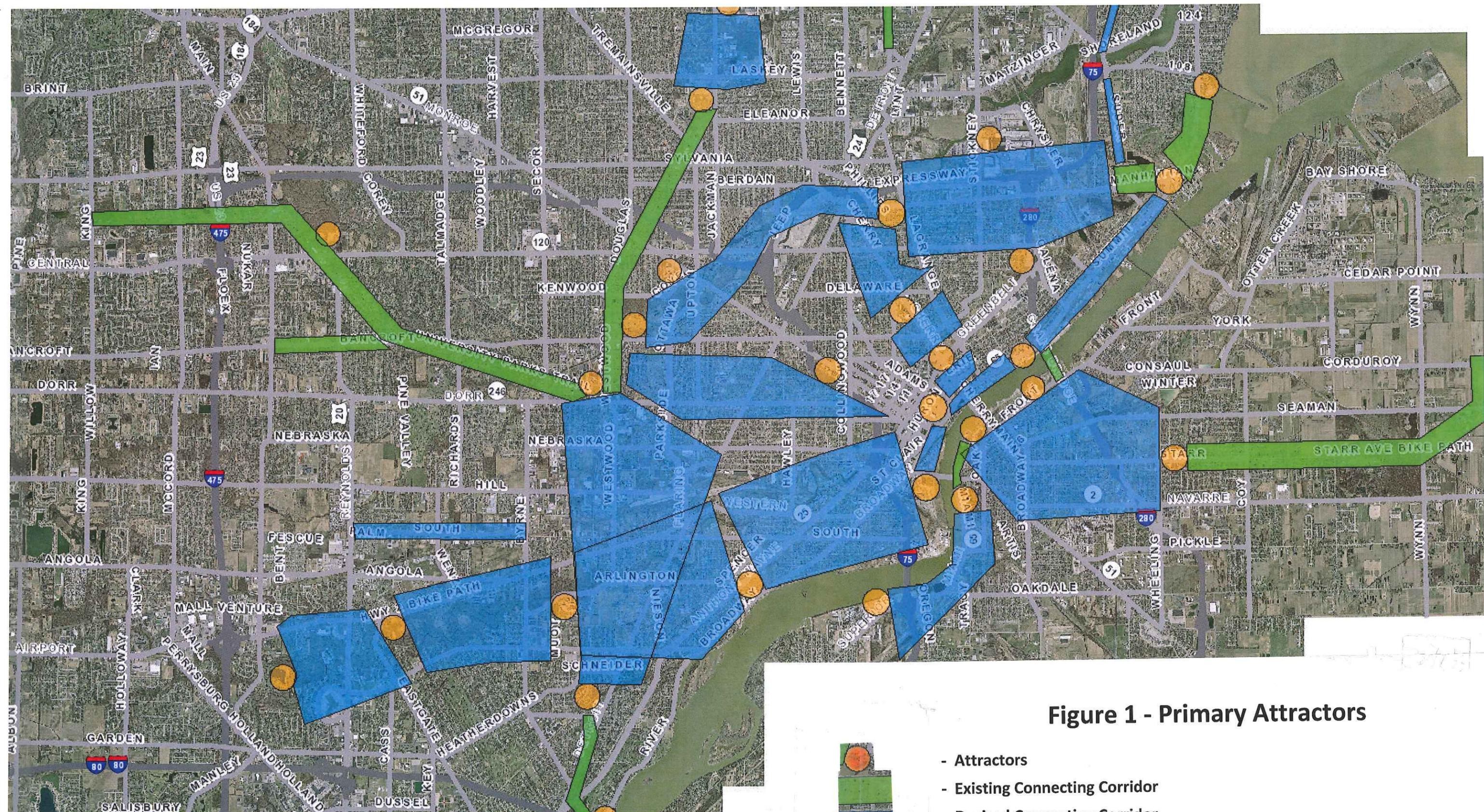


Figure 1 - Primary Attractors



- Attractors
- Existing Connecting Corridor
- Desired Connecting Corridor

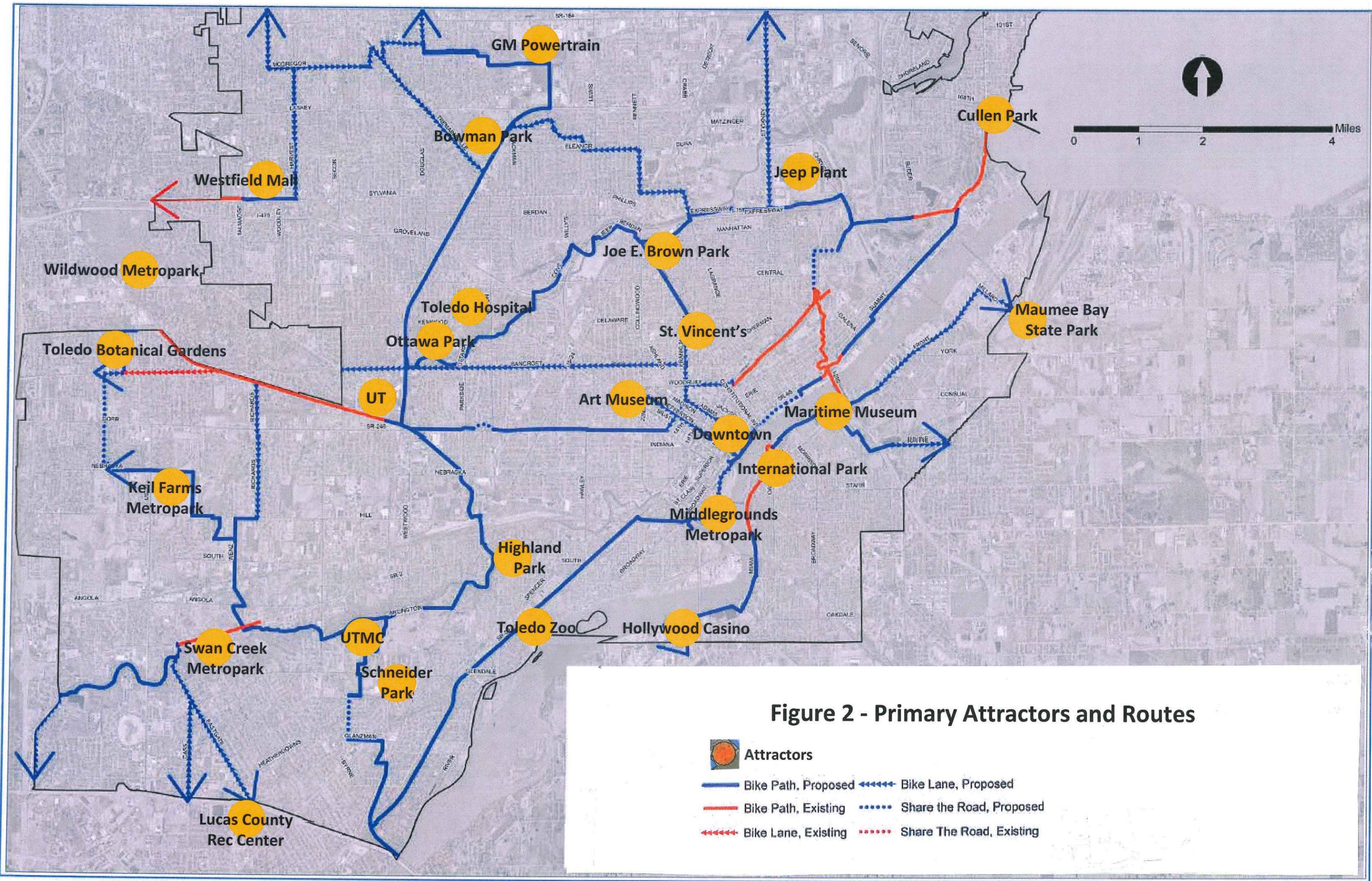
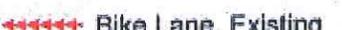


Figure 2 - Primary Attractors and Routes

-  **Attractors**
-  **Bike Path, Proposed**
-  **Bike Lane, Proposed**
-  **Bike Path, Existing**
-  **Share the Road, Proposed**
-  **Bike Lane, Existing**
-  **Share The Road, Existing**

3. The Trails

The initial focus of the City of Toledo Bike Plan is on the Primary Network of Trails composed of different types of facilities along important “spine” routes that connect areas across the City. These are the major routes that will require targeted investment to provide a general level of connectivity to neighboring areas and to and from main destinations. There will be other facilities constructed within neighborhoods to connect to this system as opportunities present themselves but the initial focus of the Bike Plan is on the Primary Connector routes, the “higher level” or strategic network that must be put into place City wide.

There are thirteen Primary Trails identified in the Plan that cross the City. They have been selected to provide the most direct route to connect areas of the City but also to provide the safest least stressful riding experience for the bicyclist. The routes take advantage of rights of way dedicated to bicycle use (as in the example of the University –Parks or Chessie Circle Rail Trails) or wider street rights of way or streets that have experienced decreasing auto traffic so that auto travel lanes can be re-purposed to include separate bicycle facilities (on street bike lanes or side paths such as along the Anthony Wayne Trail right of way or on Bancroft Street). The different types of facilities are discussed in the next section of the plan.

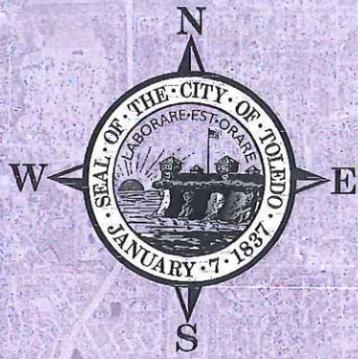
The Primary Network Trails are listed below and shown in the Primary Network Map (Figure 3). The routes are named to provide for potential way finding and for reference. For a more detailed description of the routes and facility type recommendations see Appendices A through M.

The Routes are:

- A. Angola -Scott Park Trail – Connecting from west City limits along South and Hill to Scott Park;
- B. Bancroft-Promenade Trail – Connecting the University of Toledo and points west along Bancroft through the Old West End to the Toledo Museum of Art and down Jefferson to Promenade Park and the Riverside Trail in downtown;
- C. Buckeye Basin Trail – Connecting the Cherry-University Trail in Uptown along the Buckeye Basin Greenbelt Parkway, up Buckeye, Manhattan, Suder and Shoreland to Point Place with a connector route to the Oregon and Riverside East Trails at Summit and the Craig Street Bridge and a connector to Riverside Trail at Detweiller Park across Manhattan.
- D. Cherry University Trail – Connecting the University of Toledo Main Campus via Dorr Street to the Uptown neighborhood and then on the 17th/Franklin Corridor and Cherry to the Overland Trail at Manhattan Boulevard with a connector route along City Park Avenue to the Riverside Trail at Emerald;

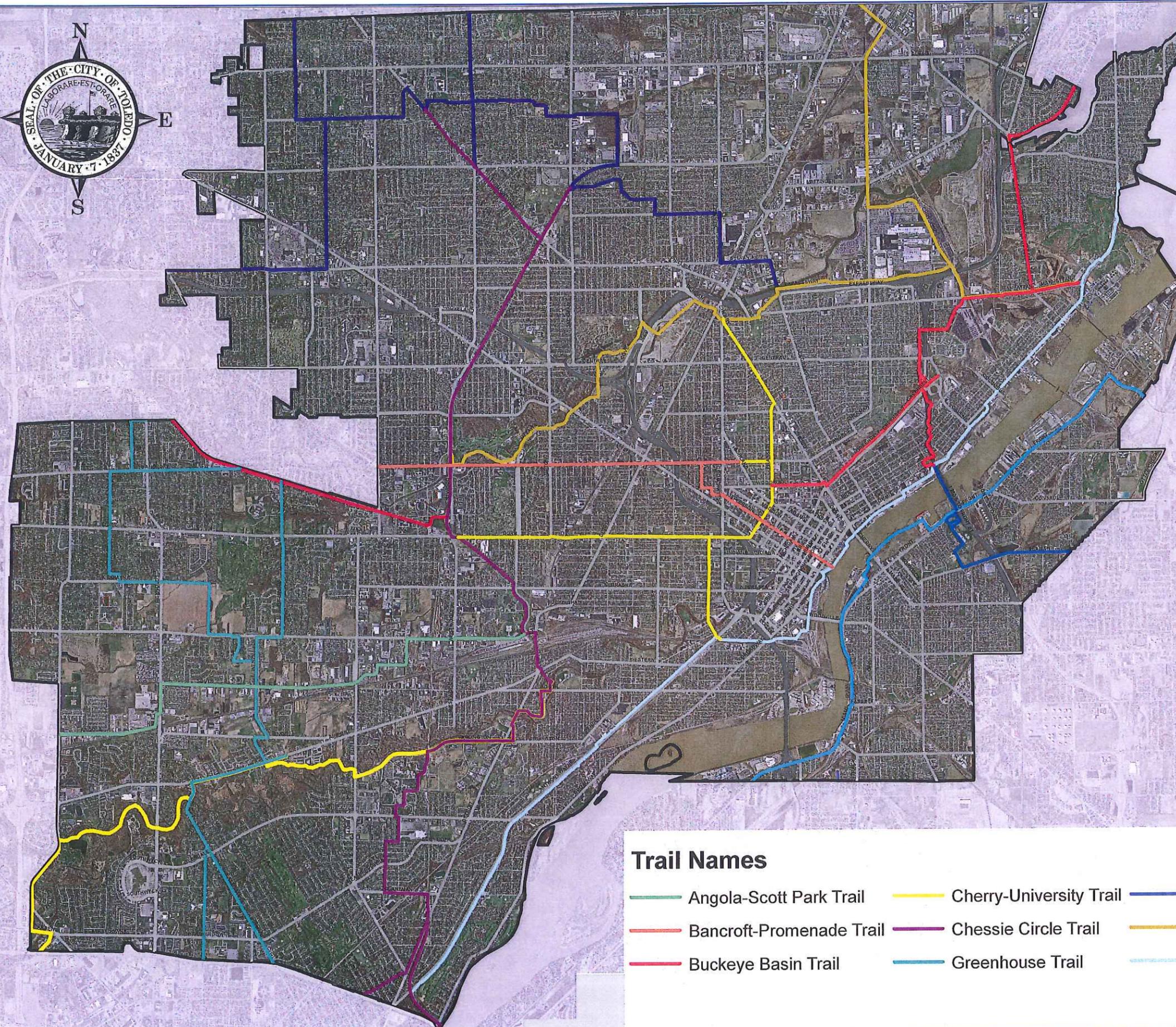
[Trail descriptions continue on next page]

- E. Chessie Circle Trail – Connecting from Maumee at River Road and the abandoned Toledo Terminal railroad alignment to Glanzman and then up to the University of Toledo Health Sciences Campus then sharing the route of the Swan Creek Trail to Highland Park and then to Scott Park and along the abandoned rail corridors through the UT Main Campus to Ottawa and Bowman Parks and the Trilby Washington Trail;
- F. Greenhouse Trail – Connecting from Maumee via either Cass or Eastgate to Swan Creek Park and then north on Wenz and Richards Road to Ottawa Hills or on Hill to the Keil Farms park (under development) and then on Nebraska and residential streets up to the Toledo Botanical Gardens and then the University Parks Trail;
- G. Oregon Trail – Connecting the Buckeye Basin Trail, at Summit Street, across the Craig Street Bridge through Ravine Park and along Seaman Road to the City of Oregon;
- H. Overland Trail – Connecting the Chessie Circle Trail at the University of Toledo near Bancroft through Ottawa, Jermain and Beatty Parks to Auburn and through the Overland Industrial Park and along Berdan and Manhattan to Joe E. Brown Park to Expressway Drive North to Chrysler Drive to Manhattan and the Buckeye Basin and Riverside Trails with a connector north to Michigan along Stickney and Benore;
- I. Riverside Trail – Connecting the Chessie Circle Trail near Maumee to the Toledo Zoo and Emerald Avenue to the Middlegrounds Metropark (being developed in 2015) to Promenade Park along the river front and Summit Street to Jamie Farr Park and continuing along Summit to Manhattan Boulevard and on to Cullen Park in Point Place;
- J. Riverside East Trail – Connecting Rossford along Miami Street to International Park the Marina District and the Great Lakes Maritime Museum and then along Front to Millard to the City of Oregon;
- K. Swan Creek Trail – Connecting from Maumee along Manley Road along Holland-Sylvania to the green corridor along Swan Creek at Anderson Belt Park then under or across Reynolds connecting to Swan Creek Metropark to Arlington at Byrne and then along Arlington, Detroit and Swan Creek flood control levy to Highland Park;
- L. Trilby-Washington Trail – Connecting the existing side path along Sylvania at the city limits near Talmadge along Sylvania to Harvest Lane to McGregor to Trilby Park and then crossing Tremainsville near Whitmer High School and then through to Jackman Park and then to the Chessie Circle Trail south of Laskey and then to the Overland Trail at Lagrange and Expressway Drive North via Slater, Eleanor, Bennet, Sylvania and Lagrange with two connectors north to Michigan trails one on Clover and one on Douglas to the state line; and,
- M. University-Parks Trail – Existing rail trail corridor from Wildwood metropark (and points west) to the University of Toledo with an extension to connect to the Chessie Circle Trail at the Oakwood-Douglas intersection.



City of Toledo Bike Plan Primary Network

Date: 4/14/2015



Trail Names

- | | | | |
|--------------------------|-------------------------|-----------------|-------------------------|
| Angola-Scott Park Trail | Cherry-University Trail | Oregon Trail | Riverside Trail East |
| Bancroft-Promenade Trail | Chessie Circle Trail | Overland Trail | Swan Creek Trail |
| Buckeye Basin Trail | Greenhouse Trail | Riverside Trail | Trilby-Washington Trail |
| | | | University/Parks Trail |

4. Types of Facilities

In addition to the routes and alignments presented above the Bike Plan includes recommended types of facilities along the routes as a guide and for cost estimation purposes. Facility type and trail or route alignment should not be confused. Primary Routes or Trails are composed of various types of bike facilities to best accommodate bicyclists traversing that route within practical constraints. The selection of facility type is governed by numerous design factors that include such things as: right of way width; amount of traffic (annualized average daily traffic); required number of travel lanes necessary for safe and efficient motorized vehicle flow; and, large complex obstructions (such as high tension power lines) in or adjacent to the public right of way. During project design the final decision on facility type will be made but the Plan recommends facility type based on planning level analysis of these factors. Figure 4, Recommended Facility Types, shows facility type for Primary Network routes as recommended in the Bike Plan. Figure 4 also includes information on the status of facilities in the City. Some facilities have already been completed and will be integrated into the trails. Other facilities are included in planned projects that have already been funded but are in design or waiting construction (committed). Others are proposed – the vision of how to complete the system in coming years. Appendix N includes facility type definitions with illustrations and examples. The facility types are also discussed below.

There are five facility types included in the plan. These include: 1) Bike Path; 2) Side path; 3) Bike Lanes (also described as Striped Lanes); 4) Sharrow Lanes; and, 5) Share the Road streets. Bike Paths are the highest level of bicycle facility. An exclusive right of way for the bicycle facility has been secured and a path has been constructed in the corridor. Paths are generally fenced or separated from side conflicts with access only at specific locations designed for that purpose like street crossings or trail heads. These facilities feel safe for young and inexperienced riders and are the least stressful to ride on. They are also very expensive to provide since separate right of way is necessary.

Side Paths provide a separate path for bicyclists with physical separation of bicycle and motorized vehicle traffic but run parallel along a street or roadway right of way. Usually both directions of bicycle travel are provided for side by side with a minimum path width of 10'. While the side path provides a safer option for cyclists than being directly in the flow of vehicular traffic they feel slightly less safe and “comfortable” for young or inexperienced riders since they are near the street or roadway. Many times there is pedestrian traffic crossing the path at many locations and driveways also allow vehicles to cross the path more frequently than a path separated. Access points for side paths are generally at street corners and are less controlled and require more caution as a bicycle rider.

Bike lanes use only striping on the pavement to designate a separate lane area on the street for bicyclists flowing in the same direction as vehicle traffic. Design requirements dictate a minimum of 5' for the bike lane and 10' for the vehicle lane. With a heavier overall level of

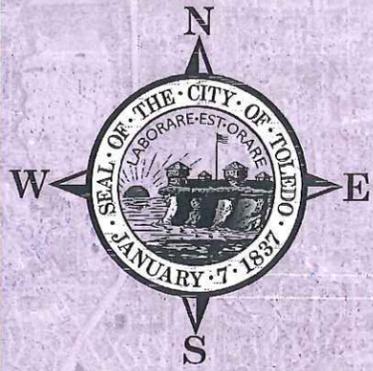
traffic, higher truck traffic or higher speeds the vehicle lane width should be increased to 11' or 12'. Separate sidewalks should still be part of the street, if possible, due to speed difference for bicycle and pedestrian traffic. This means that a larger right of way is required.

Sharrow lanes have been used in varying applications around the country. They include pavement marking using a bike symbol on the pavement designating an area in the general vehicle travel lane where motorists should expect bicycle traffic. In some cities these have been used on low volume standard width lanes to alert motorists to the expected presence of bicyclists and to remind them of the requirement to accommodate bicycles in the flow of traffic. They are not recommended for higher speed (36 MPH and above) streets or higher volume streets. Generally, City of Toledo policy has been to provide a wider than normal curb or outside travel lane (13-14') in order to incorporate this facility type into the street.

For both bike lanes and sharrow lanes providing added width to the street will, in many instances, mean that current street configurations can be marked for bicycles but parking must be removed. Eliminating parking may have a negative effect on the sustainability of fronting properties and so the recommendation of this facility type may be limited for that reason. Bike lane and sharrow lane streets do not feel as comfortable for young or inexperienced bicyclists as separated paths or side paths since there is no physical separation of bicycle and vehicle traffic. They are, however, less stressful than sharing a general use lane with no accommodation as there is a designated separate area on the pavement intended for bike use.

Share the Road Streets are streets where signage has been posted to remind the motorist that, under Ohio law, bicycles are considered vehicles with regard to road usage and have the legal right to travel in the travel lane of any street or road in Ohio that is not marked as "limited or controlled access" (interstates and freeways are limited access). Technically, every street could be signed as a share the road street but large scale posting of these signs would reduce their effectiveness. These signs are only recommended or used where no other reasonably direct alternative route is available to provide a needed connection in the Primary Network system of connecting bicycle facilities. These signs are generally used where there is less motor vehicle traffic and vehicles speeds are slower. These streets can be intimidating for bicyclists if they are not in residential areas with very slow traffic. For this reason in developing the City of Toledo Bike Plan every effort has been made to limit the number of locations included as only share the road facilities, but there are locations where that is the recommendation in this plan. As design efforts progress an alternative may be found but they were not readily apparent.

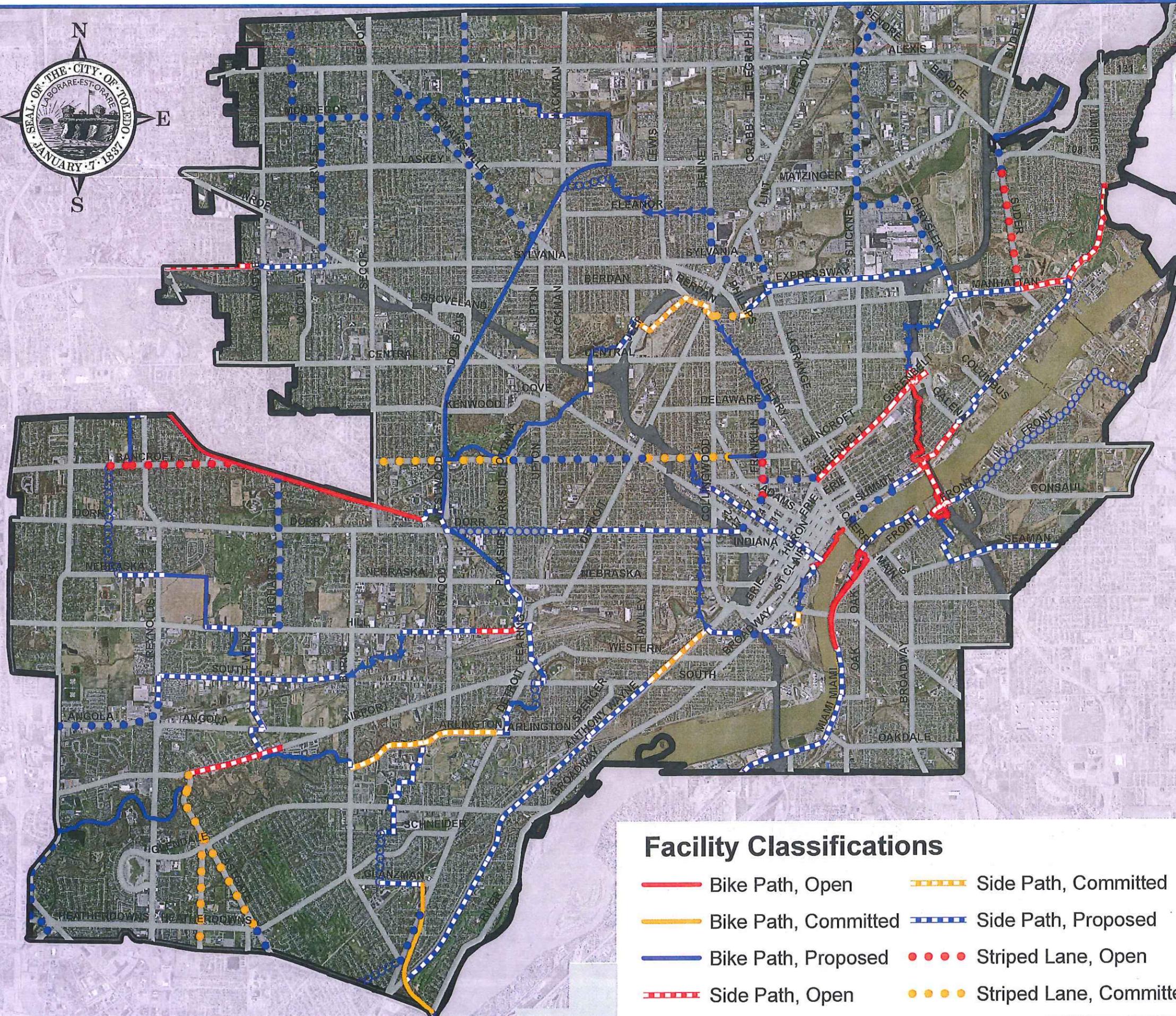
While legal in Ohio most cyclists do not feel comfortable riding in a standard 12' wide lane (or less) on larger arterial streets. This is due to the larger volume of traffic regularly experienced and the higher speed of traffic on arterial streets. Basically, what holds most people back from using a bicycle is the stress they feel using a street in traffic. Therefore, facility types were recommended to include the maximum separation of bicycle traffic from motorized vehicle traffic deemed feasible within each section of the route or trail while still providing reasonably direct routing to major destinations or neighborhood areas.



City of Toledo Bike Plan

Facility Types

Date: 4/14/2015



Facility Classifications

- | | | |
|----------------------|-------------------------|--------------------------|
| Bike Path, Open | Side Path, Committed | Striped Lane, Proposed |
| Bike Path, Committed | Side Path, Proposed | Sharrow, Proposed |
| Bike Path, Proposed | Striped Lane, Open | Share the Road, Proposed |
| Side Path, Open | Striped Lane, Committed | Share the Road, Open |

5. Implementation and Cost Estimates

The City of Toledo Bike Plan is meant to be a compelling guide to specific action to construct the envisioned system incrementally over time. Construction activity and completion of the routes will many times occur as elements of City street resurfacing or other construction projects. This is the most efficient approach as many times changes to the cross section of the street need to be completed to accommodate the bike facilities proposed for a section of street.

This Plan can also guide coordination with outside agencies as their construction projects affect City streets. This is especially important for coordination with ODOT during its reconstruction program for Interstate 75 and Interstate 475 within the City. In these occasions City staff will need to coordinate implementation of the recommendations of this plan as part of these projects.

There are also funding programs and partnership opportunities with private organizations that may allow construction of separate stand alone bike projects. There are federal funds administered by TMACOG called Transportation Alternatives Program (TAP) funds designated for trail and streetscape improvements that are a source of funding for trail construction. There are also funds through the Ohio Department of Natural Resources for the development of trails. There may also be funding made available through non-profit or community based organizations such Rotary International or others. Funding for the construction of the Trail in International Park was generously donated by the Rotary.

As a guide for these future efforts very rough preliminary cost estimates to complete the various trails as stand along projects have been developed. Caution must be exercised in using these cost estimates and more detailed estimates must be developed for specific projects. While every effort was made to anticipate elements necessary to construct the bicycle facilities in the plan the cost estimates included in the plan are planning level estimates made without the benefit of topographic survey or detailed engineering to establish exact right of way locations, soil borings to determine if difficult conditions are present or research of other detailed design considerations necessary to develop a fully refined cost estimate. There are also potential cost savings and economies of scale that can be realized by constructing these facilities in tandem with general roadway rehabilitation work that is not reflected in the estimates.

Appendices A through M provide a more detailed description of the thirteen Primary Connector Trails or Routes and information on the facility type, assumptions about obstacles to construction and construction cost estimates. Table 1 presents estimated costs for completion of the City of Toledo Bike Plan based on the more detailed work presented in the appendices. These costs do not include adjacent road work costs that would be required to improve streets recommended for bike facilities – just the bicycle related costs.

TABLE 1: TOLEDO BIKE PLAN - SUMMARY OF COST ESTIMATES FOR TRAILS

PLAN APP. / ID.	TRAIL NAME	TRAIL LENGTH (LF)	TRAIL LENGTH (MILES)	COST ESTIMATE	LENGTH (LF)		NOTES
					Side path	Bike Lane, Sharrow Lane, Share the Road	
A	<u>Angola-Scott Trail</u>	28,695	5.4	\$2,049,000	18,245	10,450	
B	<u>Bancroft-Promenade Trail</u>	27,720	5.3	\$1,434,000	6,440	21,280	
C	<u>Buckeye Basin Trail</u>	41,945	7.9	\$1,227,000	27,280	14,665	
D	<u>Cherry - University Trail</u>	35,145	6.7	\$1,192,000	9,075	26,070	Coordinate with ODOT bridge project.
E	<u>Chessie Circle Trail</u>	72,055	13.6	\$5,903,000	49,965	22,090	Coordinate with Metroparks, and UT path projects.
F	<u>Greenhouse Trail</u>	61,265	11.6	\$3,566,000	28,750	32,515	Coordinate with Metroparks and TBG.
G	<u>Oregon Trail</u>	12,780	2.4	\$736,000	12,780	NA	Coordinate with Toledo Edison.
H	<u>Overland Trail</u>	55,400	10.5	\$3,326,000	41,500	13,900	Coordinate with Woodlawn Cemetery and ODOT path project.
I	<u>Riverside Trail</u>	67,245	12.7	\$3,918,000	61,370	5,875	Coordinate with Metroparks, Toledo Zoo and ODOT.
J	<u>Riverside East Trail</u>	35,110	6.6	\$1,424,000	24,280	10,830	Coordinate with Marina District owner.
K	<u>Swan Creek Trail</u>	22,305	4.2	\$1,410,000	13,730	8,575	Coordinate with Metroparks path project.
L	<u>Tribby-Washington Trail</u>	66,085	12.5	\$6,137,000	18,105	47,980	Coordinate with Washington Local.
M	<u>University-Parks Trail</u>	16,400	3.1	NA	16,400	NA	Existing facility and UT campus
	TOTAL	542,150	102.7	\$32,322,000	327,920	214,230	
	MILES	102.68			62.11	40.57	

General Notes:

1. The estimate of pavement widen or pavement marking for Sharrow or Bike Lane does not include existing roadway pavement rehabilitation. Roadway pavement conditions need to be reviewed prior to implementation.
2. The estimate does not include any cost to implement Sharrow or Bike Lane which are to be completed as part of a programmed roadway rehabilitation project.
3. The path length is measured at proposed path center line.
4. The estimate does not include any cost to implement path. side path, sharrow or bike lane which are to be completed by other agencies unless it was noted.
5. The estimate does not include overlap sections.
6. The estimate does not include plan development, environmental review, testing, and permit and inspection fees.
7. All existing road widths were estimated from aerial photo for reference without detailed surveys.