EST 1808

CITY OF DELAWARE OHIO

MEMORANDUM

TO: Planning Commission LAS
FROM: Lance A. Schultz, Planning and Zoning Administrator
DATE: February 23, 2017
RE: Bike Plan 2025

The Planning and Community Development Department requests the review of Bike Plan 2025 by the Planning Commission before it is forwarded to City Council for review. The Parks Commission approved the plan at its February 21, 2017 meeting. Ted Miller, Parks and Natural Resource Director, will be at the meeting to give a brief presentation and answer questions. Attached is the Executive Summary and exhibits of the Priority Trail Projects (south, east, and west) for your review. The entire Bike Plan 2025 was emailed to you in a dropbox for your review as it is too large to include in the packet (157 pages).

DRAFT

BIKE PLAN 2025

September 2016

EST 1808
CITY OF
DELAWARE
OHIO

Prepared for:
City of Delaware, Ohio
1 S. Sandusky Street
Delaware, Ohio 43015

Stantec

Authored by:
Stantec Consulting Services
1500 Lake Shore Drive, Ste. 100
Columbus, Ohio 43204

1. Executive Summary

This document, Delaware's third bike network plan, has a 10 year planning horizon. The planning process included an assessment of existing conditions, a public engagement and visioning process, and recommendations to implement the vision.

This vision is that, by 2025, "Delaware [will be] a bike-friendly city, with a complete bike network which allows bicyclists of varying age, skill, and ability to safely travel across the city and beyond."

Existing Conditions

In communities across the country, bicycling for recreation, and increasingly for transportation, is desired. In Delaware, existing and prospective residents value the ability to bike across the city and to local destinations.

Most neighborhood streets in the City of Delaware are fairly bikeable for a range of users; however, many of these mostly residential areas are not connected to each other or area destinations. Barriers such as railroads, busy roadways, and disconnected and non-adjacent development impact connectivity.

The City and developers have made significant strides to construct multi-use paths to improve connectivity; however, the system is largely disconnected. More investment is needed to close gaps, improve crossing safety, and address some difficult and expensive corridors. At the same time, the City's existing paths are aging, and the budget to maintain its 15 miles of city-maintained paths is insufficient.

Residents seem to value the path network, particularly for recreation; however, there are few if any events to encourage biking or a local bike culture sought by millennials and others.

Public Engagement

Those who participated in this planning process said they want a safe network which allows trips across the city and to community amenities. While the existing network is mostly comprised of multi-use path, there is support for on-road bike facilities. Further, there is support for large, system expansion projects; however, most say the system has gaps and safety problems which also need to be addressed.

Recommendations

This plan outlines over $14 million in projects to be implemented over the next 10 years. Projects to be implemented in the short and medium term are generally safety and gap-closing projects, or about $4 million. These also include miles of on-road facilities such as bike boulevards, defining neighborhood streets as bikeways, and also road diet projects where wide or under-utilized travel lanes may be repurposed as bike lanes, a center turn lane, and/or on-street parking.

The remaining projects focus on better connections across the City such as along Delaware Run, the Springfield Branch rail spur, and along US-23, to be implemented as grants and roadway improvements allow.

Beyond infrastructure, the plan outlines program and policy changes to improve biking in the City of Delaware.

TRAIL PLAN 2016
PRIORITY TRAIL PROJECTS- EAST

EST 1808
CITY OF DELAWARE OHIO

DATE: FEBRUARY 20, 2017
SHEET SIZE: 11 x 17

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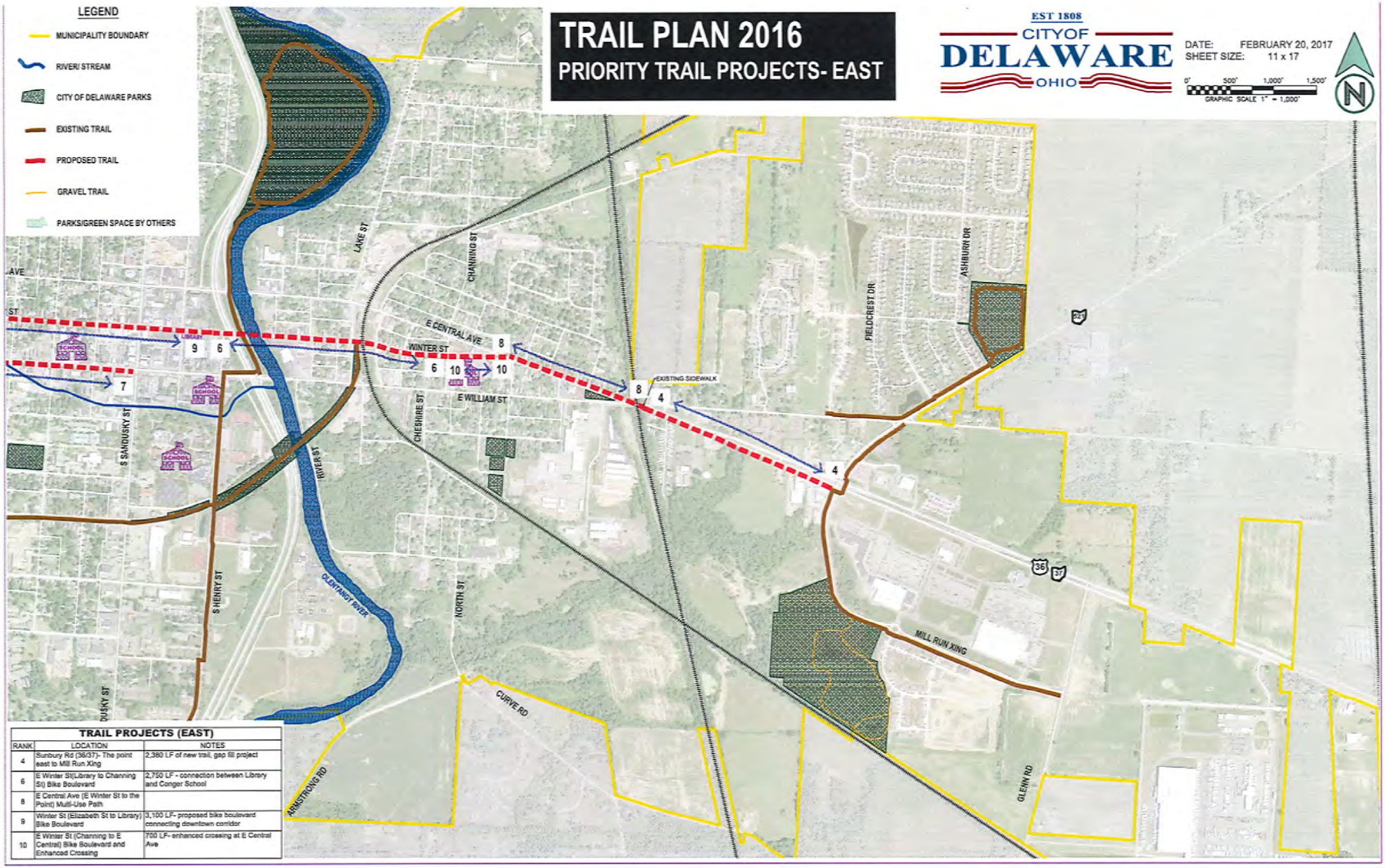

TRAIL PROJECTS (EAST)

RANK	LOCATION	NOTES
4	Sunbury Rd (36/37)- The point east to Mill Run Xing	2,380 LF of new trail, gap fill project
6	E Winter St(Library to Channing St) Bike Boulevard	2,750 LF - connection between Library and Conger School
8	E Central Ave (E Winter St to the Point) Multi-Use Path	
9	Winter St (Elizabeth St to Library) Bike Boulevard	3,100 LF- proposed bike boulevard connecting downtown corridor
10	E Winter St (Channing to E Central) Bike Boulevard and Enhanced Crossing	700 LF- enhanced crossing at E Central Ave

TRAIL PLAN 2016
PRIORITY TRAIL PROJECTS- SOUTH

EST 1808
CITY OF DELAWARE
OHIO

DATE: FEBRUARY 20, 2017
SHEET SIZE: 11 x 17

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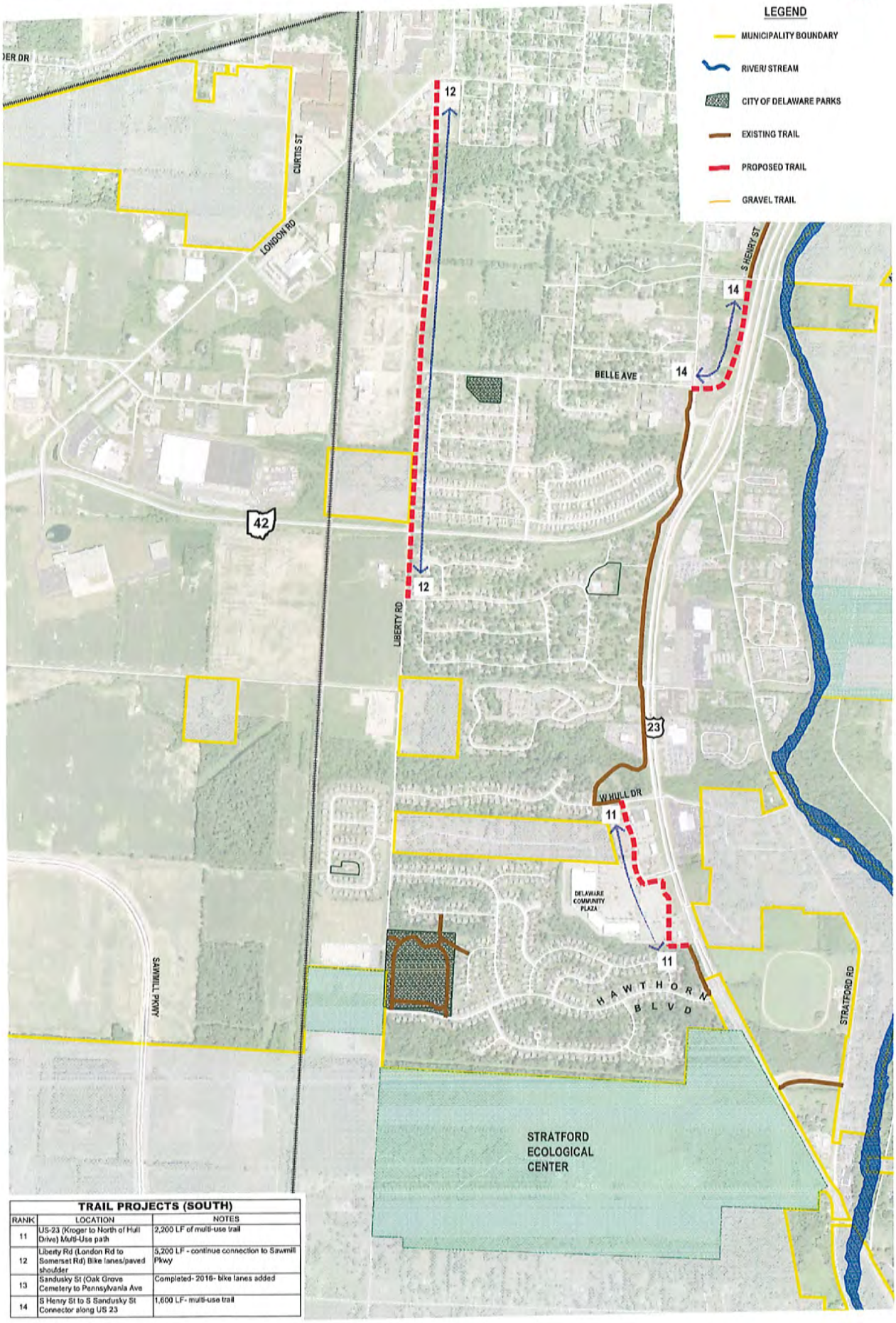

TRAIL PROJECTS (SOUTH)		
RANK	LOCATION	NOTES
11	US-23 (Kroger to North of Hull Drive) Multi-Use path	2,200 LF of multi-use trail
12	Liberty Rd (London Rd to Somerset Rd) Bike lanes/paved shoulder	5,200 LF - continue connection to Sawmill Pkwy
13	Sandusky St (Oak Grove Cemetery to Pennsylvania Ave	Completed- 2016- bike lanes added
14	S Henry St to S Sandusky St Connector along US 23	1,600 LF- multi-use trail

TRAIL PLAN 2016
PRIORITY TRAIL PROJECTS- WEST

EST 1808
CITY OF DELAWARE OHIO

DATE: FEBRUARY 20, 2017
SHEET SIZE: 11 x 17

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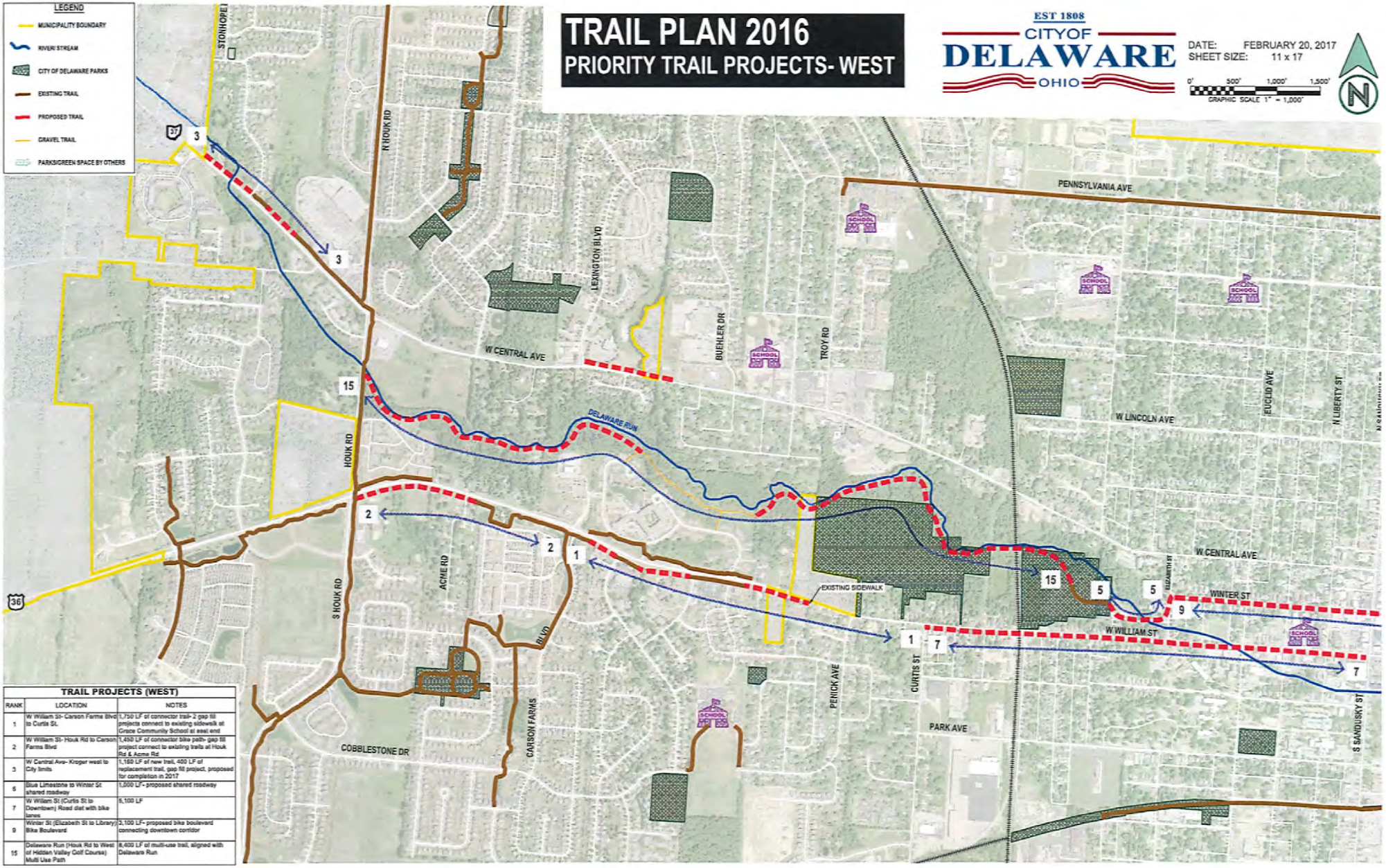

TRAIL PROJECTS (WEST)		
RANK	LOCATION	NOTES
1	W William St- Carson Farms Blvd to Curtis St.	1,750 LF of connector trail- 2 gap fill projects connect to existing sidewalk at Grace Community School at east end
2	W William St- Houk Rd to Carson Farms Blvd	1,450 LF of connector bike path- gap fill project connect to existing trails at Houk Rd & Acme Rd
3	W Central Ave- Kroger west to City limits	1,160 LF of new trail, 400 LF of replacement trail, gap fill project, proposed for completion in 2017
5	Blue Limestone to Winter St	1,000 LF- proposed shared roadway
7	W William St (Curtis St to Downtown) Road diet with bike lanes	5,100 LF
9	Winter St (Elizabeth St to Library) Bike Boulevard	2,100 LF- proposed bike boulevard connecting downtown corridor
15	Delaware Run (Houk Rd to West of Hidden Valley Golf Course) Multi Use Path	8,400 LF of multi-use trail, aligned with Delaware Run

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1. Executive Summary

This document, Delaware's third bike network plan, has a 10 year planning horizon. The planning process included an assessment of existing conditions, a public engagement and visioning process, and recommendations to implement the vision.

This vision is that, by 2025, "Delaware [will be] a bike-friendly city, with a complete bike network which allows bicyclists of varying age, skill, and ability to safely travel across the city and beyond."

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The City and developers have made significant strides to construct multi-use paths to improve connectivity; however, the system is largely disconnected. More investment is needed to close gaps, improve crossing safety, and address some difficult and expensive corridors. At the same time, the City's existing paths are aging, and the budget to maintain its 15 miles of city-maintained paths is insufficient.

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2. Introduction

Over the past decade, the creation of walkable and bikeable communities has become recognized as a key benchmark of community progress.

In the late 1990s, the City of Delaware saw this need and started requiring developers to construct multi-use paths in open-space dedication areas. Further, the City successfully sought grants for several rails-to-trails projects (Figure 2-1), and included side paths along new and reconstructed roadways.

Today, the network is comprised of nearly 24 miles—mostly paths but also some low volume streets and drives. These investments are predominantly in four areas of the city: near downtown and along US-23, as well as on the far west, far east, and far south sides of town.

While these multi-use paths are valued by local residents, they are also disconnected. Combined with railroads, busy streets, highways and rivers, cross-city travel is difficult for most people who ride bicycles. Becoming

Figure 2-1: *Delaware's Springfield Branch rails to trails path, looking east toward the bridge over US-23.*

a place where bicycling is easier for adults, families, and children is an aspiration of City leadership as well as many local residents. This planning document provides insight with respect to what has been accomplished and what still needs to be done to help Delaware become a more "bike friendly" community.

About this Plan

This plan follows a traditional planning process including an assessment of the existing condition, engagement of the public, development of a guiding vision, and the development of prioritized recommendations. Chapters of this plan follow this organization.

This document builds on and supersedes recommendations from previous planning efforts. These include: the City's most recent comprehensive plan (2003), which defined a vision for a more connected city; the City's first bike plan, published in 2006; a condition inventory and implementation report, published in 2008; and the City's most recent bike plan, published in 2010.

Planning Perspective

While active transportation plans may follow a traditional planning process, those reading the plan should be aware of several nuances.

Traditionally such plans have focused exclusively on infrastructure—new paths and safer crossings. Today, it is recognized that non-infrastructure factors have an impact as well. This plan incorporates a ***Five E perspective***, considering infrastructure, generally Engineering matters, as well as non-infrastructure matters, specifically Education, Encouragement, Enforcement and Evaluation.

This more holistic approach places additional emphasis on the influence of policies and programming toward improving mobility. Examples may include educating bicyclists and motorists to safely share the road, encouraging more people to ride for recreation and transportation trips, enforcing safe riding through rules and law enforcement, as well as evaluating the effectiveness of policies and planning efforts.

Second, plan authors have been cognizant of the range of anticipated users, answering the question ***"who are we planning for?"*** This is a difficult question because those who ride bicycles range in skill, experience, and fitness. As such, what is sufficient for some users may not be for others. Also, people have different reasons for riding: some for recreation without concern for their destination, while others ride for transportation to specific destinations such as work or school. Finally, while many people ride their bikes alone, some ride with friends or family. The range of users helps to define the range of needs required to accommodate them.

Plan Lifespan and Updates

This plan sets a vision and provides recommendations to guide decision makers over the next 10 years of implementation. While the planning horizon is the year 2025, the plan should be updated if priorities or conditions significantly change, or by the year 2020.

3. Existing Conditions

The study of existing conditions provides insights into "how things are," providing an understanding of what is working well and where more progress is needed. The chapter is broken into two sections: *The Built Environment* – addressing the city's geography and infrastructure, and *Standards, Policies, and Programs* – addressing the non-infrastructure, "soft" factors which affect those who bike.

The Built Environment

While the City has nearly 24 miles of multi-use path, its most important type of infrastructure for bicycling is its ***city streets*** as most bike trips will start and stop on streets, not paths.

Bicycling is easiest in the historic core of the city, where its streets are laid out on a very walkable and bikeable grid. Its neighborhood streets are mostly quiet with less than 2,000 vehicles per day and a speed limit of 25 mph (Figure 3-2). Similarly, most of Delaware's local, neighborhood streets are conducive to bicycling. As such, trips within and to adjacent neighborhoods are relatively easy so long as those neighborhoods are connected to each other. Trips outside of one's neighborhood may require bicyclists to cross ***barriers*** such as railroads, limited-access highways, streams and rivers, and large developments without cross-access. Since these barriers often block automobile traffic, the few crossing points that exist are likely on arterial roadways which may be difficult to cross, let alone travel along for any length of time. Figure 3-4 illustrates such barriers in Delaware and the vicinity.

Arterial and Collector Streets

Delaware's arterial roadways are much less friendly to bicyclists, specifically William Street (US-36), Central Avenue (SR-37), and, to a lesser degree Sandusky Street and London Road. These roads handle high volumes of passenger car and truck traffic with posted speeds ranging from 25 to 45 mph. While there are some segments of multi-use paths, none provide dedicated space for those who want to ride in the road. Some trips are simply not possible, or at least direct, without riding on Central Avenue or William Street (Figure 3-3).

Figure 3-2: *W Winter Street, typical of a very bikeable neighborhood street.*

Figure 3-3: *William Street, typical of a busy and less bikeable arterial street.*

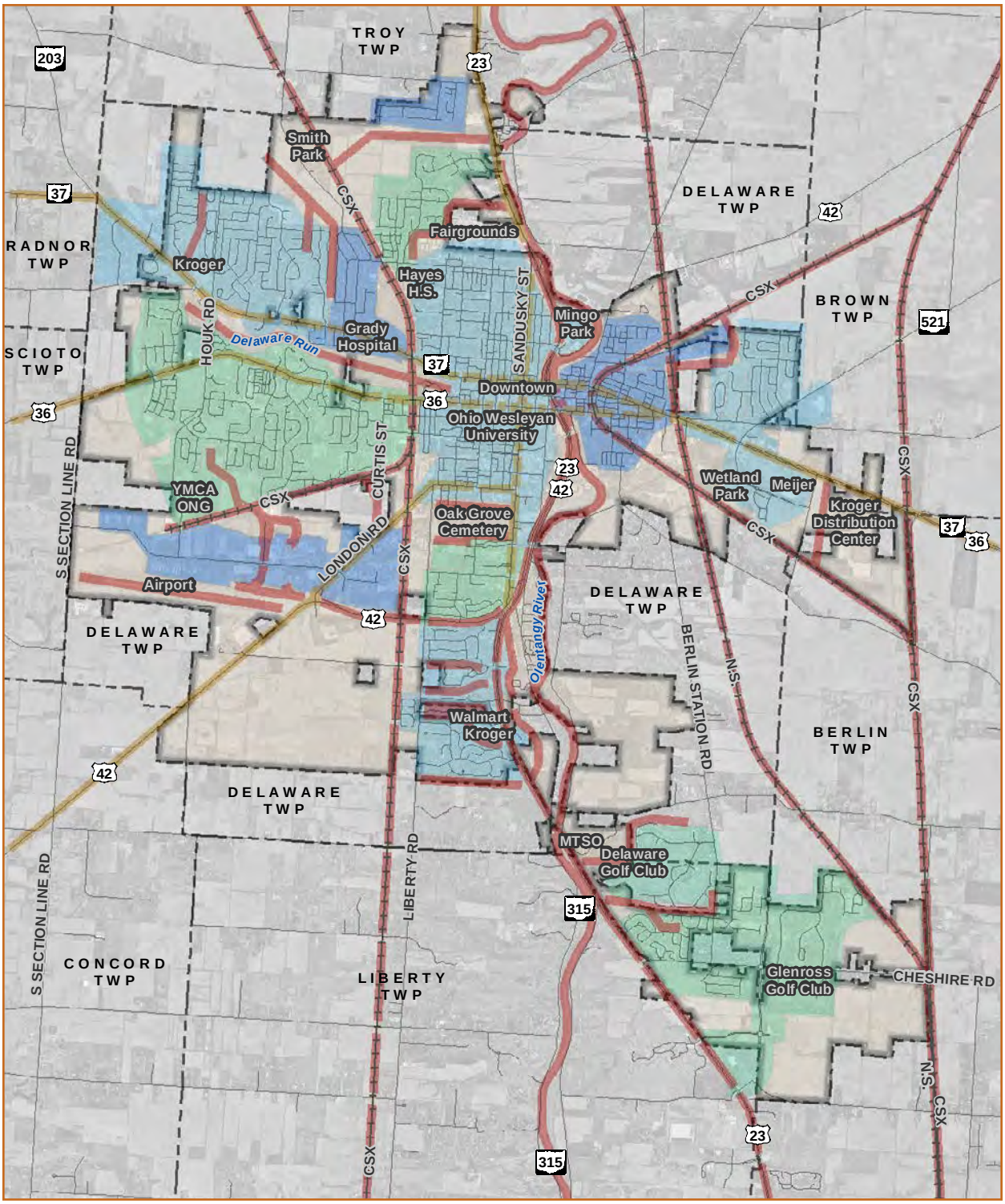


Figure 3-4: *Barriers shown with dark red lines, such as railroads, limited-access highways, streams and rivers, and large developments/subdivisions without cross-access, force people to ride out of their way to travel around the barrier. Busier arterial roadways, shown with orange lines, are easier to cross; trips along them are difficult and required to navigate around other barriers. Shaded areas, generally bound by barriers, are places where it is generally easy to bicycle.*

Other collector roads such as Troy Road and Pittsburgh Drive are not comfortable to use for their own reasons. While total traffic volumes are lower, they still have high speed limits (35 mph) and very narrow shoulders. As such, bicyclists must ride in vehicular travel lanes, contending with faster-moving vehicles and, on Pittsburgh Drive, delivery and semi-trucks.

Bike-Specific Improvements

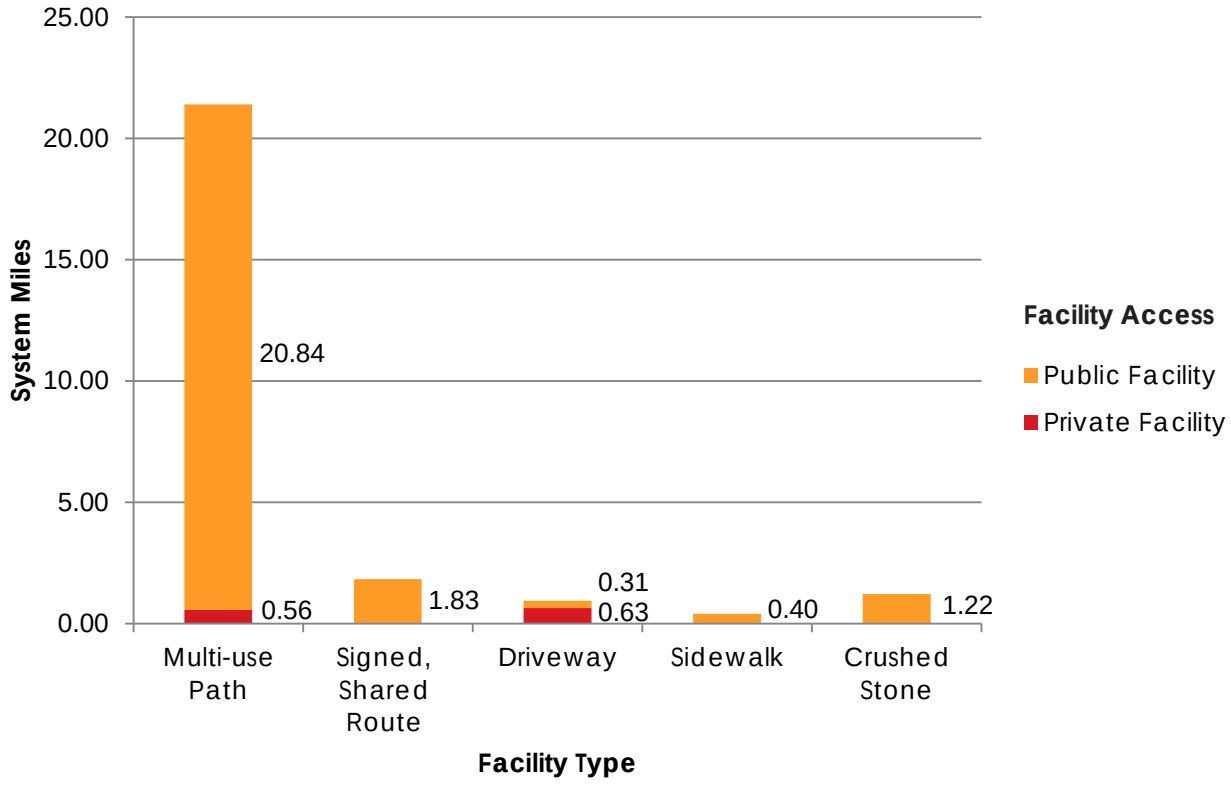
Delaware's bike network is roughly 24 miles in length, 21 miles of which are multi-use paths and the remainder comprised of low volume, low speed driveways and streets which link segments of path. The vast majority of the network is public and available for use 24-hours a day. Some portions are private, either signed "no trespassing" or gated and, therefore, restricting use 24-hours a day. Table 3-1 provides a breakdown of the network by type of facility and type of access.

Multi-use Paths

The majority of multi-use paths were built and contributed since 2001 by housing developers, predominantly on the west side near Houk Road, on the east side near Kilbourne Road and Mill Run Crossing, and on the far south side near Glenn Parkway and Cheshire Road. The City and various project partners have contributed paths along US-23 and the Olentangy River, as well as along the abandoned Springfield Branch rail spur.

A condition inventory of the city's multi-use paths was completed in 2008, and then again in 2015 as part of this planning effort. The inventory provides a broad representation of the condition of each path in the system. Paths in "good" condition have few if any pavement defects and are generally accessible. Paths in "fair" condition are deteriorating and have some pavement defects which

Table 3-1: Existing Bicycle Network by facility type and access



impact path accessibility. Paths in "poor" condition have significant pavement defects and/or accessibility problems and need significant maintenance activities such as an asphalt overlay or full-depth reconstruction.

Table 3-2 shows the change in condition for paths in 2008 and 2015. During this time period, 7.6 miles of path was added to the network. Paths rated as "fair" jumped from 1.77 miles (11%) in 2008 to 4.70 miles (20%) in 2015. Similarly, paths rated at "poor" jumped from 0.12 miles (1%) to 1.09 miles (5%). Exhibits 3-3 and 3-4, provided in Appendix A, symbolize the condition of paths throughout the city in 2008 and 2015 respectively.

This represents a significant backlog in maintenance as "poor" paths will need to be resurfaced within the next few years (if not sooner), and "fair" paths will likely need to be resurfaced in five to eight years. Table 3-2 shows the condition of paths throughout the city in 2008 and 2015. These data include the roughly 15 miles of path which is City maintained, as well as the balance which are maintained by Homeowners' Associations and other entities. Private paths were not inspected and are not included in these statistics. Most paths rated in "poor" condition are City maintained.

For the first time, the condition inventory also included a detailed list of locations where spot maintenance activities are needed. Exhibit 3-5, provided in the appendix, illustrates the locations of various deficiencies requiring maintenance. Specific examples include: places where vegetation needs to be trimmed to improve visibility around curves and at intersections, and pavement joints and cracks which may present a fall hazard (Figure 3-5).

Table 3-2: Multi-use Path Condition by Year of Condition Inventory

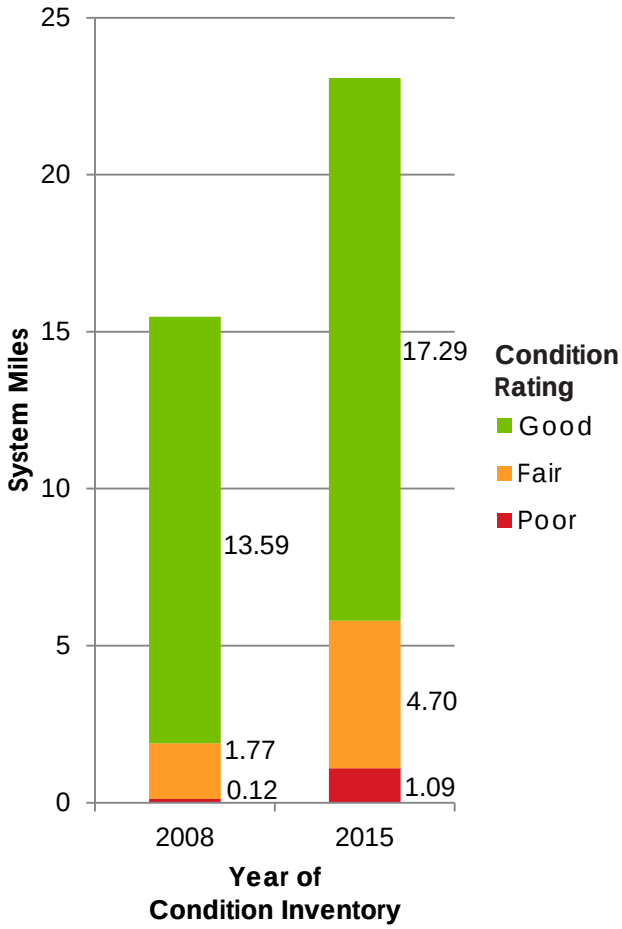


Figure 3-5: *Here, the asphalt trail and curb ramp no longer meet, creating a trip hazard and making the path inaccessible. Vertical and horizontal separations between curb ramps and paths, and curb ramps and curbs seem to be a common problem.*

The condition inventory showed that preventative maintenance activities, such as seal coating, are being performed along some paths but not all. Seal coating is an activity which, if performed consistently and early in a path's lifespan, can extend the life of the surface course of asphalt from about 15 years to about 20 years. The City has a defined preventative maintenance plan for the pathway network; however, only $5,000 is allocated annually to implement it. While it had been estimated that $40,000 is a more reasonable estimate, the anticipated backlog of resurfacing and repairs may require upwards of $80,000 annually to address these needs over the next five years.

Crossing Locations

During the condition inventory, plan authors made observations at numerous multi-use path crossings throughout the city. Most path crossings of streets have a direct and accessible route, a striped crosswalk, and advanced warning signage—typically a bicyclist (W11-1) or pedestrian (W11-2) in the vicinity warning sign. A few crossings have additional treatments such as a median island and/or a continuously flashing yellow beacon or flashing LED edge-lit accompanying a W11-1 or W11-2 sign. A few locations have significant sight-distance problems, or are particularly difficult for users to safely cross.

Plan authors have idenfied a number of crossings where enhancements should be evaluated. In short, all path crossings must be continuous and ADA accessible. Crossing locations should also have good visiblity to ensure motorists and path users can see each other on approach to each crossing. With respect to signage, current guidance suggests using signage to show the location of the crossing using W11-15 with supplemental plaque W16-7P (instead of the W11-1 or W11-2), and to place the signs on both sides of the road for added emphasis (see examples on page 24).

The city uses a number of continuously-flashing beacons with W11-1 signs at crossing locations with multi-lane approaches (e.g. E Central Avenue at Mingo Trail (Figure 3-6). Such locations should be evaluated for the installation of a median refuge island which allow users to cross one approach at a time, greatly improving safety while having a minimum impact on traffic. In addition, pedestrian-activated rapid-flash (RRFB) beacons should be considered to further improve safety and reduce delay. These de-

Figure 3-6: *Mingo Multi-use Path at its crossing of SR-37 looking south. While the crossing has continuously-flashing beacons and is striped, a median island, pedestrian-activated push button, and a wider and more direct north approach would improve accessibility and safety for all users.*

vices shown to be much more effective at encouraging motorists to yield than the continuously-flashing beacons used in the city.

Beyond roadway crossings, there are many locations where side paths cross driveways and intersecting streets. Plan authors noted that during the condition inventory, most crossings had no signage and other crossings had either yield or stop signage. With respect to "side paths" traveling along roadways, bicyclists generally have the same right-of-way as those traveling on a roadway, and turning/approaching vehicles must yield to path users. "Attempts to require bicyclists to yield or stop at each cross-street or driveway are inappropriate and are typically not effective" per AASHTO, p5-8, Guide for the Development of Bicycle Facilities, 4th Ed. As such, stop and yield signs and flexible delineators with the word "stop" should be removed from the system except where necessary and warranted. Where paths follow independent alignments, path users should be instructed to yield (or, if necessary, stop) based on anticipated volumes on the trail and intersecting road. The assignment of right-of-way should follow warranting criteria for stop-controlled intersections.

Finally, plan authors found numerous locations where wood, metal, or plastic bollards or delineators were used to discourage motorists from driving on paths. While motorists could drive on paths, the risk is minimal compared to a bicyclist hitting the vertical obstructions. Such obstructions are a serious-injury hazard to bicyclists and can require bicyclists and wheelchair-users to leave the trail in order to get around them (Figure 3-7). All bollards should be removed from the system. where there may be confusion, "No Motor Vehicle" signs (R5-3) can be erected. Where access must be restricted, path geometry can be

Figure 3-7: *At this location off Timbersmith Drive, bollards nearly prevent bikes from entering/leaving the roadway, forcing bicyclists (and those using a wheelchair or stroller) to leave the path.*

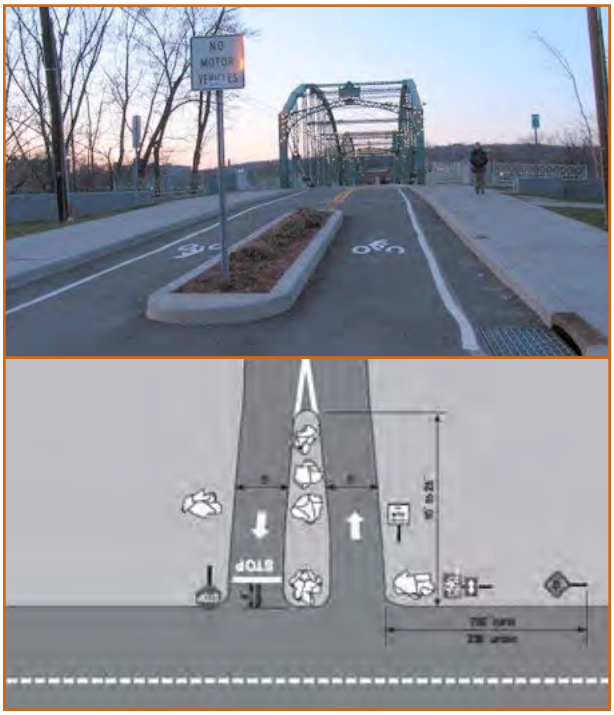


Figure 3-8: *Alternative treatments to using bollards may include a vegetated median island in a path, either curbed (top) or uncurbed (bottom) to further discourage motor vehicles. If still needed, bollards may be placed in the islands and within the path shoulder.*

designed to more strongly discourage motor vehicle access (Figure 3-8), or bollards can be placed in a landscaped median where they are less likely to be struck by bicyclists. If bollards are used, illumination is recommended, as well as using a bright color of paint and reflective tape on the bollard to ensure they are visible day and night.

Bike Parking

Knowing there will be a secure and safe place to park one's bike is an important consideration for those who travel for transportation. A brief inventory of major destinations such as the downtown (Sandusky Street: Spring Street to Central Avenue) and some area retail centers showed that most locations lacked bike parking in visible and prominent locations—important for theft deterrence and to help bicyclists easily find the parking area.

The City has a program to install bike parking downtown; however, there are only 10 parking spaces on the three-block stretch of Sandusky Street between Spring Street and Central Avenue. These included three "U" racks and one "wave " rack—a type of rack more likely to allow bikes to be damaged when used as designed[1]. While it's unclear how frequently these are used, they are not conveniently located throughout the downtown area.

If a family of four wanted to ride to Whit's Ice Cream on the west side of Sandusky Street, the closest racks are on the east side of the street. After parking their bikes, the family would need to walk a half block to the nearest crosswalk, cross, and then walk back a half block to reach their destination. Their bikes would occupy all of the spaces on the block, and 40 percent of what's available on Sandusky Street downtown. More likely, the family would park them in front of the business, locking them up to trees, sign posts, or benches—or choose to drive an automobile.

Standards, Policies, and Programs

The following categories address the "soft" factors which affect bicycling in Delaware such as standards, policies, and programming.

Engineering

1. ***Complete Streets Policy*** – The City plans to adopt a policy in 2016. Even so, accommodation is addressed in nearly every project.

2. ***Engineering Training or Resources*** — The City does not have its own bike-specific design manual, or copies of the most recent AASHTO or NACTO design manuals. No staff members have participated in continuing education specific to on- or off-road bike facilities.

3. ***Bike Parking Requirements and Standards*** — City code and development standards do not require bike parking. There are no standards with respect to where parking should be located, the type of racks provided, or the size and layout of such parking spacces.

4. ***High-capacity Bike Parking at Community Destinations and Facilities*** — Downtown

1: The Association of Pedestrian and Bike Professionals (APBP) has produced guidelines for bike racks to reduce the risk of damage to parked bikes. Racks should provide at least two points of contact with a bike's frame and have the ability to attach a cable or U-lock through part of the rack to secure the bike. "Wave" racks, as well as "ladder" and "wheel-slot" racks do not meet these guidelines and bikes parked at these racks are more prone to being damaged from tipping over and/or sliding down the rack.

and large retail destinations lack high-capacity bike racks needed to accommodate groups of bicyclists.

5. *Path Maintenance Plan or Program* — The City has a preventative maintenance plan in place; however, only $5,000 is budgeted to maintain 15 miles of trail. An annual budget of $80,000 or more is needed over the next five years to address deferred maintenance and other needs. Requests for maintenance can be made with the "My Delaware" smartphone app, as well as reports made via email, website, telephone, or to staff, including police dispatch.

6. *Path Standard Drawings and Details* — City standard drawings "RDWD 25-28" specify how paths are to be constructed and signed. The drawings allow for paths as narrow as six feet; require installation of bollards which may prevent wheelchair access on six- and eight-foot paths, and include a message to stop at every crossing; and call out use of traffic control signing which is not compliant with the Manual of Uniform Traffic Control Devices (MUTCD). Per American Association of State Highway and Transportation Officials (AASHTO), the recommended width of a multi-use path is 10 feet or wider, else eight feet at absolute minimum where space is constrained. As noted earlier, bollards are a serious-injury hazard to bicyclists. They can also prevent access by those using wheelchairs when there is not sufficient width to navigate around them. The intersection right-of-way of side paths should generally match that of adjacent traffic. Yield or stop signs should be used only as warranted. All path signing should be in compliance with the MUTCD.

Education

1. *Safe Biking Education Programming for Students* — The Delaware City School District has a Safe Routes to School plan, approved in January of 2015. This plan calls for bike rodeo events and some education events outside of the class, possibly aimed at family participation. It's unclear if these countermeasures will be provided to all students, and if they will help students learn how to ride their bikes safely with an opportunity to learn the rules of the road.

2. *Safe Biking Education Programming for Young Children* — The City and YMCA sponsor an annual Safety Town program targeted to young children.

3. *Safe Biking Education Programming for Adults* — There is no specific program aimed at teaching skills to adult bicyclists.

4. *Share the Road Campaign* — A program aimed to help motorists and bicyclists learn how to safely share the road. While such a campaign occurred in Columbus, including media spots which would have been seen and heard in Delaware, no specific effort has been made to reach local residents.

Encouragement

1. *Bike Network Map* — There is no specific map of the City's multi-use paths or bike network. Multi-use paths are shown on the City's roadway map; however, the map is not easy to use.

2. *Bike Network Wayfinding Signage System* — Delaware's bike network does not have a wayfinding signage system. Such a system would be most beneficial in locations where out-of-town or visiting bicyclists are expected.

3. *National Bike Month Events*—The City does not sponsor events or publicize National Bike Month.

4. *Signature Bike Events*—The city does not host a signature bike event; however, some organizations sponsor rides or events with a cycling component such as the annual Mingo Man triathlon. Of note, the City hosts an annual, week-long "Bike Patrol School" for police officers across Ohio.

5. *Bike Accommodation at Festivals and Large Events*—The City (or partners) do not provide valet or monitored bike parking at events.

6. *Bike Tourism Promotion*—To date, bike riding in or near Delaware is not specifically promoted, other than by groups sponsoring events within the city.

7. *Bike Co-Op and Maintenance Training*—Delaware does not have a bike co-op; however, retailer Breakaway Cycling hosts an annual Park Tool School training course on bike maintenance, offered at cost.

Enforcement

1. *City Ordinances*—Various ordinances in Chapter 373 require bicyclists to have a license from the police department (373.13-14), as well as register their bicycles (373.15) and report changes in the appearance of their bicycles (373.19).

2. *Sidewalk Riding*— People are permitted to ride bikes on sidewalks, except in the downtown area (373.12) even though bike racks are located on the sidewalk.

3. *Law Enforcement Training*—The City has several officers attend regularly-offered legal training and this information is disseminated to officers as needed.

4. *Helmet or Lights Give-Away Programs*—Helmets are given away through the Safety Town and Bike Rodeo education programs.

Evaluation and Policy

1. *Bike Program Manager*—No one person has been identified as the program manager, responsible for the bike network.

2. *Bike Advisory Committee*—Tentatively, the Park and Recreation Advisory Board has purview over bicycling in the city.

3. *Dedicated Funding Source for Plan Implementation*—The City has not yet created a dedicated funding source for implementation of plan recommendations.

4. *Crash Reporting and Tracking*—The Mid-Ohio Regional Planning Commission tracks all reported crashes and provides those to member agencies upon request. Delaware uses this data on an aggregate level; however, does not regularly analyze crashes on an individual basis.

4. Public Engagement and Vision

Public engagement is an important component of any planning process for the purposes of increasing knowledge and understanding of the issues in question. Plan authors combine this input with research, professional judgment, and best practices to derive plan findings and recommendations. In short, public input helps to inform the planning process and the resulting plan document.

A multi-pronged approach was used to engage the public. These included an internet-based survey, a public meeting, mobile input stations, and two periods for the public to provide comments.

Input Methods

Survey

A voluntary, 33 question internet-based survey focusing on bicycling in Delaware was prepared and made available for three and a half weeks. One-hundred-seventy-one respondents completed the survey, advertised via the City's website and Facebook page, and mentioned in a newspaper article. The survey and a summary of the responses is provided in Appendix B.

Public Meeting

A public meeting was held on Tuesday, May 12th, 2015 from 7 to 8pm in Council Chambers. Approximately 30 people attended the meeting, including City staff and leaders. Participants sat through a brief presentation followed by opportunities to provide input on Vision and Value Statements; Policy and Programming; Priority Corridors; and Locations for more bike racks, safer crossings, and destinations to connect to the network.

Figure 4-1: *Attendees of the public meeting review interactive exhibits before providing their input. Participants were provided stickers to append to exhibits and a tally sheet, indicating the projects they support.*

Mobile Input Stations

Priority Corridor Exhibits were placed at the YMCA and the Library. The exhibits consist of a map of highlighted, numbered corridors and a separate tally sheet where participants could place stickers to vote for their favorite corridors (Figure 4-2). These stations also included a flyer providing information on how to submit public comment.

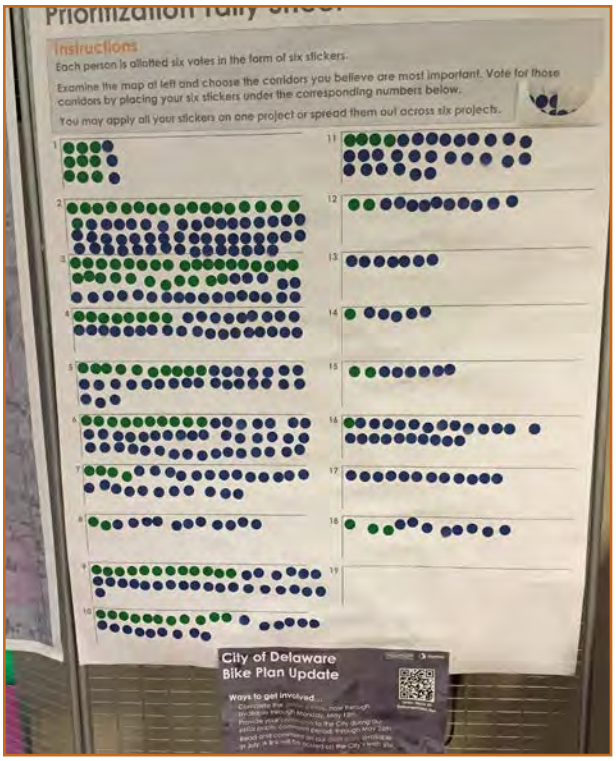


Figure 4-2: *The Library Mobile Input Station, consisting of an exhibit of possible corridors (to the left, out of frame) and a tally sheet, where participants would apply stickers under the number(s) corresponding to the projects they most support.*

Public Comment Periods

A general public comment period was advertised in May, resulting in eight comments emailed to City staff. A second public comment period was advertised in July, providing the public an opportunity to read the draft plan and provide input. Public Comments are provided verbatim in an appendix to this plan.

Five Key Findings

The multi-pronged public engagement approach produced a significant amount of feedback. Here are five key findings derived from public input:

1. About 83% of survey respondents use the path network. Nearly all who indicated they use the path network "agree" or "strongly agree" that the multi-use path network is a desirable amenity.

2. When asked about their vision of biking in Delaware in 2025, the following themes were heard over and over again: safe cross-city bike routes; connectivity to all neighborhoods, community facilities, retail centers, and downtown; and connectivity to nearby cities and parks.

3. When asked about their top priorities, respondents indicated that expanding the path network across the city, and closing gaps in the network were the first and second most important priorities. Many stated they think the path network is disconnected, and that they lacked access to desired destinations.

4. There is support for on-road cycling if improvements are made. About 87 percent of respondents indicated they would feel comfortable if they had dedicated space for biking (e.g. bike lanes). Just 57 percent indicated they would feel comfortable sharing an automobile travel lane on streets where shared-lane signs and markings were installed.

5. The most popular path/project corridors, in order of popularity: Delaware Run/ US-36/SR-37 Corridor, YMCA/Rail Trail Extension, Liberty Street Bike Boulevard,

Figure 4-3: *Meeting participants read vision and value statements, preparing to place stickers under the statements they most agree with.*

Winter Street Bike Boulevard, Bowtown Road/SR-37/Winter Street Connection, and Troy Road/Merrick Blvd/Smith Park. Connector.

Vision

A vision statement is a picture of what one wants to be true at some point in the future. Plan authors formulated a vision statement based on the following input, collected during the public engagement process.

Vision and Value Statements

With respect to vision, attendees at the public meeting were asked a simple question: ***"what do you want to say is true about bicycling in Delaware in 2025?"*** Some sample statements were provided and participants placed dots under the statements they agree with most (Figure 4-3). Statements receiving the most votes include:

1. *"One can safely ride their bike across the city."*
2. *"I can ride from Delaware to nearby cities and parks."*
3. *"All neighborhoods are connected to the network."*

In other words, participants valued *cross-city access/mobility* and, to a lesser extent, *equity of access*.

Priorities

While the internet-based survey did not specifically address the "vision," participants were asked about priorities. At least 150 respondents (of 171) indicated the following five priorities were "important" or "very important," in descending order of priority:

1. *Expanding the system across the city,*
2. *Closing short gaps in the system,*
3. *Connecting the system to downtown,*

4. *(Increasing) path maintenance, and*

5. *Connecting neighborhoods to the network.*

When respondents were asked to provide their top three priorities, two objectives stood out overwhelmingly: *"Expanding the system across the City,"* and *"Closing short gaps in the system."*

From these priorities, the predominant themes are *cross-city access/mobility*, and to a lesser extent *destinations*, *level of service*, and *equity of access*.

Vision Statement

The following vision statement is a summary of the sentiment and themes heard during the planning process:

> "Delaware is ***a bike-friendly city***, with ***a complete bike network*** which allows bicyclists of ***varying age, skill, and ability*** to ***safely travel across the city and beyond***."

1. ***A Bike-Friendly City***
   A place where bike riding is easy and people enjoy riding bikes.

2. ***A Complete Bike Network***
   A continuous and connected network of paths and streets.

3. ***Varying Age, Skill, and Ability***
   Infrastructure which is bikeable for a range of users, age 8 to 80; cyclists both new and experienced; and those with a range of physical abilities.

4. ***Safely Travel . . .***
   Facilities, programming, and policies with a clear emphasis of maximizing the safety of vulnerable users.

5. ***. . . Across the City and Beyond***
   Early efforts should focus on connecting the existing, fragmented system; and neighborhoods and key destinations. Later efforts should focus on long-term aspirations to connect Delaware to nearby places such as cities and parks.

5. Recommendations and Implementation

This chapter provides an implementation strategy to guide the City in implementing the plan. Following the strategy, recommendations are organized into *infrastructure* and *non-infrastructure* items.

Implementation Strategy

The City of Delaware has significant infrastructure needs and the first and foremost priority of this plan is to provide a connected network. This being said, other elements of this plan are critical for increasing system usage, and improving both community health and quality of life; helping to keep users safe; and even finding ways to leverage investments in terms of economic development. To this end, successful implementation will require the assistance of multiple City departments, as well as other partners in the public and private sectors.

Infrastructure

Recommendations to improve infrastructure are shown on the Bike Network Plan, Exhibit 6-1 (page 27), and provided in detail in Table 6-1 (pages 29-34). In the interest of providing context for these recommendations, a review of ***"who are we planning to accommodate"*** and ***"bike-infrastructure facilities"*** is recommended by this planning effort.

"Who Are We Planning to Accommodate?"

The recommendations of this plan are offered assuming the "design user" is represented by the images in Figure 5-1 and the following characteristics:

- ***Groups of 1 to 5 bicyclists***, which affects queuing space at curb ramps and median islands, as well as bike parking.
- ***Users with limited physical ability***, who may travel at 5-15 mph and much slower when riding up hill. Significant grade changes may require an asymmetric, uphill bike lane on busier roadways. Also, all facilities must comply with applicable accessibility standards.
- ***Users with limited skill riding with motorists***, who presumably can ride safely and comfortably with traffic where the posted speed limit is 25 mph (or less), and vehicular volumes are less than approximately 4,000 vehicles per day. Beyond route wayfinding signs, "Share the Road" signage and "sharrow" markings, placed at regular intervals, are helpful for streets with more than 2,000 vehicles per day.
- ***Users who know the rules of the road*** — People who bicycle on streets are assumed to know the *rules of the road* as taught by parents or learned at school or in a driver's education course. *Note: Bicyclists who do not drive, have not participated in Safety Town, or have not otherwise been taught how to safely ride a bicycle may lack this knowledge.*

The design user is not an advanced and athletic cyclist, adept at riding with traffic in challenging conditions and, therefore, needs more accommodation.

Figure 5-1: *Photo example images of the "design user." Varying in number, purpose of trip, as well as age, skill, and ability.*

Bike Infrastructure Toolbox of Treatments

The following pages, 21-24, provide a "toolbox" of infrastructure solutions for the City of Delaware, including: multi-use paths, bicycle boulevards, signed-shared roadways (with and without pavement markings), and bike lanes (resulting from road diets, as well as shoulder widening). Further, three types of crossings are highlighted, as well as recommended practices for bike parking.

Sidewalk Riding

Previous plans have also included sidewalks as an acceptable accommodation; however, this plan does not. Studies have now shown that those who ride on the sidewalk have a greater risk for crashes than those who ride in the street. There are several reasons: crossing motorists, by in large, do not expect fast-moving bicyclists on the sidewalk; and bicyclists, often traveling at a fast pace, sometimes fail to avoid pedestrians and other unexpected hazards while riding on a sidewalk. Even so, sidewalk riding may still be appropriate for slow-moving children or adults and, therefore, it is not recommended to make sidewalk riding illegal.

Given this understanding, the City should accommodate bicyclists within the street where eight- to 10-foot wide sidepaths are

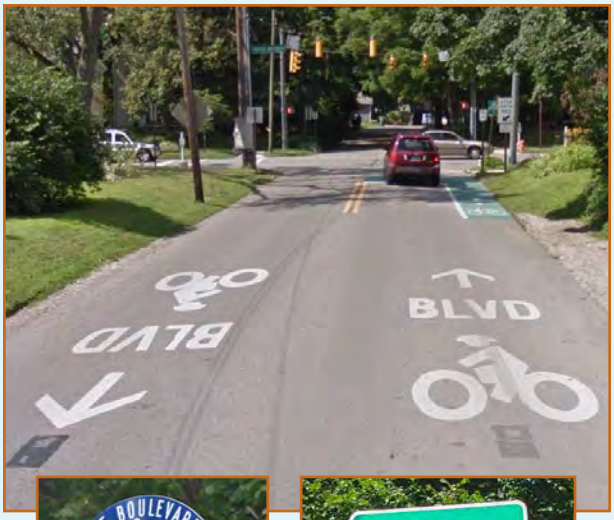
This section continues on page 25 . . .

Bike Infrastructure Toolbox of Treatments

Multi-use Paths

Multi-use Paths are typically 10-foot wide paths, with an asphalt or concrete surface, to accommodate bicyclists as well as those walking, running, or rolling. Paths may be as narrow as eight feet where few users are anticipated, and may be upwards of 16 to 20 feet wide in areas with lots of users. Paths should have a minimum design speed, and include traffic control signs and a marked centerline where user volumes or path geometry (e.g. width and curvature) warrant. Cost per mile for independent alignments: varies from $800,000 a mile to over $3M+ per mile where bridges and right-of-way may be required. Sidepaths built adjacent to and with new roadways may be substantially less expensive due to economies of scale.

Bicycle Boulevards/Neighborhood Greenways



On these routes, bicyclists share the roadway with motorists on streets and driveways. Streets with an average daily traffic of 4,000 vehicles or less and traffic speeds of 25 mph or less may be suitable candidates. Specialized signage and pavement markings are used to define the bike boulevard for bicyclists as well as motorists. These routes often connect multi-use paths or parallel busy arterial streets in order to provide a continuous network in areas where the construction of multi-use paths are impracticable. As needed, these routes can include traffic calming elements to slow automobile traffic, and traffic diversion treatments to restrict through automobile traffic while accommodating through bike traffic. Cost: varies, $35,000 per mile (basic) to $80,000 per mile.

Shared Lane Markings

These markings provide an indication to bicyclists where they should ride within a travel lane, and remind drivers that the travel lane is shared with bicyclists. "Sharrow" pavement markings as seen at right define the condition. If desired, signage (W11-1 with a W16-1P plaque) can accompany the treatment to instruct motorists to "share the road." These facilities are appropriate on streets with posted speeds of 35 mph or less, and traffic volumes of 5,000 vehicles per day, per travel lane. They are not a replacement for bike lanes but may provide benefit on streets where bike lanes are infeasible. They Cost: Approximately $25,000 to $50,000 per mile depending upon the complexity of the project and the density of markings and signs, and other features.

www.pedbikeimages.org / Lyubov Zuyeva

Bike Lanes

Bike lanes are preferential travel lanes, typically five feet wide, which provide dedicated space for bicyclists allowing them to move at their own speed independent of adjacent traffic. Bike lanes are often created by *road diet* projects, where travel lanes are narrowed to their minimum width, and under-utilized parking or travel lanes may be eliminated. The space created can be used for bike lanes, a center turn lane, and even on-street parking. Projects which remove travel lanes can reduce average vehicle speeds, and provide space for median refuge islands. Bike lanes can also be provided on uncurbed roads by paving a four-foot paved shoulder, which will also improve pavement life. Even where two bike lanes are not feasible, an asymmetric configuration providing an uphill bike lane can benefit users. Bike lanes are most appropriate on roads up to 35 mph. Cost: road diet and bike lane projects may cost up to $200,000 per mile, or much less if implemented with a resurfacing projects.

www.pedbikeimages.org / Dan Burden

Divisadero Street, www.fresno.gov

Basic Crossing

Basic marked crosswalks consist of pavement markings or striping, as well as signage. Markings can consist of two bars, or more intense treatments such as the ladder whose "rungs" make the crossing more visible to motorists. Signage should be placed at the crosswalk, consisting of (W11-15) and a downward pointing arrow (W16-7P) at minimum, showing drivers where the crossing is. Advanced crossing signage, and advanced yield signage (R1-5, and yield bar markings) may also be used, particularly if the crosswalk signage is obscured from approaching motorists. Costs range from $5,000 to $15,000.

Rectangular Rapid Flashing Beacons

Rectangular rapid-flashing beacons (RRFBs) are a very effective and low-cost countermeasure to reduce delay and improve safety at a crosswalk. The beacons are activated by push buttons or passive detection and are most effective over short crossing distances (e.g. two to three lane roads, or up to two-lane approaches if used with a median island). Signs and beacons should be placed on both sides of each approach; left side signs should be mounted in a median if present or constructible. Cost: to add a beacon to an existing or new crosswalk may cost $25,000 to $35,000.

Median Refuge Island

Traditional crossings require pedestrians and bicyclists to wait for motorists to yield, or a gap sufficient to cross both directions of traffic. Median refuge islands (shown at right with an optional RRFB beacon) allow users to cross just one direction of traffic at a time. This simplifies the complexity of the crossing, allowing users to focus on threats approaching from one direction instead of two. Further, they shorten the crossing distance—reducing the amount of time users are in the road, and reducing delay on motorists when compared to a signal or pedestrian hybrid beacon. Cost: May range from $25,000 to $60,000 (with RRFB beacon) on a road with a center turn lane, to upwards of $200,000 when roadway widening is required for implementation.

Pedestrian Hybrid and Signalized Crossings

Where there are higher volumes of motorists or pedestrians, or where motorists travel at a high rate of speed, Pedestrian Hybrid Beacons (or HAWK beacon) or Signalized Pedestrian Crossing intersection may be more appropriate. Both treatments legally control the movements of motorists and pedestrians, improving safety and minimizing delay for both users. Both treatments also have specific warrant criteria based on significant vehicular and pedestrian volumes, as well as crossing distances and vehicle speeds. Costs will range from $75,000 to $150,000.

Bike Parking

Encouraging people to bike to destinations requires the provision of secure and attractive parking options. In terms of security, bike parking should be theft deterrent, allowing bikes to be locked up. Secondly, proper racks will support the frame of a bike in two places—reducing the risk of the bike wheel being bent when falling over, or sliding down the rack and being stepped on. The Association of Pedestrian and Bike Professionals (APBP) has guidelines which may be helpful in this regard. Racks provided to the public should meet these standards, reducing the likelihood of damage to Delaware residents.

Bike Corrals

Large capacity bike parking can be provided by constructing bike corrals—the placement of large bike racks on curb extensions or on the street in a parking spot or in areas where sight-distance restrictions prevent automobile parking. Bike corrals can accommodate upwards of 12 bikes in the space of just one automobile parking spot!

Infrastructure (continued)

not feasible, as well as where the number of intersecting driveways would make such sidepaths difficult to safely use.

Bike Network Plan

The Bike Network Plan (Exhibit 6-1, page 27) illustrates a network of on- and off-road facilities which, when completed, will comprise a connected, secondary network allowing bicyclists to travel safely around the city.

Each project is presented with a project number which can be cross-referenced with the projects listed in the Infrastructure Recommendation tables on pages 29 through 39. Each project includes a name which describes the project's limits and the intended facility, as well as the project's rank, potential sponsors or partners, its approximate cost, and potential sources of grant funding. Projects "committed" for construction in the short term are not included.

Two projects address short-term ***Safety*** needs on the existing network. Given their importance and relatively small cost, these projects are presented separately in Table 6-1s, and have yellow colored labels on Exhibit 6-1. These projects should be addressed over the next five years.

The remaining infrastructure projects are ***Corridor Projects*** which create cross-city connectivity, exceptional recreational opportunities, as well as contribute to economic development by providing new or improved connectivity along independent alignments and roadways. These projects may include off-road multi-use paths, on-road treatments[1] such as bike lanes and bicycle boulevards, or some combination of the two in the same project. Given their comparably higher cost, the corridor projects are ranked based on the sum of weighted scores applied under 12 factors. In Table 6-1a, the projects are presented in order of project rank. Table 6-1b presents the same projects ordered by their project number.

Over time, opportunities to fund and implement projects may change and, as such, the City may make revisions to the priority of projects in this plan. Similarly, new corridors and projects may present themselves as viable. City staff is encouraged to consider these opportunities with respect to the intent of the plan, as well as the Bike Network established herein. As needed, the plan should be revised.

Non Infrastructure

Non-infrastructure recommendations, addressing the City's standards, policies, and programs, are provided in Table 6-2, on pages 40 through 46. These are organized by their respective Five E categories: Engineering, Education, Encouragement, Enforcement, and Evaluation. Recommendations include a project number, name and description, priority, implementation time frame, listed sponsor or partners, approximate cost, and potential funding sources.

1: On-road bicycle facilities can be implemented as standalone projects but are most cost-effectively completed in conjunction with resurfacing projects. Implementation several years in advance also allows agencies to "try it before you buy it." On-road bike facility recommendations are offered at a planning level. Often on-road facilities can be provided by narrowing lanes or better defining the traveled way; however, a capacity analysis should be completed when travel lanes are removed to ensure impacts to motor vehicle traffic is acceptable with respect to reasonable Level of Service (LOS) standards.

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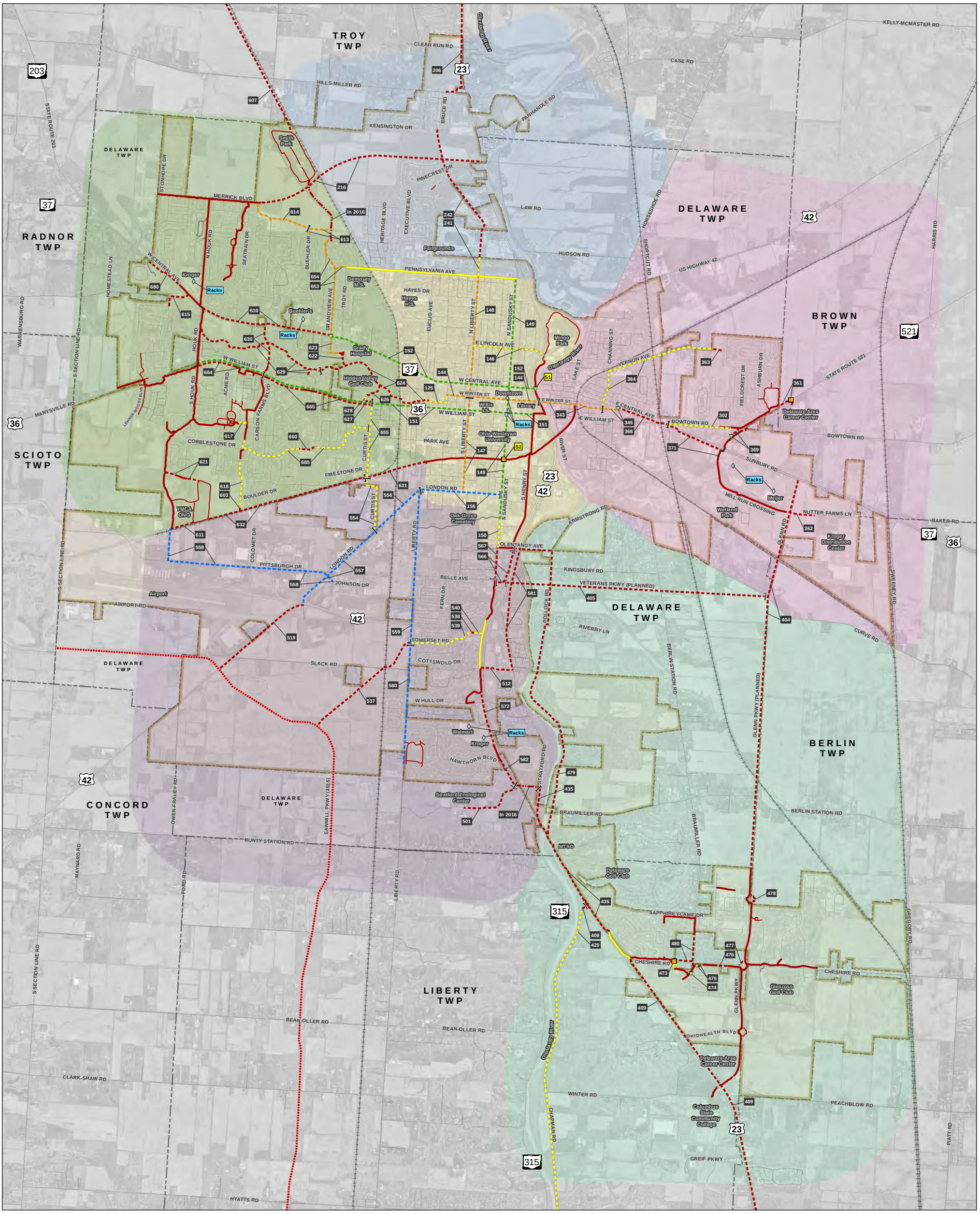
Exhibit 6-1

Bike Network Plan

City of Delaware Bike Plan Update



Legend

Type of Facility

Existing	Committed	Proposed	By Others	
				Multi-use Path
				Bike Boulevard
				Signed, Shared Route
				Bike Lanes, Paved Shoulder
				Road Diet with Bike Lanes

Spot Improvements

- Basic Crossing
- Enhanced Crossing
- Median Crossing
- Parking Corrals

Project Identification

- 101 Project Number

Functional Classification

- Route*
- Local*
- Private**

*Route and Local improvements vary in color and dash pattern based on type of facility.

**Private paths are signed as no trespassing, or are not open 24-hours a day.

Project Numbering Zones

- 100
- 200
- 300
- 400
- 500
- 600

Other Modes

- Roadways
- Railroad

Jurisdiction

- City of Delaware
- Township Boundary

N

0 0.5 1 Mile

Full size: 34" x 22" — 1 inch = 1/3 miles
Half size: 17" x 11" — 1 inch = 2/3 miles

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Infrastructure Recommendations: Tables 6-1s, 6-1a, and 6-1b

The following tables detail recommended infrastructure projects. Table 6-1s details safety projects. Table 6-1a presents projects ordered by their ranking. Table 6-1b presents the same projects as 6-1a but orders them by the project number.

Grant Funding programs recommended for projects are abreviated as follows: STP - Surface Transportation Program (federal funds, MORPC), SRTS - Safe Routes to School (federal funds, ODOT), RTP - Recreational Trails Program (federal funds, ODNR), COTF - Clean Ohio Trail Fund (state funds, ODNR), Safety - Highway Safety or other discretionary safety funding (ODOT or MORPC), ODOT Urban Paving. Projects designated with "ATP" are located along a MORPC Active Transportation Corridor. Projects designated with "SBR" are on ODOT's draft State Bike Route system.

Detailed Descriptions are provided for safety projects, as well as those ranked 1 to 20 in the appendix C2.

Project Costs were developed to a planning level. Costs for projects ranked 21 and lower were not estimated. The scale of cost anticipated for projects ranked 21 and higher is as follows:
$ ≈ $25k-50k, $ $ ≈ $50k-100k, $ $ $ ≈ $100k-250k, $ $ $ $ ≈ $250k-750k, $ $ $ $ $ ≈ $750-1M+

Table 6-1s: Safety Projects

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
S1	Mingo Path / SR-37 Crossing	1	CIP, ODOT	$80,000	STP, Safety
S2	Sandusky Street / Springfield Branch Crossing Upgrades	2	CIP	$70,000	Safety

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
665	W William Street (Carson Farms Boulevard to Curtis Street): Bike Lanes with Multi-Use Path.	1	City, ODOT, Developer Fees	$1.43M	n/a
664	W William Street (Houk to Carson) Road Diet w/ Bike Lanes & Parallel Multi-Use Path	2	City, ODOT, Developer Fees	$550,000	n/a
680	W Central Avenue (Kroger to City Limits) Multi-Use Path	3	City, ODOT	$470,000	STP, COTF
371	Sunbury Road (The Point to Mill Run Crossing) Multi-Use Path	4	City, ODOT	$1.07M	STP, TA, COTF, Safety, ATP
125	Blue Limestone to Winter Street Shared Roadway	5	City	$23,000	n/a

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
343	E Winter Street (Library to Channing) Bike Boulevard	6	City, ODOT	$54,000	STP, TA, SBR, ATP
151	W William Street (Curtis to Downtown) Road Diet with Bike Lanes	7	City, ODOT	$515,600	ODOT Urban Paving
368	E Central Avenue (E Winter Street to the Point) Multi-Use Path	8	City, ODOT	$736,500	STP, TA, COTF, Safety, SBR, ATP
144	Winter Street (Elizabeth St to Library) Bike Boulevard	9	City, ODOT	$47,000	STP, TA, SBR
345	E Winter Street (Channing to E Central) Bike Boulevard and Enhanced Crossing.	10	City, ODOT	$45,000	STP, TA, Safety, SBR, ATP
572	US-23 (Kroger to North of Hull Drive) Multi-Use Path	11	City, ODOT	$1.35M	STP, TA, COTF, Safety, ATP
559	Liberty Road (London to Somerset) Bike Lanes / Paved Shoulder	12	City, ODOT	$407,000	STP, TA, SBR
149	Sandusky Street (Oak Grove Cemetery to Pennsylvania Avenue) Road Diet w/ Bike Lanes	13	City	$403,000	n/a
566	S Henry Street to S Sandusky Street Connector along US-23 Multi-Use Path	14	City, ODOT	$710,700	STP, TA, COTF, ATP
629	Delaware Run (Houk Road to West of Hidden Valley Golf Club) Multi-Use Path	15	City	$1.67M	COTF, RTP
435	US-23 (Crystal Petal Drive to Stratford Road) and Stratford Road (US-23 to Meeker Way) Multi-Use Path	16	City, County, ODOT	$3.03M	STP, TA, COTF, Safety
582	US-23 (Meeker Way to Hawthorne Boulevard) Multi-Use Path	17	City, ODOT, Developer	$654,000	STP, TA, COTF, ATP
624	Delaware Run (West of Hidden Valley Golf Club to Blue Limestone Park) Multi-Use Path	18	City	$1.88M	COTF, RTP
567	S Sandusky Street (Belle Avenue to Olentangy Avenue) Multi-Use Path	19	City, ODOT	$828,750	STP, TA, COTF, ATP
610	W Central Avenue (Houk Road to Grandview Avenue) Multi-Use Path	20	City	$2.08M	STP, TA, COTF, Safety, SBR, ATP
362	Nutter Farms Lane Extension (Glenn Road to Kroger D.C.) Multi-Use Path	21	City	$ $	n/a
631	Springfield Branch Extension (Curtis Street to David Street) Multi-Use Path	22	City	$ $ $ $ $	COTF, RTP

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
152	Central Avenue (Grandview Avenue to Mingo Trail) Road Diet w/ Bike Lanes	23	City, ODOT	$ $ $	STP, ODOT Urban Paving
473	Cheshire Road (Watertower Access Road) Enhanced Road Crossing	24	City	$	n/a
369	SR-521 (Biltmore Drive to Bowtown Road) Multi-Use Path and Median Crossing.	25	City, ODOT	$ $	STP, TA, Safety
626	Delaware Run Connection to W William Street (access from Golf Parking Lot) Multi-Use Path	26	City	$ $	COTF, RTP
632	Springfield Branch Extension (YMCA/ONG to Curtis Street) Multi-Use Path	27	City	$ $ $	COTF, RTP
408	US-23 to Chapman Multi-Use Path Connector	28	City, County, Liberty Twp, ODOT	$ $ $	STP, TA, Safety
623	Grandview Avenue to Delaware Run Connector Bike Boulevard	29	City	$	COTF, RTP
302	Bowtown Road Shared Street	30	City, ODOT	$	STP, TA, SBR
474	Cheshire Road and Indigo Blue Street Median Crossing	31	City	$	n/a
475	Cheshire Road and Braumiller Road Median Crossing	32	City	$	n/a
653	Grandview Avenue (W Central Avenue to Pennsylvania Avenue) Bike Boulevard	33	City	$	n/a
622	Grandview Ave to Delaware Run Connector Multi-Use Path	34	City	$ $ $	COTF, RTP
628	Delaware Run Connection to W William Street Shared Roadway	35	City	$	COTF, RTP
627	Delaware Run Connection to W William Street Multi-Use Path and Crossing	36	City	$	COTF, RTP
539	Liberty to US-23 Connector: Somerset Road Shared Roadway	37	City	$	n/a
540	Liberty to US-23 Connector: Sulu Road Shared Roadway	38	City	$	n/a
150	S Sandusky Street (Olentangy Avenue to Oak Grove Cemetery Driveway) Shared Roadway	39	City	$	n/a
654	Hickory Lane (Grandview Avenue to Troy Road) Bike Boulevard	40	City	$	n/a
156	London Road (S Sandusky Street to Liberty Road) Bike Lanes / Paved Shoulders	41	City	$ $	STP, TA

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
363	Vernon Avenue to Kensington Green Multi-Use Path	42	City, Developer	$	n/a
611	Springfield Branch (S Houk Road to YMCA/ONG Loop) Multi-Use Path	43	City	$ $	COTF, RTP
147	Liberty Street (London Road to W Winter Street) Bike Boulevard	44	City, ODOT	$	STP, TA, SBR
477	Cheshire Road and Glenn Parkway Roundabout Multi-Use Path Gap	45	City	$	n/a
537	Sawmill Road to Liberty Connector Multi-Use Path (Alignment TBD)	46	City, County, Developer	$ $ $	n/a
558	Pittsburgh Drive (Houk Road to London Road) Bike Lanes / Paved Shoulders	47	City	$ $	n/a
409	US-23 (South of Cheshire Road) Multi-Use Path	48	City, County, Liberty Twp, ODOT	$ $ $ $	STP, TA, Safety
476	Cheshire Road (Near Vet Clinic) Multi-Use Path	49	City	$	n/a
557	London Road (US 42 to Curtis Street) Bike Lanes / Paved Shoulders	50	City	$ $	n/a
556	London Road (Curtis Street to Liberty Road) Bike Lanes / Paved Shoulders	51	City	$ $	n/a
148	Liberty Street (Pennsylvania Avenue to W Winter Street) Bike Boulevard	52	City	$	n/a
420	Chapman Road Shared Roadway	53	County, Liberty Township	$	n/a
613	Buehler Drive to Troy Road Bike Boulevard	54	Developer, City	$	n/a
614	Buehler Drive to Merrick Boulevard Bike Boulevard	55	Developer, City	$	n/a
621	Boulder Drive (S Houk Road to YMCA/ONG Loop) Multi-Use Path	56	Developer, City	$ $	n/a
630	Valleyside Drive (Future Alignment: W William Street to W Central Avenue) Multi-Use Path	57	City	$ $ $	n/a
538	Liberty to US-23 Connector: Somerset Road Multi-Use Path	58	City	$ $	n/a
216	Merrick Boulevard (Future extension: Cambridge Road to US-23) Multi-Use Path	59	Developer, City	$ $ $ $ $	n/a
560	Liberty Road (Hawthorn Boulevard to Somerset Road) Bike Lanes / Paved Shoulders	60	City, ODOT	$ $	n/a

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
478	Glenn Parkway and Tree Line Way Roundabout Multi-Use Path Gap	61	City	$	n/a
603	Carson Farms Connection to Springfield Branch Extension Multi-Use Path	62	Developer, City	$	n/a
241	Liberty Road (Pennsylvania Avenue to Fairgrounds Path) Shared Roadway	63	City	$	n/a
384	Channing Street and Vernon Avenue Shared Roadway	64	City	$	n/a
242	N Liberty Street to Bruce Road (Through Fairgrounds) Multi-Use Path	65	City, County, Developer	$ $ $	n/a
404	Glenn Parkway (Future Alignment: Tree Line Way to Sunbury Road) Multi-Use Path	66	City, ODOT, Development	$ $ $ $ $	n/a
405	Veterans Parkway (Future Alignment: US-23 to Glenn Parkway) Multi-Use Path	67	City, ODOT, Development	$ $ $ $ $	n/a
660	Cobblestone Drive to Penick Avenue Multi-Use Path	68	City	$ $	n/a
685	Cobblestone Drive and Penick Avenue (Carson Farms Boulevard to Curtis Street) Shared Roadway	69	City	$	n/a
581	Stratford Road (Olentangy Avenue to Cottswold Drive Extension) Multi-Use Path	70	City	$ $ $ $	n/a
480	Braumiller and Cheshire Roads Multi-Use Path	71	City, Developer Fees	$ $ $	n/a
519	London Road (US-42 to Sawmill Parkway) Multi-Use Path	72	City, ODOT, Developer	$ $ $	n/a
554	Curtis Street (London Road to Firestone Drive) Shared Roadway	73	City	$	n/a
655	Curtis Street (Firestone Drive to W William Street) Shared Roadway	74	City	$	n/a
146	Lincoln Avenue (Liberty Street to Mingo Park and Pool) Shared Roadway	75	City	$	n/a
617	Carson Farms Park to Carson Farms Boulevard Shared Roadway	76	City	$	n/a
618	Carson Farms Connection to Springfield Branch Extension Shared Roadway	77	City, Developer	$	n/a
479	Pollack Road Multi-Use Path	78	City, Developer	$ $ $ $ $	n/a
512	Cottswold Drive Extension (US-23 to Stratford Road) Multi-Use Path	79	City	$ $ $	n/a

Table 6-1a: Infrastructure Improvements, Ordered by Rank

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
501	Stratford Ecological Center Connection to US-23 Multi-Use Path	80	Stratford Ecological Center	$ $ $	n/a
206	US-23 to Delaware Lake State Park Multi-Use Path	81	City, County, ODOT, ODNR	$ $ $ $ $	STP, TA, COTF, RTP
615	Warrensburg Road (Grand Circuit Boulevard to W Central Avenue) Multi-Use Path	82	City	$ $ $	n/a
361	Delaware Area Career Center Multi-Use Path / Enhanced Crossing	83	City	$ $	n/a
686	Smith Park to Galant Woods Rails to Trails Multi-Use Path	84	City, County	$ $ $ $ $	COTF, RTP

Grant Funding programs recommended for projects are abreviated as follows: STP - Surface Transportation Program (federal funds, MORPC), SRTS - Safe Routes to School (federal funds, ODOT), RTP - Recreational Trails Program (federal funds, ODNR), COTF - Clean Ohio Trail Fund (state funds, ODNR), Safety - Highway Safety or other discretionary safety funding (ODOT or MORPC), ODOT Urban Paving. Projects designated with "ATP" are located along a MORPC Active Transportation Corridor. Projects designated with "SBR" are on ODOT's draft State Bike Route system.

Detailed Descriptions are provided for safety projects, as well as those ranked 1 to 20 in the appendix C2.

Project Costs were developed to a planning level. Costs for projects ranked 21 and lower were not estimated. The scale of cost anticipated for projects ranked 21 and higher is as follows:
$ ≈ $25k-50k, $ $ ≈ $50k-100k, $ $ $ ≈ $100k-250k, $ $ $ $ ≈ $250k-750k, $ $ $ $ $ ≈ $750-1M+

Table 6-1b: Infrastructure Improvements, Ordered by Project Number

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
125	Blue Limestone to Winter Street Shared Roadway	5	City	$23,000	n/a
144	Winter Street (Elizabeth St to Library) Bike Boulevard	9	City, ODOT	$47,000	STP, TA, SBR
146	Lincoln Avenue (Liberty Street to Mingo Park and Pool) Shared Roadway	75	City	$	n/a
147	Liberty Street (London Road to W Winter Street) Bike Boulevard	44	City, ODOT	$	STP, TA, SBR
148	Liberty Street (Pennsylvania Avenue to W Winter Street) Bike Boulevard	52	City	$	n/a
149	Sandusky Street (Oak Grove Cemetery to Pennsylvania Avenue) Road Diet w/ Bike Lanes	13	City	$403,000	n/a
150	S Sandusky Street (Olentangy Avenue to Oak Grove Cemetery Driveway) Shared Roadway	39	City	$	n/a
151	W William Street (Curtis to Downtown) Road Diet with Bike Lanes	7	City, ODOT	$515,600	ODOT Urban Paving
152	Central Avenue (Grandview Avenue to Mingo Trail) Road Diet w/ Bike Lanes	23	City, ODOT	$ $ $	STP, ODOT Urban Paving
156	London Road (S Sandusky Street to Liberty Road) Bike Lanes / Paved Shoulders	41	City	$ $	STP, TA
206	US-23 to Delaware Lake State Park Multi-Use Path	81	City, County, ODOT, ODNR	$ $ $ $ $	STP, TA, COTF, RTP
216	Merrick Boulevard (Future extension: Cambridge Road to US-23) Multi-Use Path	59	Developer, City	$ $ $ $ $	n/a
241	Liberty Road (Pennsylvania Avenue to Fairgrounds Path) Shared Roadway	63	City	$	n/a

Table 6-1b: Infrastructure Improvements, Ordered by Project Number

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
242	N Liberty Street to Bruce Road (Through Fairgrounds) Multi-Use Path	65	City, County, Developer	$ $ $	n/a
302	Bowtown Road Shared Street	30	City, ODOT	$	STP, TA, SBR
343	E Winter Street (Library to Channing) Bike Boulevard	6	City, ODOT	$54,000	STP, TA, SBR, ATP
345	E Winter Street (Channing to E Central) Bike Boulevard and Enhanced Crossing.	10	City, ODOT	$45,000	STP, TA, Safety, SBR, ATP
361	Delaware Area Career Center Multi-Use Path / Enhanced Crossing	83	City	$ $	n/a
362	Nutter Farms Lane Extension (Glenn Road to Kroger D.C.) Multi-Use Path	21	City	$ $	n/a
363	Vernon Avenue to Kensington Green Multi-Use Path	42	City, Developer	$	n/a
368	E Central Avenue (E Winter Street to the Point) Multi-Use Path	8	City, ODOT	$736,500	STP, TA, COTF, Safety, SBR, ATP
369	SR-521 (Biltmore Drive to Bowtown Road) Multi-Use Path and Median Crossing.	25	City, ODOT	$ $	STP, TA, Safety
371	Sunbury Road (The Point to Mill Run Crossing) Multi-Use Path	4	City, ODOT	$1.07M	STP, TA, COTF, Safety, ATP
384	Channing Street and Vernon Avenue Shared Roadway	64	City	$	n/a
404	Glenn Parkway (Future Alignment: Tree Line Way to Sunbury Road) Multi-Use Path	66	City, ODOT, Development	$ $ $ $ $	n/a
405	Veterans Parkway (Future Alignment: US-23 to Glenn Parkway) Multi-Use Path	67	City, ODOT, Development	$ $ $ $ $	n/a
408	US-23 to Chapman Multi-Use Path Connector	28	City, County, Liberty Twp, ODOT	$ $ $	STP, TA, Safety
409	US-23 (South of Cheshire Road) Multi-Use Path	48	City, County, Liberty Twp, ODOT	$ $ $ $	STP, TA, Safety
420	Chapman Road Shared Roadway	53	County, Liberty Township	$	n/a
435	US-23 (Crystal Petal Drive to Stratford Road) and Stratford Road (US-23 to Meeker Way) Multi-Use Path	16	City, County, ODOT	$3.03M	STP, TA, COTF, Safety

Table 6-1b: Infrastructure Improvements, Ordered by Project Number

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
473	Cheshire Road (Watertower Access Road) Enhanced Road Crossing	24	City	$	n/a
474	Cheshire Road and Indigo Blue Street Median Crossing	31	City	$	n/a
475	Cheshire Road and Braumiller Road Median Crossing	32	City	$	n/a
476	Cheshire Road (Near Vet Clinic) Multi-Use Path	49	City	$	n/a
477	Cheshire Road and Glenn Parkway Roundabout Multi-Use Path Gap	45	City	$	n/a
478	Glenn Parkway and Tree Line Way Roundabout Multi-Use Path Gap	61	City	$	n/a
479	Pollack Road Multi-Use Path	78	City, Developer	$ $ $ $ $	n/a
480	Braumiller and Cheshire Roads Multi-Use Path	71	City, Developer Fees	$ $ $	n/a
501	Stratford Ecological Center Connection to US-23 Multi-Use Path	80	Stratford Ecological Center	$ $ $	n/a
512	Cottswold Drive Extension (US-23 to Stratford Road) Multi-Use Path	79	City	$ $ $	n/a
519	London Road (US-42 to Sawmill Parkway) Multi-Use Path	72	City, ODOT, Developer	$ $ $	n/a
537	Sawmill Road to Liberty Connector Multi-Use Path (Alignment TBD)	46	City, County, Developer	$ $ $	n/a
538	Liberty to US-23 Connector: Somerset Road Multi-Use Path	58	City	$ $	n/a
539	Liberty to US-23 Connector: Somerset Road Shared Roadway	37	City	$	n/a
540	Liberty to US-23 Connector: Sulu Road Shared Roadway	38	City	$	n/a
554	Curtis Street (London Road to Firestone Drive) Shared Roadway	73	City	$	n/a
556	London Road (Curtis Street to Liberty Road) Bike Lanes / Paved Shoulders	51	City	$ $	n/a
557	London Road (US 42 to Curtis Street) Bike Lanes / Paved Shoulders	50	City	$ $	n/a
558	Pittsburgh Drive (Houk Road to London Road) Bike Lanes / Paved Shoulders	47	City	$ $	n/a

Table 6-1b: Infrastructure Improvements, Ordered by Project Number

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
559	Liberty Road (London to Somerset) Bike Lanes / Paved Shoulder	12	City, ODOT	$407,000	STP, TA, SBR
560	Liberty Road (Hawthorn Boulevard to Somerset Road) Bike Lanes / Paved Shoulders	60	City, ODOT	$ $	n/a
566	S Henry Street to S Sandusky Street Connector along US-23 Multi-Use Path	14	City, ODOT	$710,700	STP, TA, COTF, ATP
567	S Sandusky Street (Belle Avenue to Olentangy Avenue) Multi-Use Path	19	City, ODOT	$828,750	STP, TA, COTF, ATP
572	US-23 (Kroger to North of Hull Drive) Multi-Use Path	11	City, ODOT	$1.35M	STP, TA, COTF, Safety, ATP
581	Stratford Road (Olentangy Avenue to Cottswold Drive Extension) Multi-Use Path	70	City	$ $ $ $	n/a
582	US-23 (Meeker Way to Hawthorne Boulevard) Multi-Use Path	17	City, ODOT, Developer	$654,000	STP, TA, COTF, ATP
603	Carson Farms Connection to Springfield Branch Extension Multi-Use Path	62	Developer, City	$	n/a
610	W Central Avenue (Houk Road to Grandview Avenue) Multi-Use Path	20	City	$2.08M	STP, TA, COTF, Safety, SBR, ATP
611	Springfield Branch (S Houk Road to YMCA/ONG Loop) Multi-Use Path	43	City	$ $	COTF, RTP
613	Buehler Drive to Troy Road Bike Boulevard	54	Developer, City	$	n/a
614	Buehler Drive to Merrick Boulevard Bike Boulevard	55	Developer, City	$	n/a
615	Warrensburg Road (Grand Circuit Boulevard to W Central Avenue) Multi-Use Path	82	City	$ $ $	n/a
617	Carson Farms Park to Carson Farms Boulevard Shared Roadway	76	City	$	n/a
618	Carson Farms Connection to Springfield Branch Extension Shared Roadway	77	City, Developer	$	n/a
621	Boulder Drive (S Houk Road to YMCA/ONG Loop) Multi-Use Path	56	Developer, City	$ $	n/a
622	Grandview Ave to Delaware Run Connector Multi-Use Path	34	City	$ $ $	COTF, RTP
623	Grandview Avenue to Delaware Run Connector Bike Boulevard	29	City	$	COTF, RTP
624	Delaware Run (West of Hidden Valley Golf Club to Blue Limestone Park) Multi-Use Path	18	City	$1.88M	COTF, RTP

Table 6-1b: Infrastructure Improvements, Ordered by Project Number

Proj. No.	Project Name	Rank	Sponsors, Partners	Cost (2016-$)	Grant Funding
626	Delaware Run Connection to W William Street (access from Golf Parking Lot) Multi-Use Path	26	City	$ $	COTF, RTP
627	Delaware Run Connection to W William Street Multi-Use Path and Crossing	36	City	$	COTF, RTP
628	Delaware Run Connection to W William Street Shared Roadway	35	City	$	COTF, RTP
629	Delaware Run (Houk Road to West of Hidden Valley Golf Club) Multi-Use Path	15	City	$1.67M	COTF, RTP
630	Valleyside Drive (Future Alignment: W William Street to W Central Avenue) Multi-Use Path	57	City	$ $ $	n/a
631	Springfield Branch Extension (Curtis Street to David Street) Multi-Use Path	22	City	$ $ $ $ $	COTF, RTP
632	Springfield Branch Extension (YMCA/ONG to Curtis Street) Multi-Use Path	27	City	$ $ $	COTF, RTP
653	Grandview Avenue (W Central Avenue to Pennsylvania Avenue) Bike Boulevard	33	City	$	n/a
654	Hickory Lane (Grandview Avenue to Troy Road) Bike Boulevard	40	City	$	n/a
655	Curtis Street (Firestone Drive to W William Street) Shared Roadway	74	City	$	n/a
660	Cobblestone Drive to Penick Avenue Multi-Use Path	68	City	$ $	n/a
664	W William Street (Houk to Carson) Road Diet w/ Bike Lanes & Parallel Multi-Use Path	2	City, ODOT, Developer Fees	$550,000	n/a
665	W William Street (Carson Farms Boulevard to Curtis Street): Bike Lanes with Multi-Use Path.	1	City, ODOT, Developer Fees	$1.43M	n/a
680	W Central Avenue (Kroger to City Limits) Multi-Use Path	3	City, ODOT	$470,000	STP, COTF
685	Cobblestone Drive and Penick Avenue (Carson Farms Boulevard to Curtis Street) Shared Roadway	69	City	$	n/a
686	Smith Park to Galant Woods Rails to Trails Multi-Use Path	84	City, County	$ $ $ $ $	COTF, RTP

Non-Infrastructure Recommendations: Table 6-2

The following table details recommended non-infrastructure projects, programs, and policies, categorized by the 5-Es: Engineering, Education, Encouragement, Enforcement, and Evaluation.

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
Engineering Recommendations					
ENG 1	**Adopt a Complete Streets Policy** Such a policy would require accommodation of all users anticipated within the street corridor.	High / Short-term	City	Staff Time	N/A
ENG 2	**Engineering Training or Resources** The City should purchase applicable design manuals, and have one or more engineering staff focus continuing education on bike infrastructure.	High / Short-term	City	$500, Staff time	N/A
ENG 3	**Create a Bike Parking Standard** Bike parking, provided to the public, should comply with a City standard drawing ensuring racks provided to the public comply with APBP criteria, minimizing the risk of damage to parked bikes. Racks should support the frame of parked bikes at two points of contact, allow the bike to be securely attached to the rack, and be sufficiently spaced from other racks, walls, and obstructions to allow their use.	High / Short-term	City	Staff Time	N/A
ENG 4	**Revise Bike Parking Requirements** Parking regulations should be revised to require high-capacity bike racks at all new and existing retail centers, as well as other areas and uses anticipated to generate demand for bicyclist trips. Efforts should be made to improve access at existing developments and destinations.	High / Short-term	City	Staff Time	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
ENG 5	**Revise Standard Drawings for Multi-use Paths** Revise City standard drawings. Remove all reference to bollards in the standard drawings. Increase the intermediate course of asphalt from 1-1/2 inches to 2-1/2 inches, and add a note to apply a herbicide and compact the sub-base prior to constructing the path. Additional standard drawings should be provided to show concrete walk paths, detailing path thickness and the use of saw-cut joints (instead of tooled joints). Should existing sidewalks in good repair be widened, an additional detail may be provided for this activity, showing how the path is to be constructed.	High / Short-term	City	Staff Time	N/A
ENG 6	**Place High-Capacity Bike Parking in Downtown and at Retail Centers** Work with key stakeholders to allow for the installation of high-capacity bike racks at retail centers, public facilities, and throughout downtown. Racks at retail centers may be placed on concrete walk, or occupy one to two parking spaces near store entrances. Racks downtown may be placed in the parking lane in areas where sight-distance prohibit automobile parking. Pylons and markings should be used to reduce the risk of racks being hit by motorists or snow plow operators.	High / Medium-term	City	$4,000 per location	N/A
ENG 7	**Develop a Path Maintenance Plan and Program** The City should develop a Path Maintenance Plan, addressing preventative maintenance such as seal coating, mitigation of standing water on paths, spot repairs due to root intrusion; regular maintenance such as vegetation clearance, snow plowing; and larger maintenance activities such as resurfacing and path reconstruction.	High / Short-term	City	Staff Time	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
ENG 8	**Establish a Path Maintenance Budget** A larger amount of funding should be set aside for path maintenance activities, and private path owners should be notified of path deficiencies and their responsibility to correct them. Annual maintenance needs estimated at $80,000 per year to implement a preventative maintenance program (general fund), and address defered maintenance needs (capital improvement plan). As a greater share of paths reach an age where resurfacing is needed, this budget may need to increase to $100,000 to $120,000 per year by 2020.	High / Short-term	City, HOAs (where appli-cable)	$80,000 to $120,000 per year	CIP and/or General Fund
Education Recommendations					
EDU 1	**Safe Biking Education Program for Adults, Children, and Families** Work with the YMCA to offer 2 hour introductory bike skills and safe riding courses for adults, children, and families. The internet-based survey indicated there was some demand for such a program. Yay Bikes!, a Columbus-based organization, has experience leading similar events in the region and would be a good resource to learn more.	High / Medium-term	City, YMCA	$100 to $200 per course	User Fees
EDU 2	**Safe Biking Education Program for Students** Encourage Delaware City Schools to incorporate bike safety and skills curriculum into PE courses so all students learn how to ride a bike safely as well as the rules of the road. This may be most appropriate for students grade 5 through 12.	High / Medium-term	City, Delaware City Schools	Staff Time	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
EDU 3	**Share the Road Campaign** In conjunction with the metropolitan region, participate in the next "Share the Road" campaign. These programs typically consist of radio and TV spots, social media, and hand-outs aimed at encouraging motorists and bicyclists to safely share the road. Delaware may supplement this outreach with, for example, portable changeable message signs and distribution of informational materials at community events and facilities, as well as with utility bills. Contact MORPC for more information.	Medium / Medium-term	City, MORPC	$5,000 to $8,000	N/A
Encouragement Recommendations					
ENC 1	**Bike Network map** Revise the City's street map to include bike facilities and make this available to the public via a PDF on the website, and through printing the map. If desired, work with businesses to place advertising on the maps to help offset the cost of printing them.	High / Medium-term	City, Local Businesses	Staff Time, $3,000 to $5,000.	N/A
ENC 2	**Bike Network Wayfinding** Name key routes, and then post signage at cross streets and path intersections, as well as wayfinding signage help bicyclists get around the City.	High / Medium-term	City	$25,000	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
ENC 3	**Celebrate Bike Month by Working with Partners to Host a Bike Event** Host a bike-specific event on at least an annual basis in celebration of National Bike Month (May). The City may seek to partner with organizations to host the event. Such events may be helpful from a economic development and branding perspective. Example events include: - An *Open Streets* event where a main street is blocked to traffic so bicyclists (and pedestrians) can have the street to themselves. Such events usually include street vendors or food trucks and are popular with both families and young adults. Downtown Delaware would be a good place for such an event. - A *bike race* where individuals ride their bikes on a street course, competing against other cyclists. Such events are popular and draw cyclists from around the region. - A *group ride* where individuals and families may ride together around town, to downtown, or to another city. Such events are popular and draw cyclists from around the region.	High / Short-term and then annually	City, and possibly: Sustain-able Delaware, Friends of the Trails, etc.	Staff Time, $15,000 to $25,000 per event.	N/A
ENC 4	**Bike Accommodation at Festivals and Large Events** The City or private partners may provide a bike valet for large events. Several volunteers will take your bike and store it on portable racks in a monitored bike corral, reducing risk of theft or damage. Pedal Instead is a comparable service in Columbus and provides its service for a very modest charge (if not free), generating income with advertising banners around their bike corrals. Event permits may require sponsors to work with organizations to provide a valet, or at least portable racks.	High / Short-term and then annually	City, Pedal Instead	Little to no cost	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
ENC 5	**Bike Tourism and Promotion** The City should work with the Chamber of Commerce to think of ways investments in the bike network can leverage economic development in terms of tourism, a more attractive place to operate a business, and the like. Support from the chamber may help encourage area businesses to consider purchasing and constructing bike racks.	Medium / Medium- to Long-term	City, Chamber of Commerce	Staff Time	N/A
Enforcement Recommendations					
ENF 1	**Repeal Obsolete Bike Ordinances** The City should pass an ordinance to repeal the following ordinances requirements for bicyclists to be licensed by the police department (373.13-14), register their bicycles (373.15) and report changes in appearance of their bicycles (373.19).	High / Short-term	City	Staff Time	N/A
ENF 2	**Implement a Bicycle Ticket Diversion Program** - Bicyclists who are riding at night without head- or tail-lights may be provided a set of lights for their bicycle by law enforcement. - Bicyclists who ride against traffic or ride erratically may be instructed to take a bike skills and safety training course. - Motorists who give insufficient passing room or fail to yield at crossings may be required to take a similar course instead or in addition to paying a fine.	Medium / Medium- to Long-term	City	Staff Time, Up to $2,000 annually	N/A
ENF 3	**Sponsor Helmet and Lights Programs to Encourage Safe Riding** The City may choose to give bike helmets and head- and tail-lights to low-income bicyclists, and make similar equipment available at cost to higher income bicyclists. Police and others may help young and old bicyclists with helmet-fitting events, or in installing lights on bicycles. These events can also be sponsored or run by local bike shops or bike organizations. They may also occur during bike events or other community events.	Medium / Medium- to Long-term	City	Staff Time, Up to $2,000 annually	N/A

Table 6-2: Non-Infrastructure Recommendations

Proj. No.	Recommendation Name and Description	Priority / Timeframe	Sponsors, Partners	Cost (2016-$)	Funding Sources
ENF 4	**Bike Crash Report Tracking and Reviews** Area law enforcement groups, including City policy, State Highway Patrol, and Sheriff's Office are encouraged to submit crash reports for bike crashes occurring in the City to the Engineering Department. The engineering department should track these report locations, identifying high-crash locations and develop countermeasures aimed at improving safety for applicable crashes.	Medium / Medium- to Long-term	City	Staff Time	N/A
Evaluation and Program Management Recommendations					
EVA 1	**Establish a Bike Program Manager** Identify a City staff person who will serve as the City's Bike Program Manager. This individual will be responsible for coordinating the bike program, and potentially be responsible for maintenance requests, engineering design review, and advancing non-infrastructure elements of the plan.	High / Short-term	City	Staff Time	N/A
EVA 2	**Establish a bike subcommittee of the Parks and Recreation Advisory Board** The City should establish a subcommittee on biking issues as part of the Parks and Recreation Advisory Board. This group would help guide implementation of the plan and may meet quarterly or as needed.	High / Short-term	City	No Cost	N/A
EVA 3	**Establish Dedicated Funding to Implement the Plan** The City is encouraged to identify a specific funding source for maintenance, programs, and capital improvements regarding the bike network. The capital improvement budget may not need to be targeted to specific projects, providing funding to be used as a local match on any awarded grant projects, or to be used as needs arise.	High / Short-term	City	Staff Time	N/A

Appendices

Appendix A

- *Exhibit 3-1: Barriers and Bikeable Districts* A3
- *Exhibit 3-2: Existing Bikeway Network* A4
- *Exhibit 3-3: Bikeway Condition Inventory, 2008* A5
- *Exhibit 3-4: Bikeway Condition Inventory, 2015* A6
- *Exhibit 3-4 Modified: Bikeway Condition Inventory, 2015 with Path Ownership* A7
- *Exhibit 3-5: Spot Maintenance Inventory, 2015* A8
- *Condition Inventory Methodology 2008, 2015* A9

Appendix B

- *Internet-based Survey and Summary of Survey Results* B3
- *Public Meeting input exhibits* B70
- *Mobile Input Station exhibits* B74
- *Public Comments* B76

Appendix C

- *Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects* C2
- *Exhibit 6-1p: Bike Network Plan (Ranking and Funding Corridors)* C11

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Appendix A

- *Exhibit 3-1: Barriers and Bikeable Districts* A3
- *Exhibit 3-2: Existing Bikeway Network* A4
- *Exhibit 3-3: Bikeway Condition Inventory, 2008* A5
- *Exhibit 3-4: Bikeway Condition Inventory, 2015* A6
- *Exhibit 3-4 Modified: Bikeway Condition Inventory, 2015 with Path Ownership* A7
- *Exhibit 3-5: Spot Maintenance Inventory, 2015* A8
- *Condition Inventory Methodology 2008, 2015* A9

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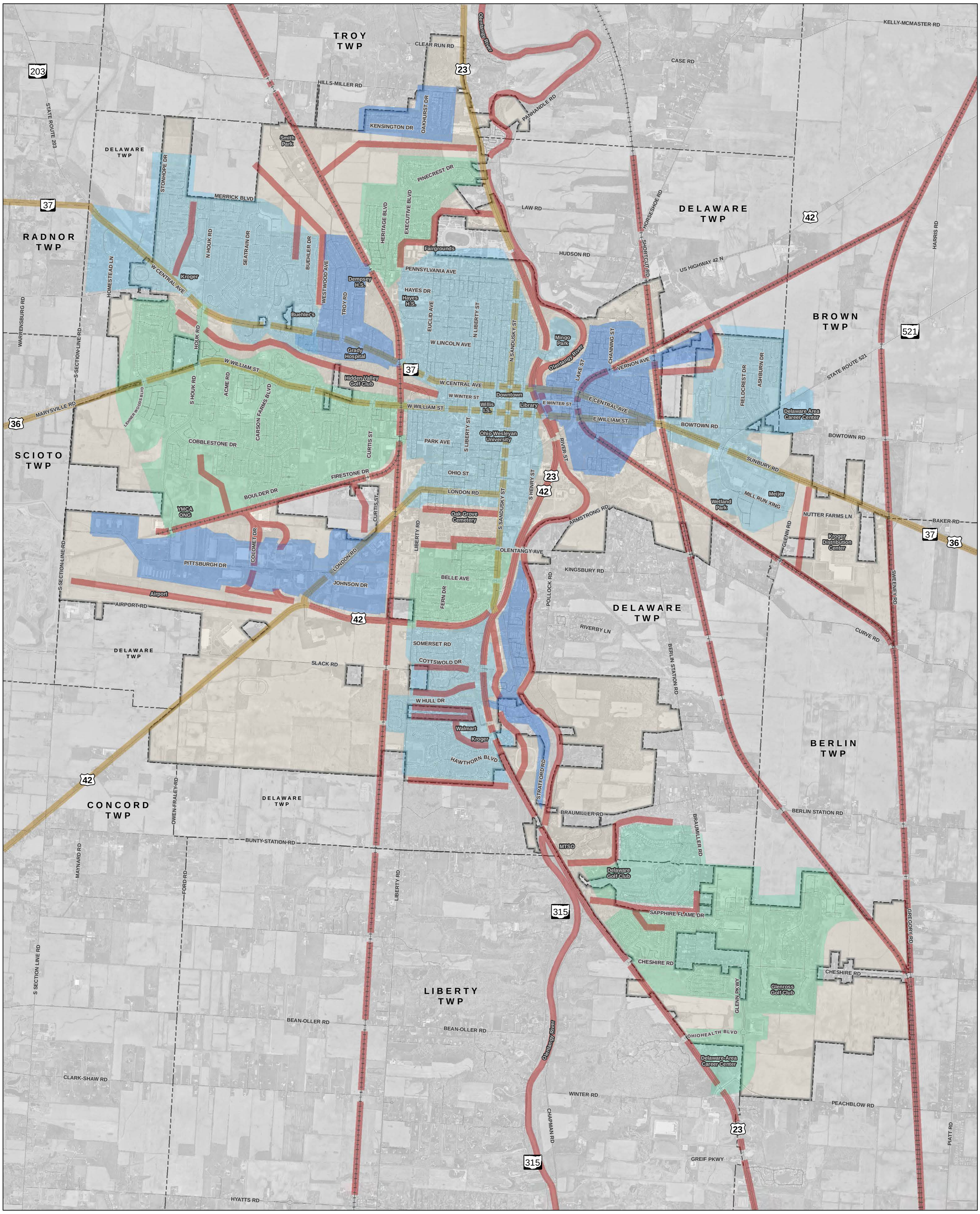
Exhibit 3-1

Barriers and Bikeable Districts

City of Delaware
BIKE PLAN 2025



Legend

Districts
- Bikeable District

Barriers
- Significant Barrier
- Lesser Roadway

Other Modes
- Roadways
- Railroad

Jurisdiction
- City of Delaware
- Township Boundary

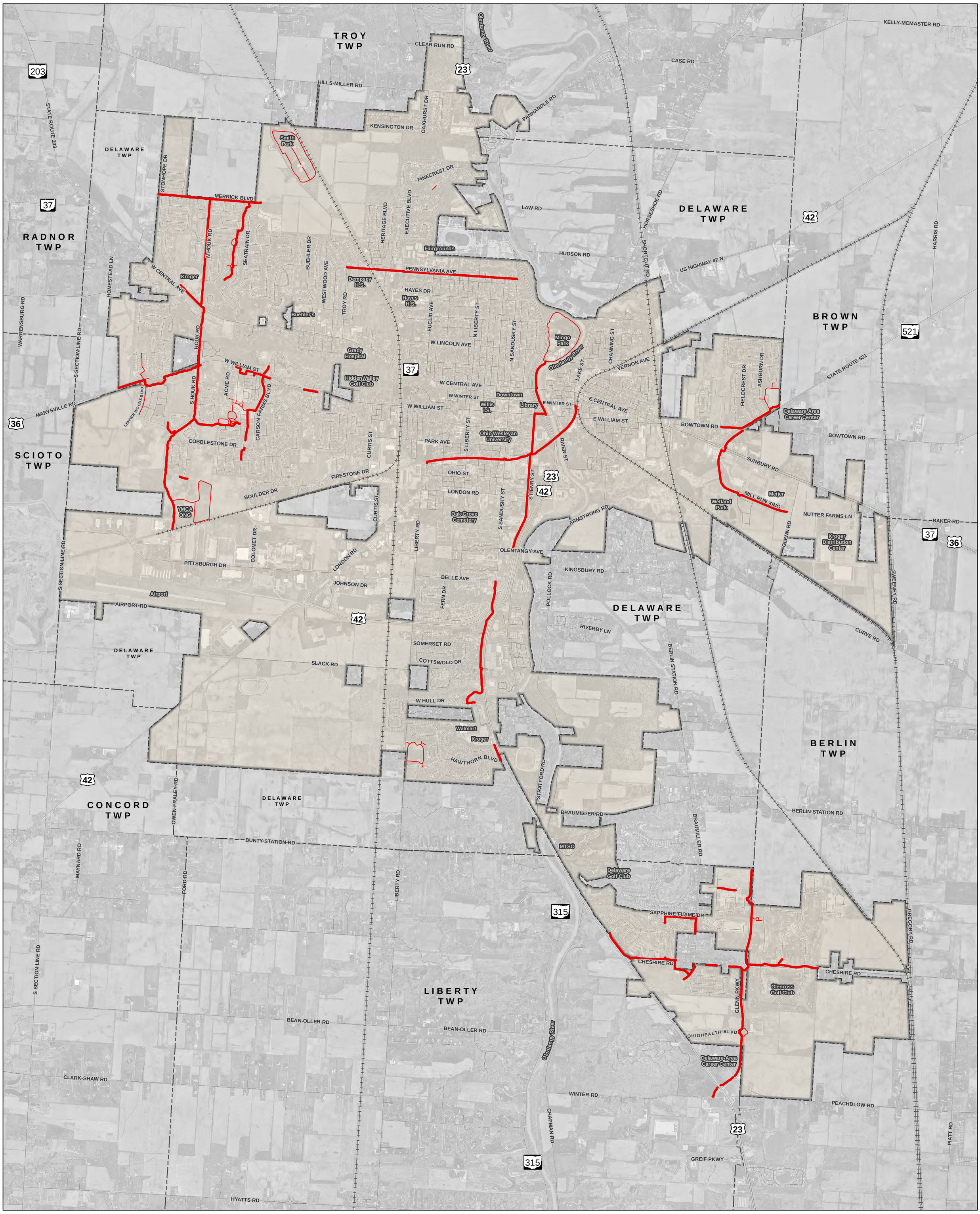
N

0 0.25 0.5 1 Mile

Exhibit 3-2

Existing Bikeway Network

City of Delaware
BIKE PLAN 2025



Legend

Bikeways
- Major Routes
- Local Routes

Other Modes
- Roadways
- Railroad

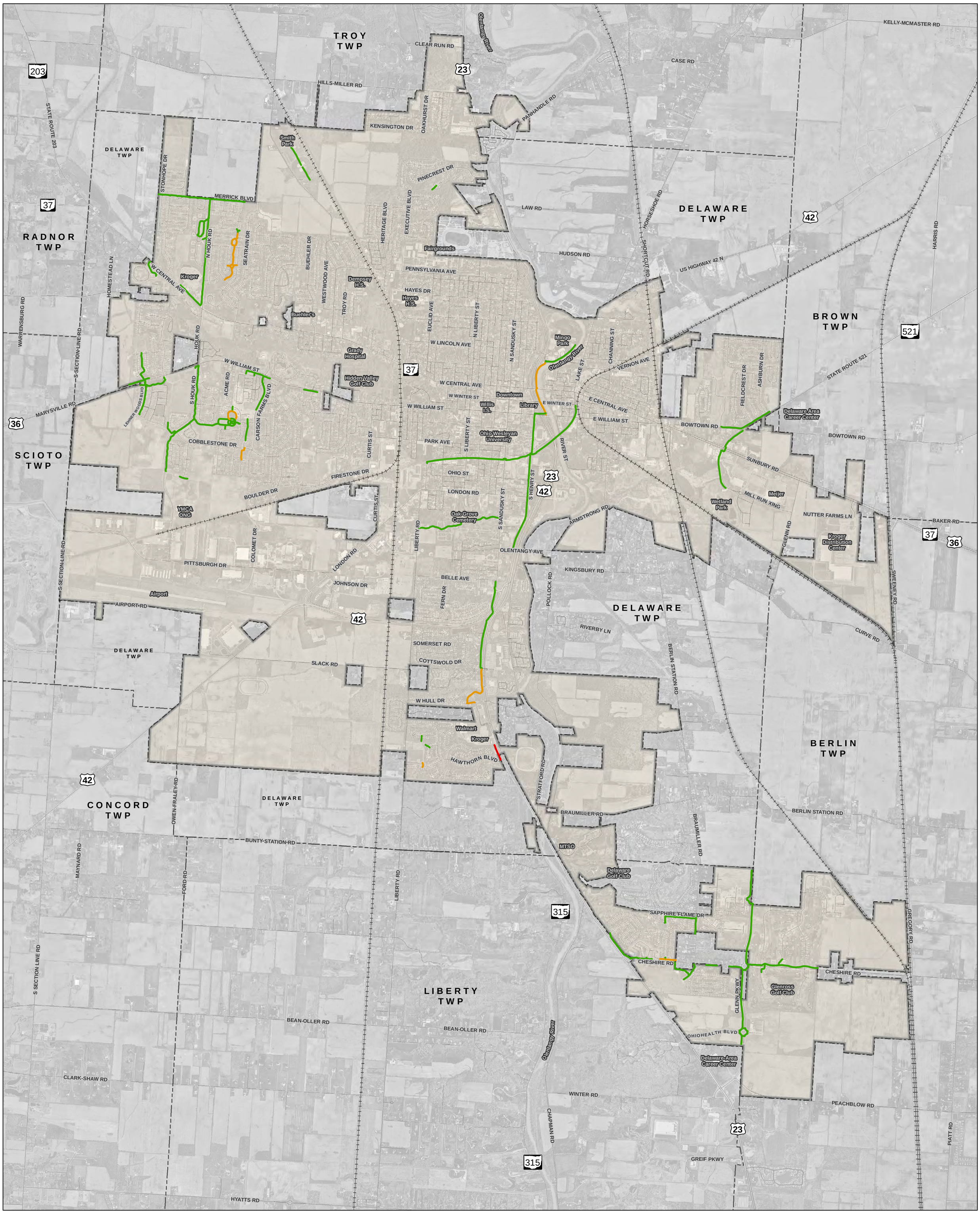
Jurisdiction
- City of Delaware
- Township Boundary

N

0 0.25 0.5 1 Mile

Exhibit 3-3

Bikeway Condition Inventory, 2008



Legend

Bikeway Condition, 2008
- Good
- Fair
- Poor

Other Modes
- Roadways
- Railroad

Jurisdiction
- City of Delaware
- Township Boundary

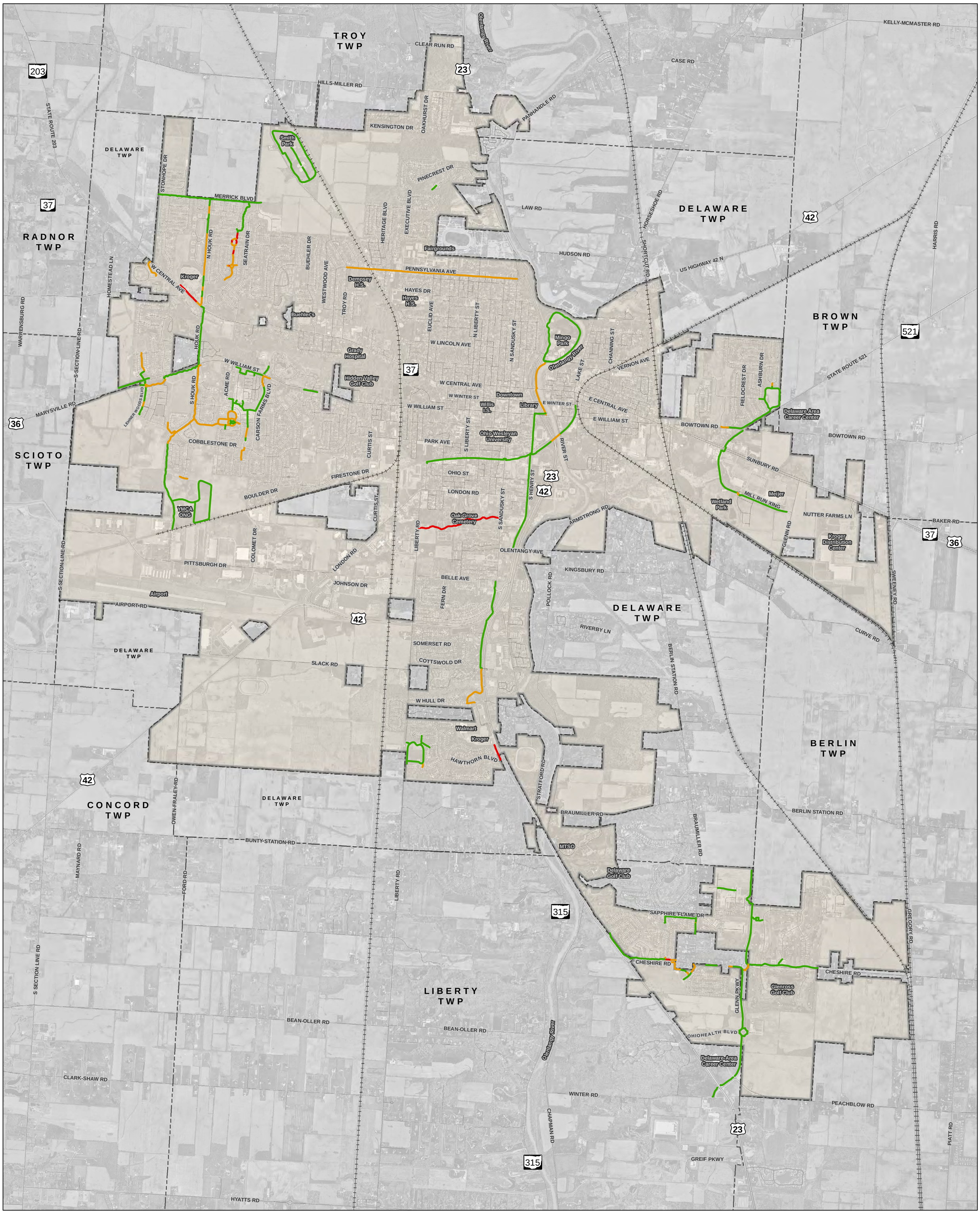
N

0 0.25 0.5 1 Mile

Exhibit 3-4

Bikeway Condition Inventory, 2015

City of Delaware BIKE PLAN 2025



Legend

Bikeway Condition, 2015

- Good
- Fair
- Poor

Other Modes

- Roadways
- Railroad

Jurisdiction

- City of Delaware
- Township Boundary

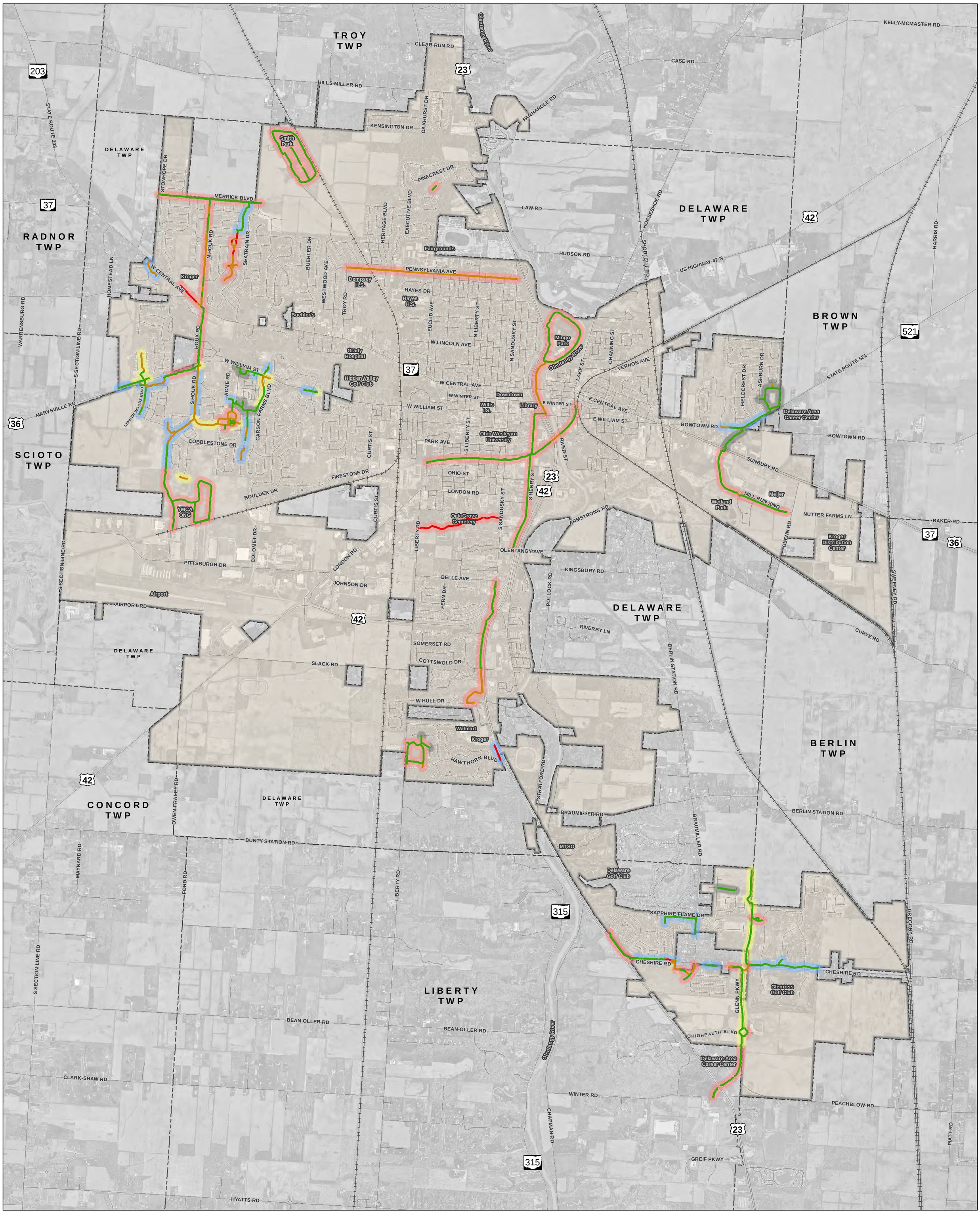
N

0 0.25 0.5 1 Mile

Exhibit 3-4 (Modified)

Bikeway Condition Inventory, 2015
With Ownership Information

City of Delaware
BIKE PLAN 2025



Legend

Other Modes
- Roadways
- Railroad

Jurisdiction
- City of Delaware
- Township Boundary

Maintenance Responsibility*
- City of Delaware
- HOA or Private Entity
- City and HOA/Private Entity
- Unknown

*Maintenance responsibility as listed on subdivision plats. Data may require verification. Newer trails with "Unknown Responsibility" have not yet been resareched.

N

0 0.25 0.5 1 Mile

Exhibit 3-5

Spot Maintenance Activities and Condition Inventory, 2015

NOTES
-□Bollards – locations where one or more bollards were identified. All bollards should be removed.
-□ADA Slope Issues or Slope/ADA Issues – Slope of path likely exceeds 5% with no landings, or 8.33% with landings, though measurements were not taken. Independent alignments must meet pedestrian accessible route standards. Regrading work and/or alternate accessible routes may be required.
-□NO DWS – Detectable warning surface is not present (ADA).
-□No Ramp – An accessible curb ramp has not been provided where there is a legal street crossing.
-□Ramp Width Less Than Standard or Ramp Width – Multi-use Trail Curb Ramp width and landings should be at least as wide/deep as the width of the path facility connecting to it. The added width is needed for bicyclists to maneuver their bikes without riding off of the ramp/landing surfaces. It can be beneficial to make such ramps wider than the path width to better accommodate multiple users/bicyclists.
-□Crack/Joint Issues – Most often a horizontal or vertical separation due to root intrusion, curb ramps settling, or asphalt path pulling away from concrete curb ramp. These issues may be trip hazards and may make routes inaccessible.
-□Roots – Similar to Crack/Joint Issues, the cause of the issue is definitively because of tree roots.
-□Utility Cut – Underground utilities have been installed or replaced after the path was built. The path was sawcut and pavement restored; however, settling has resulted in the new surface sitting one half to an inch and a half lower than the adjacent path. This is a trip hazard and makes the path inaccessible.
-□Dips/Sinkholes – Asphalt surface deformation likely due to insufficient subgrade material and/or compaction.
-□Weeds in Path – Vegetation is growing through the asphalt surface layer.
-□Hole in Path – Asphalt in the surface layer has broken up, exposing subgrade and/or dirt in the middle of the path.
-□Standing Water – Asphalt surface and/or grass adjacent to the path entraps water, creating a location where algae may grow and ice may accumulate.
-□Culvert Needed – Asphalt path dips with the ground to allow a drainage swale to flow across the path. This can lead to the accumulation of algae and ice on the path, as well as deterioration of the asphalt surface. A culvert can be installed and the path elevated to ensure users are safe from algae and ice, and reduce maintenance intervals for addressing deteriorating asphalt.
-□Visibility Issues/Cut Back Vegetation – Bushes or trees create a condition where bicyclists and pedestrians cannot see oncoming users or vehicles around the vegetation or obstruction. Vegetation should be removed where possible. Signage or traffic control changes would be a last resort.
-□Valve Above Grade in Path – a valve installed in the path sits above grade, creating a trip hazard. The valve should be adjusted to grade, or the path sloped up to meet the existing valve elevation.
-□Crossing Improvement Needed – conditions present today make crossing the roadway difficult and a defined crossing location with signage and possibly a beacon and/or median refuge island is recommended.
-□Crosswalk – A crosswalk should be signed and/or striped.
-□Shoulder Slope Hazard – The slope of the shoulder exceeds the recommendations of AASHTO, similar to clear zone issues. Path users who leave the path may not be able to recover and may continue down a slope directing them toward physical hazards such as trees, utility poles, and ditches.
-□Route Wayfinding Signage Helpful – the path turns and/or uses low volume driveways in a way which may be confusing to some bicyclists and signage may be helpful to indicate the continuation of the route.
-□Gate/Restricted Access – A gate and/or time of day restrictions prevent users from accessing the facility at all hours impacting the ability for some to use the facility when they need or want to.
-□No Trespassing – These "private" paths are noted by the presence of signage limiting access to these paths. It is unclear if the paths were to be private paths as part of original development.
-□Sweeping Needed on Regular Basis – Path travels through a wooded environment where leaves, nuts, sticks and branches routinely fall on the path, possibly creating a hazard. The hazard should be signed and the path occasionally or seasonally swept.
-□Connectivity? – The path has a small gap between segments of the path, or the path is located in close proximity to a roadway (e.g. cul-de-sac) yet does not have a curb ramp to allow on-road users to transition to the path.
-□Rutted Asphalt from Construction Equipment – Tracks from construction equipment have damaged the surface of the path, creating ruts when may present a trip hazard to some users such as rollerbladers and those using mobility aids.

Legend

- <all other values>

Bikeway Condition, 2015
- Good
- Fair
- Poor

Other Modes
- Roadways
- Railroad

Jurisdiction
- City of Delaware
- Township Boundary

N
0 0.25 0.5 1 Mile

Sample Condition Rating System for the City of Delaware

	Good	Fair	Poor
Cracks: (parallel to trail edge)	¼" Max Width	½" Max Width	> ½" Width (Potentially hazardous)
Cracks: (perpendicular to trail edge)	¼" Max Width	¾" Max Width	> ¾" Width (Potentially hazardous)
Projections: (parallel to trail edge)	¼" Max Height	3/8" Max Height	> 3/8" Height (Potentially hazardous)
Projections: (perpendicular to trail edge)	¼" Max Height	¾" Max Height	> ¾" Height (Potentially hazardous)
Waviness, Settling	Smooth without any signs of settling or waves.	Some settling or waves but these do not inhibit recreation.	Significant – may cause tires to track in a direction, causing a bumpy ride or potentially hazardous condition.
Weeds (sprouting through pavement cracks)	Few if any, maximum of one growing through cracks per 20' length of path on average.	Two to four weed plants per 20' length of path on average.	In excess of four weeds per 20' length of path on average.
Surface Condition	Few if any imperfections, smooth or flat surface	Some surface imperfections, but bumps do not contribute to a rough ride.	Pot holes, surface pockmarks, rough surface that may jolt riders, swallow tires, contribute to accidents or injury.
Safewalks / ADA Compliance (wear and tear issues)	Few if any imperfections, smooth or flat surface	May have some accessibility problems. These should be noted and scheduled for repair.	Paths deemed inaccessible should be marked with signs. Necessary repairs should be identified and scheduled for repair.
Action	Continue annual inspection schedule. Consistently utilize preventative maintenance to protect path from deterioration.	Monitor path, identify potential hazards and mitigate. Conduct additional inspections if deemed necessary. Conduct preventative maintenance to reduce further deterioration and address problems that may become hazards	Take corrective action to: 1. sign potential hazards, 2. fix immediate hazards, or 3. close the path. Consider increasing the priority of the path to receive needed repairs/maintenance.

Sample Condition Rating System for the City of Delaware Ohio. To use, perform inspection and circle average condition per category. Path condition is generally the column with the most circles; with the following exceptions:

- A rating of "good" may not contain "poor" rating in more than one category.
- Paths generally rated with an average between categories should be considered as falling within the lower of the two categories.
- Other factors may be noted and taken into account in determining the Bikeway condition rating.

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Appendix B

- *Internet-based Survey and Summary of Survey Results* B3
- *Public Meeting input exhibits* B70
- *Mobile Input Station exhibits* B74
- *Public Comments* B76

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City of Delaware Bike Plan Survey

The City of Delaware is updating its Bike Plan and we need your input!

Please complete this short, 10 minute survey to share your thoughts and priorities. All responses are anonymous.

* Required

1. How often do you engage in the following modes of recreation or active transportation? *

Choose the category that best approximates your routine

	Daily or every other day	Weekly	Monthly	Several times a year	Rarely or never
Bicycling	○	○	○	○	○
Walking	○	○	○	○	○
Running	○	○	○	○	○
Rollerblading	○	○	○	○	○
Skateboarding	○	○	○	○	○
Other mode (list below)	○	○	○	○	○

1A. Other mode?

If you selected "Other" above, please describe. This question is optional.

2. How often do you bike, walk, run, rollerblade, or skateboard for... *

	Daily or every other day	Weekly	Monthly	Several times a year	Rarely or never
Recreation?	○	○	○	○	○
Exercise or training?	○	○	○	○	○
Traveling to work?	○	○	○	○	○
Traveling to school?	○	○	○	○	○
Traveling to a destination?	○	○	○	○	○

3. What destinations can you use (or want to use) "active transportation" to travel to? *

Active transportation is human powered: bicycling, walking, running, rollerblading, skateboarding, etc.

	I have access	I want access	I don't desire access	It's too far from my house
Downtown Delaware	○	○	○	○
The YMCA	○	○	○	○
Mingo Pool	○	○	○	○
The Library	○	○	○	○
My local park	○	○	○	○
My school	○	○	○	○
My workplace	○	○	○	○
My friend's house	○	○	○	○
Other destination (list below)	○	○	○	○

3A. If you selected "Other," please list the destination (or destinations).

This question is optional.

4. Do you use Delaware's multi-use path system? *

Multi-use paths are 8' to 10' wide trails for bicycling, running, walking, and other modes. They do not include sidewalks.

- ○ Yes
- ○ No

Continue »

10% completed

City of Delaware Bike Plan Survey

* Required

Multi-use Path Questions

Multi-use paths are 8' to 10' wide trails for bicycling, running, walking, and other modes. They do not include sidewalks.

5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)? *

	Daily or every other day	Weekly	Monthly	Several times a year	Rarely or never
Bicycling	○	○	○	○	○
Walking	○	○	○	○	○
Running	○	○	○	○	○
Distance training (walking, running, biking, etc.)	○	○	○	○	○
Rollerblading	○	○	○	○	○
Skateboarding	○	○	○	○	○

6. What are common ways you travel to Delaware's multi-use path system? Choose all that apply. *

- ☐ Drive and park
- ☐ Bike
- ☐ Walk or Run
- ☐ Rollerblade or Skatebooard

7. Do you use the path network during winter months? *

- ○ Yes
- ○ No

8. Do you use the path network at night? *

- ○ Yes
- ○ No

9. Please express the degree to which you agree or disagree with the following statements. *

	Strongly Agree	Agree	Neutral/ No Opinion	Disagree	Strongly Disagree	Not Applicable
The path network is an amenity I enjoy and value	○	○	○	○	○	○
I can access the path network from my neighborhood	○	○	○	○	○	○
The path network helps me reach my desired destinations	○	○	○	○	○	○
The path network is well connected	○	○	○	○	○	○
The path network is well maintained (pavement surface, snow removal, etc.)	○	○	○	○	○	○

10. Are there any specific problems with the path network we should be aware of?

Please provide path location(s) and describe the problem(s). This question is optional.

« Back Continue »

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Edit this form

City of Delaware Bike Plan Survey

* Required

Bicycling

12. Are you a bicyclists? *

- ○ Yes
- ○ No

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City of Delaware Bike Plan Survey

* Required

Bicycling Questions

13. Please pick the category that best reflects your skill and interest as a bicyclist. *

- An experienced cyclist comfortable riding with traffic on busy city streets.
- A casual cyclists who rides on paths as well as quiet, neighborhood streets.
- A less confident or new bicyclist who prefers to ride on paths or sidewalks.

14. How far do you ride your bike on a typical ride? *

- Around the block
- Less than a mile
- Several miles
- Three to 10 miles
- More than 10 miles

15. How often do you use the following safety equipment while riding a bike? *

	Everytime	Sometimes	Rarely or Never	I do not own
Helmet				
Taillight				
Headlight				
Light-colored clothing or reflective vest				

16. Where do you feel comfortable riding your bike? Select all that apply. *

	Comfortable	Neutral	Not Comfortable	Not Sure	Refuse to ride on
On paths					
On sidewalks					
With traffic on neighborhood streets					

With traffic on lower volume, collector streets like Winter Street	○	○	○	○	○
With traffic on higher volume, arterial streets like US-36 or SR-37 west of The Point	○	○	○	○	○

17. Any other suggestions which would help you (or others) feel more comfortable bicycling with traffic?

This is not a required question.

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City of Delaware Bike Plan Survey

* Required

Potential Recommendations for Bicyclists

18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets? *

	More Comfortable	No Change	Less Comfortable	I am not sure
Signs and pavement markings instructing motorists to "share the road"	○	○	○	○
Dedicated space on the road for bicyclists (e.g. bike lanes)	○	○	○	○
Bike safety and skills class on how to ride with traffic	○	○	○	○
3' minimum passing distance ordinance and reminder signage for motorists	○	○	○	○
Riding in groups with other bicyclists	○	○	○	○

19. If a bike safety and skills class were offered, would you participate and what do you feel is a fair price for such a course? *

A 60 to 90 minute course including instruction, a group ride, and a question and answer time.

	Not interested	Yes, if free	Yes, $10/participant	Yes, $20/participant	Yes, $30/participant
For an adult	○	○	○	○	○
For a family	○	○	○	○	○
For a child	○	○	○	○	○

20. If bike parking was provided for festivals and other events, would you use the following

options? *

	Yes	Maybe	No
Bike racks, unattended	○	○	○
Bike racks or bike coral attended by volunteers	○	○	○

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City of Delaware Bike Plan Survey

* Required

Potential Recommendations and Priorities

22. Please indicate how important the following objectives are for improving mobility in Delaware. *

(mobility in terms of bicycling, walking, running, rollerblading, or skateboarding)

	Very Important	Important	Somewhat important	Not important
Maintenance of the path system	○	○	○	○
Closing short gaps in the existing system	○	○	○	○
Expanding the system across the city	○	○	○	○
Making streets safer to ride on	○	○	○	○
Connecting the system to nearby neighborhoods	○	○	○	○
Connecting the system to Downtown	○	○	○	○
Connecting the system to the YMCA	○	○	○	○
Connecting Delaware to nearby cities and parks	○	○	○	○
Bicycling safety and skills programs	○	○	○	○
Placing more bike racks at destiniations	○	○	○	○

23. Of the above objectives, which would be your first priority? *

- ○ Maintenance of the path system
- ○ Closing short gaps in the existing system
- ○ Expanding the system across the city
- ○ Making streets safer to ride on

- Connecting the system to nearby neighborhoods
- Connecting the system to downtown
- Connecting the system to the YMCA
- Connecting Delaware to nearby cities and parks
- Bicycling safety and skill programs
- Placing more bike racks at destinations
- Other:

24. Which would be your second priority? *

- Maintenance of the path system
- Closing short gaps in the existing system
- Expanding the system across the city
- Making streets safer to ride on
- Connecting the system to nearby neighborhoods
- Connecting the system to downtown
- Connecting the system to the YMCA
- Connecting Delaware to nearby cities and parks
- Bicycling safety and skill programs
- Placing more bike racks at destinations
- Other:

25. Which would be your third priority? *

- Maintenance of the path system
- Closing short gaps in the existing system
- Expanding the system across the city
- Making streets safer to ride on
- Connecting the system to nearby neighborhoods
- Connecting the system to downtown
- Connecting the system to the YMCA
- Connecting Delaware to nearby cities and parks
- Bicycling safety and skill programs
- Placing more bike racks at destinations
- Other:

26. While City officials desire to find grant sources for large projects, how supportive are you of spending City tax dollars on the following objectives? *

	Supportive	Neutral	Not Supportive
Maintenance of the existing system			
Closing small gaps in			

the existing system			
Expanding the system across Delaware	○	○	○
Expanding the system to nearby cities and places	○	○	○

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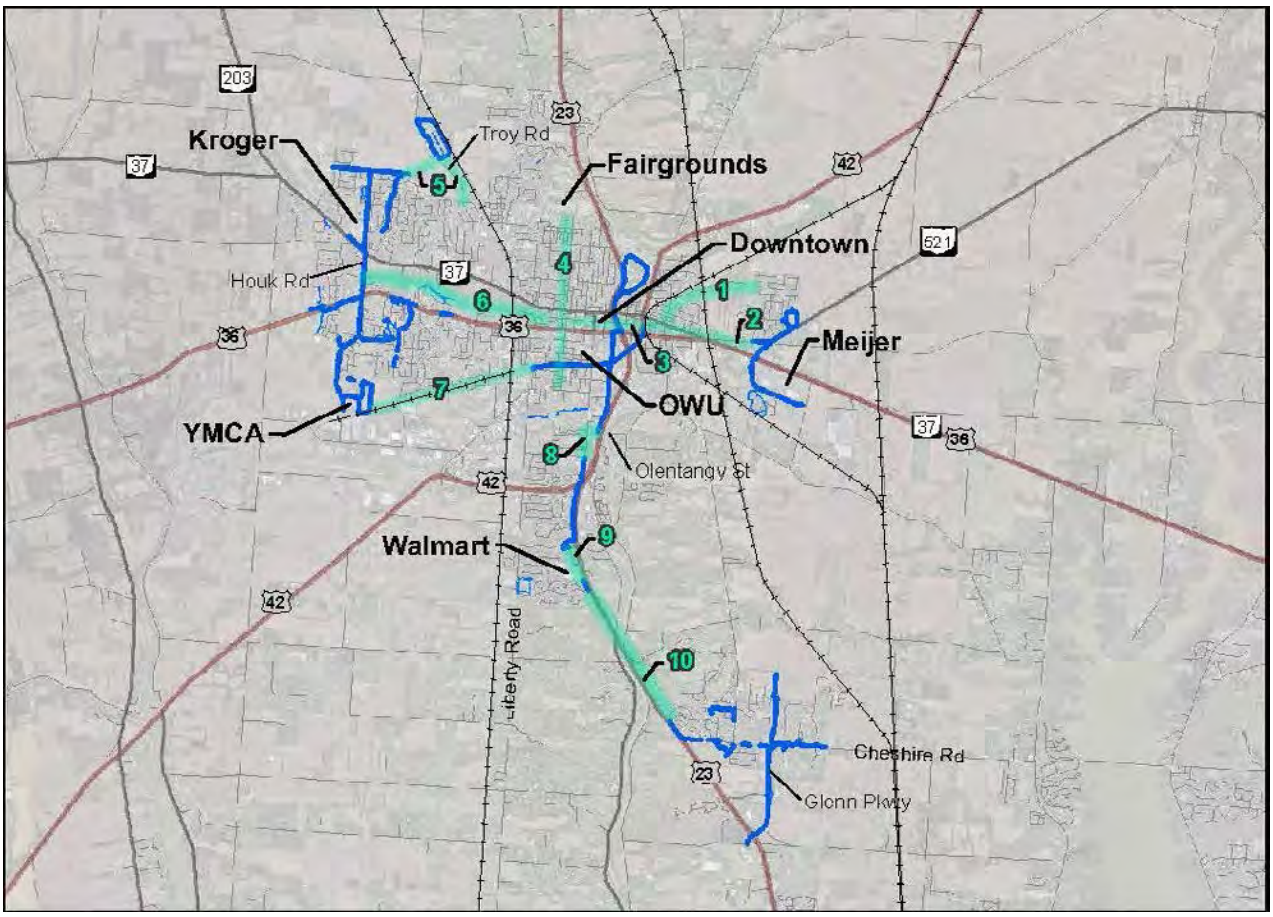
City of Delaware Bike Plan Survey

* Required

Priority Corridors

To increase the size of the image (below), press and hold the "control" key and tap the "+" key.
To reduce the size of the image, press and hold the "control" key and tap the "-" key.

The exhibit below shows potential corridors along which multi-use paths or on-road shared routes could be implemented.



27. Considering the exhibit above, which corridor is your first priority? *

- Route 1: Channing St/Vernon Ave Bike Boulevard
- Route 2: Bowtown Rd/SR-37/Winter St
- Route 3: Winter St Bike Boulevard
- Route 4: Liberty St Bike Boulevard

- ◯ Route 5: Troy Rd/Merrick Blvd
- ◯ Route 6: Delaware Run
- ◯ Route 7: YMCA/Rail with Trail Extension
- ◯ Route 8: Olentangy St/S Sandusky St
- ◯ Route 9: US-23/Walmart Link
- ◯ Route 10: US-23 - Walmart to Cheshire
- ◯ Other:

28. Considering the exhibit above, which corridor is your second priority? *

- ◯ Route 1: Channing St/Vernon Ave Bike Boulevard
- ◯ Route 2: Bowtown Rd/SR-37/Winter St
- ◯ Route 3: Winter St Bike Boulevard
- ◯ Route 4: Liberty St Bike Boulevard
- ◯ Route 5: Troy Rd/Merrick Blvd
- ◯ Route 6: Delaware Run
- ◯ Route 7: YMCA/Rail with Trail Extension
- ◯ Route 8: Olentangy St/S Sandusky St
- ◯ Route 9: US-23/Walmart Link
- ◯ Route 10: US-23 - Walmart to Cheshire
- ◯ Other:

29. Considering the exhibit above, which corridor is your third priority? *

- ◯ Route 1: Channing St/Vernon Ave Bike Boulevard
- ◯ Route 2: Bowtown Rd/SR-37/Winter St
- ◯ Route 3: Winter St Bike Boulevard
- ◯ Route 4: Liberty St Bike Boulevard
- ◯ Route 5: Troy Rd/Merrick Blvd
- ◯ Route 6: Delaware Run
- ◯ Route 7: YMCA/Rail with Trail Extension
- ◯ Route 8: Olentangy St/S Sandusky St
- ◯ Route 9: US-23/Walmart Link
- ◯ Route 10: US-23 - Walmart to Cheshire
- ◯ Other:

Please feel free to provide any other comments on proposed routes
This question is optional.

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City of Delaware Bike Plan Survey

Demographic Information

- Remember, survey responses are anonymous.
- Demographic data is solely used to identify trends based on factors such as age, gender, and location.
- If you prefer not to answer, select this option on each question.

30. Please select your gender

- ◯ Male
- ◯ Female
- ◯ Prefer Not to Answer

31. Please choose the range of ages which includes your age.

- ◯ Age 0-12
- ◯ Age 13-17
- ◯ Age 18-22
- ◯ Age 23-29
- ◯ Age 30-39
- ◯ Age 40-49
- ◯ Age 50-59
- ◯ Age 60+
- ◯ Prefer Not to Answer

32. Choose the category that best reflects your living situation

- ◯ Living alone
- ◯ Living with others (roommates)
- ◯ Living with spouse/partner
- ◯ Living with spouse/partner and children
- ◯ Living with children but not spouse/partner
- ◯ Living with parents
- ◯ Prefer Not to answer

33. Use the map below to find your residence (else, your place of work) and note which number is closest to this location. Select that number (or an appropriate option) from the following list.

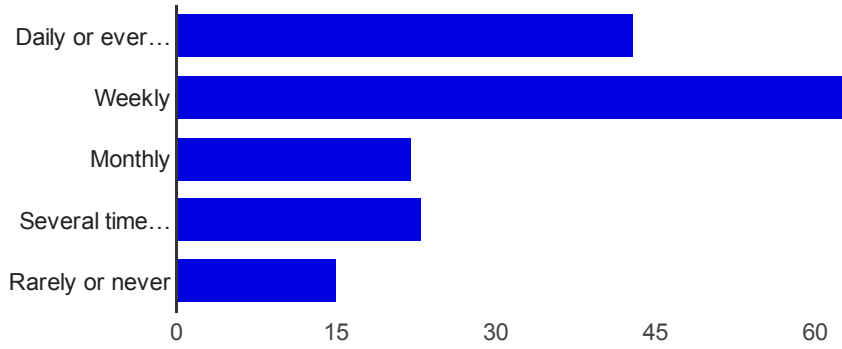
Knowing the vicinity of where respondents lives helps the City know where to fix problems and target improvements. Select "Prefer Not to Answer" if applicable.

170 responses

View all responses Publish analytics

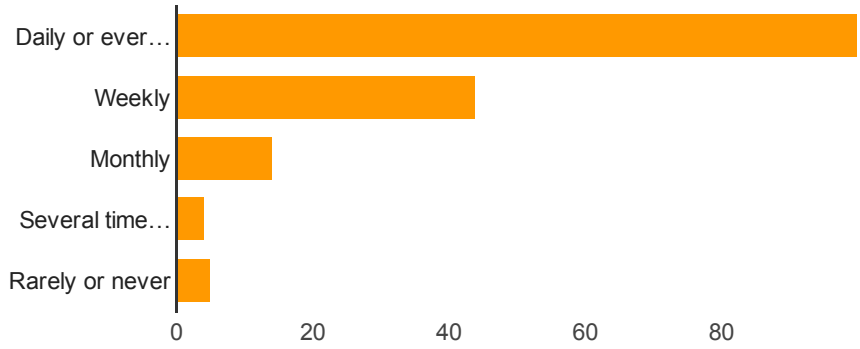
Summary

Bicycling [1. How often do you engage in the following modes of recreation or active transportation?]



Daily or every other day	43	25.3%
Weekly	64	37.6%
Monthly	22	12.9%
Several times a year	23	13.5%
Rarely or never	15	8.8%

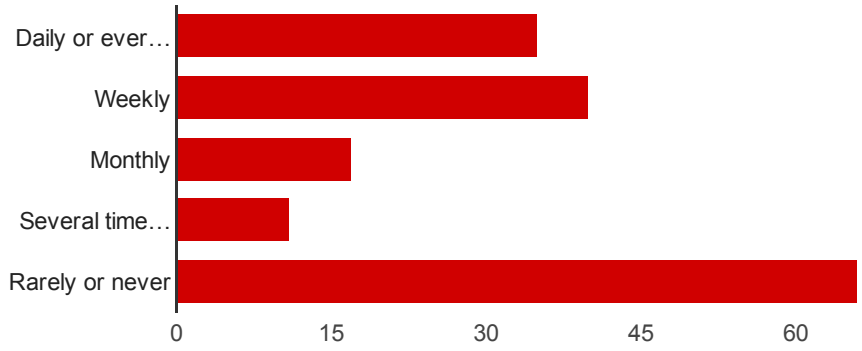
Walking [1. How often do you engage in the following modes of recreation or active transportation?]



Daily or every other day	100	58.8%
Weekly	44	25.9%

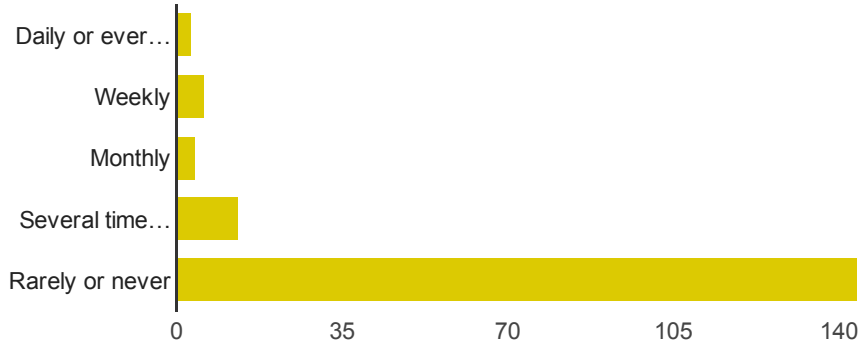
Monthly	14	8.2%
Several times a year	4	2.4%
Rarely or never	5	2.9%

Running [1. How often do you engage in the following modes of recreation or active transportation?]



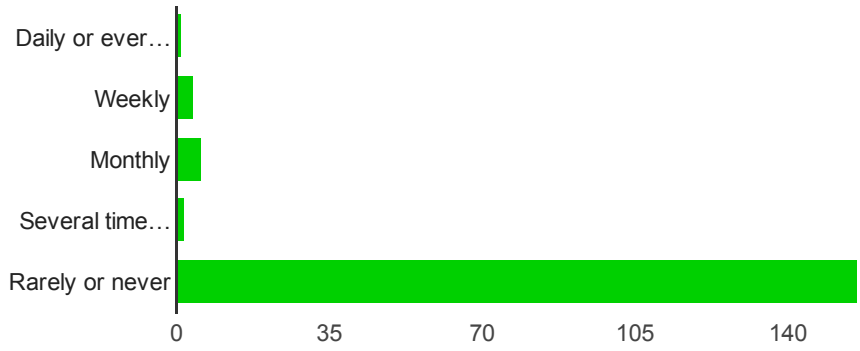
Daily or every other day	35	20.6%
Weekly	40	23.5%
Monthly	17	10%
Several times a year	11	6.5%
Rarely or never	66	38.8%

Rollerblading [1. How often do you engage in the following modes of recreation or active transportation?]



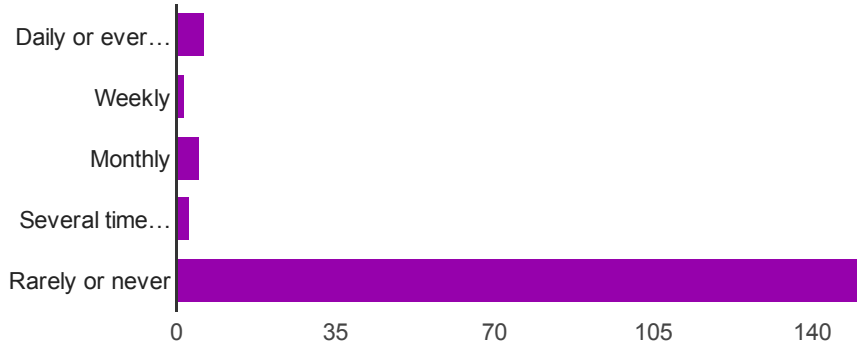
Daily or every other day	3	1.8%
Weekly	6	3.5%
Monthly	4	2.4%
Several times a year	13	7.6%
Rarely or never	144	84.7%

Skateboarding [1. How often do you engage in the following modes of recreation or active transportation?]



Daily or every other day	1	0.6%
Weekly	4	2.4%
Monthly	6	3.5%
Several times a year	2	1.2%
Rarely or never	156	91.8%

Other mode (list below) [1. How often do you engage in the following modes of recreation or active transportation?]



Daily or every other day	6	3.6%
Weekly	2	1.2%
Monthly	5	3%
Several times a year	3	1.8%
Rarely or never	150	90.4%

1A. Other mode?

never rollerbladr

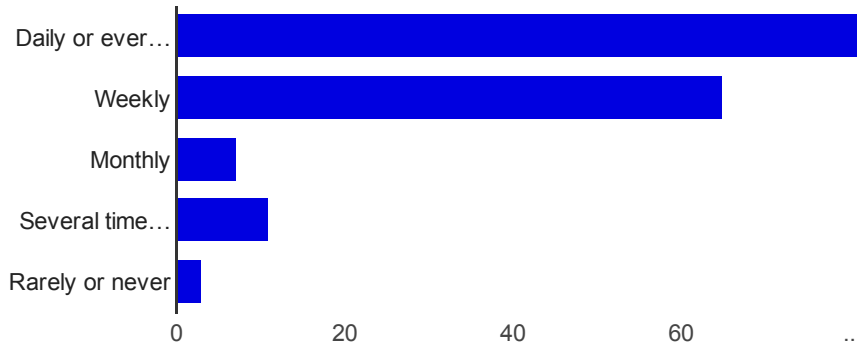
kayak

Stroller

car

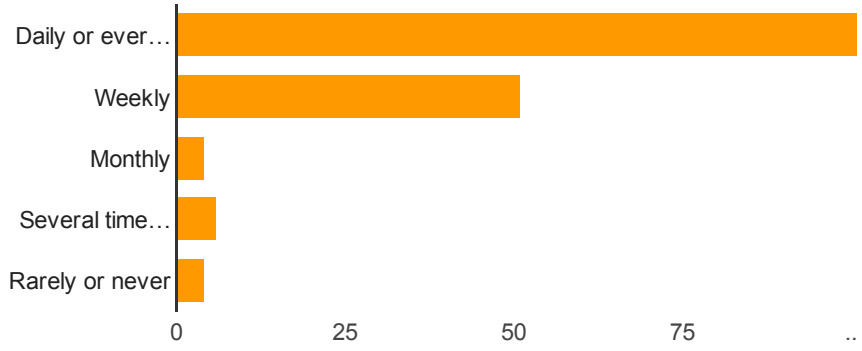
Cat

Recreation? [2. How often do you bike, walk, run, rollerblade, or skateboard for...]



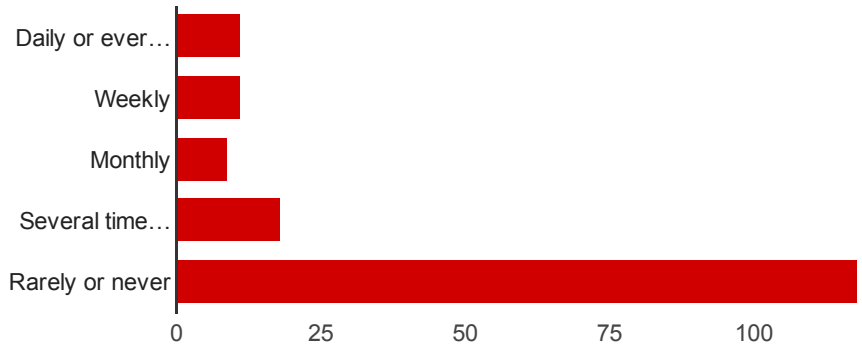
Daily or every other day	81	47.6%
Weekly	65	38.2%
Monthly	7	4.1%
Several times a year	11	6.5%
Rarely or never	3	1.8%

Exercise or training? [2. How often do you bike, walk, run, rollerblade, or skateboard for...]



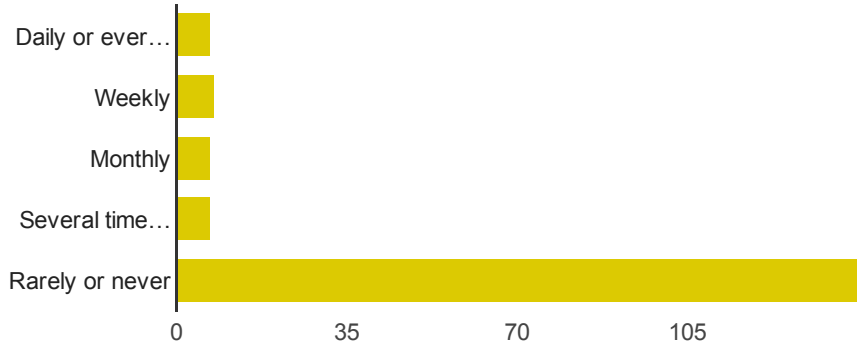
Daily or every other day	101	59.4%
Weekly	51	30%
Monthly	4	2.4%
Several times a year	6	3.5%
Rarely or never	4	2.4%

Traveling to work? [2. How often do you bike, walk, run, rollerblade, or skateboard for...]



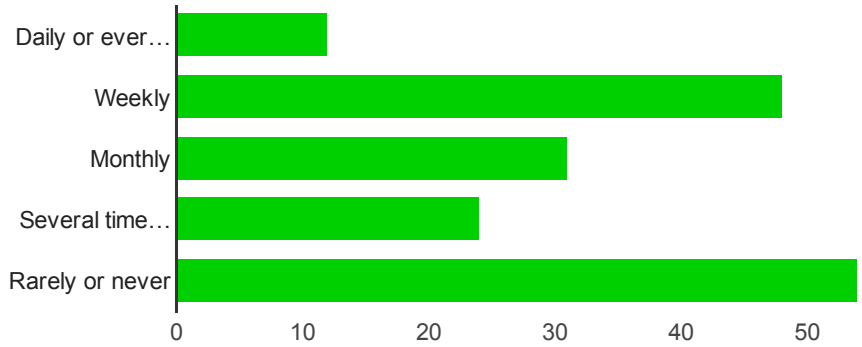
Daily or every other day	11	6.5%
Weekly	11	6.5%
Monthly	9	5.3%
Several times a year	18	10.6%
Rarely or never	118	69.4%

Traveling to school? [2. How often do you bike, walk, run, rollerblade, or skateboard for...]



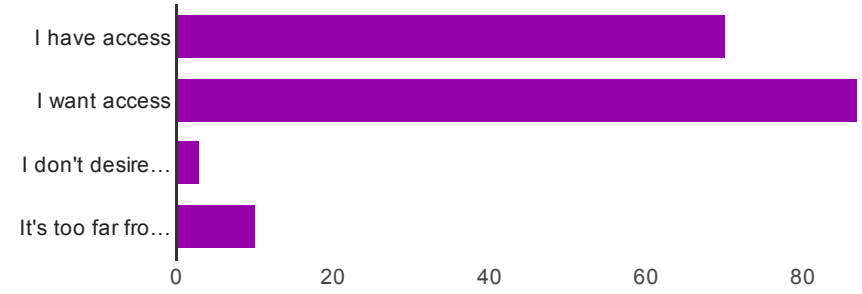
Daily or every other day	7	4.1%
Weekly	8	4.7%
Monthly	7	4.1%
Several times a year	7	4.1%
Rarely or never	140	82.4%

Traveling to a destination? [2. How often do you bike, walk, run, rollerblade, or skateboard for...]



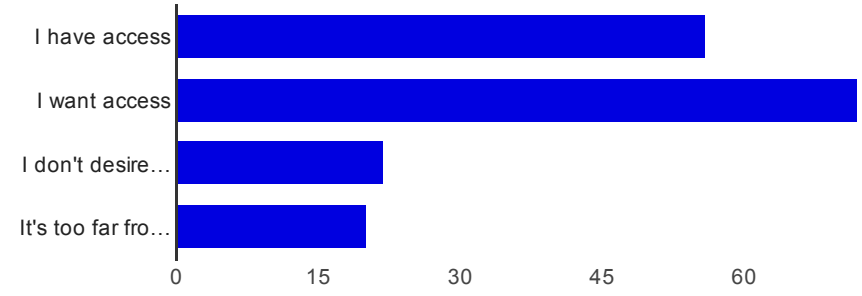
Daily or every other day	12	7.1%
Weekly	48	28.2%
Monthly	31	18.2%
Several times a year	24	14.1%
Rarely or never	54	31.8%

Downtown Delaware [3. What destinations can you use (or want to use) "active transportation" to travel to?]



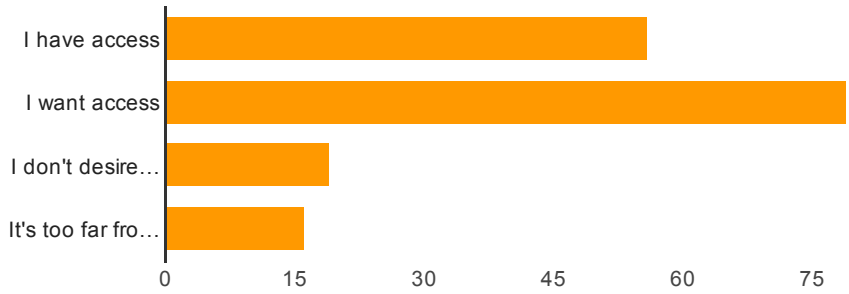
I have access	70	41.2%
I want access	87	51.2%
I don't desire access	3	1.8%
It's too far from my house	10	5.9%

The YMCA [3. What destinations can you use (or want to use) "active transportation" to travel to?]



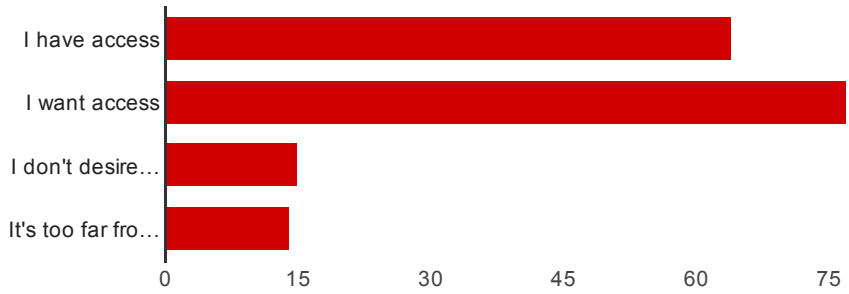
I have access	56	32.9%
I want access	72	42.4%
I don't desire access	22	12.9%
It's too far from my house	20	11.8%

Mingo Pool [3. What destinations can you use (or want to use) "active transportation" to travel to?]



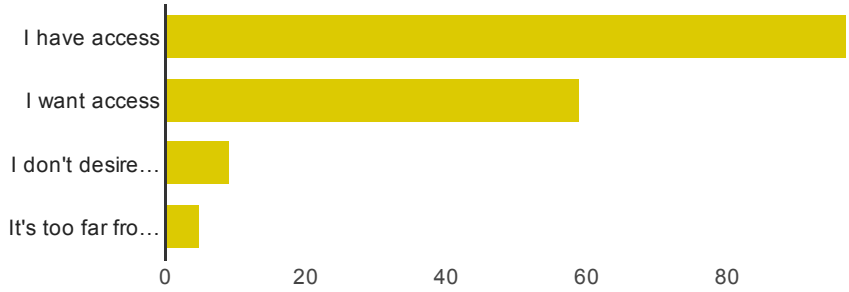
I have access	56	32.9%
I want access	79	46.5%
I don't desire access	19	11.2%
It's too far from my house	16	9.4%

The Library [3. What destinations can you use (or want to use) "active transportation" to travel to?]



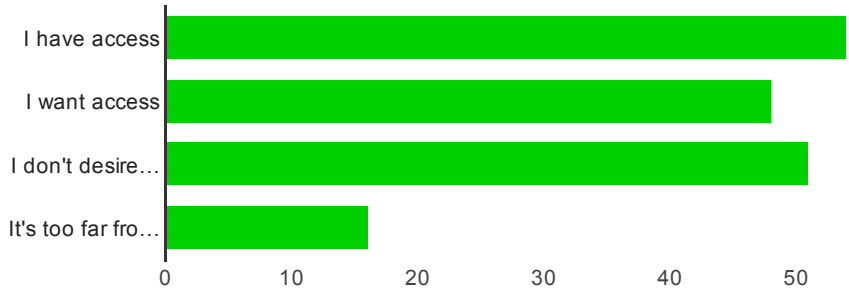
I have access	64	37.6%
I want access	77	45.3%
I don't desire access	15	8.8%
It's too far from my house	14	8.2%

My local park [3. What destinations can you use (or want to use) "active transportation" to travel to?]



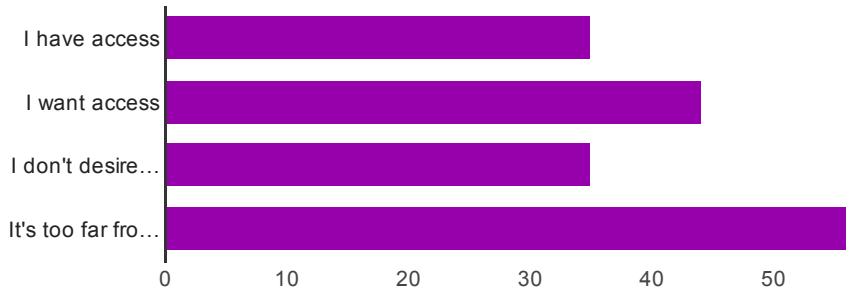
I have access	97	57.1%
I want access	59	34.7%
I don't desire access	9	5.3%
It's too far from my house	5	2.9%

My school [3. What destinations can you use (or want to use) "active transportation" to travel to?]



I have access	54	32%
I want access	48	28.4%
I don't desire access	51	30.2%
It's too far from my house	16	9.5%

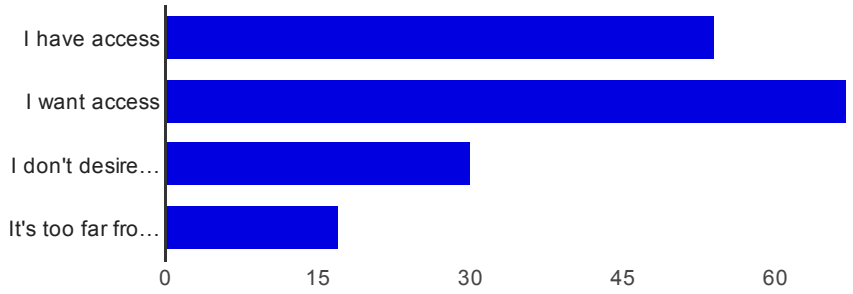
My workplace [3. What destinations can you use (or want to use) "active transportation" to travel to?]



I have access	35	20.6%
I want access	44	25.9%

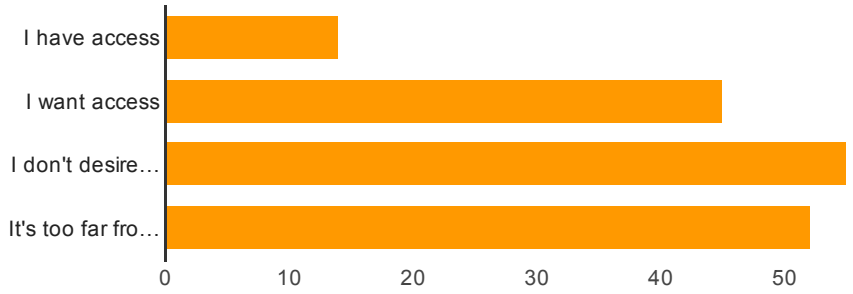
I don't desire access	35	20.6%
It's too far from my house	56	32.9%

My friend's house [3. What destinations can you use (or want to use) "active transportation" to travel to?]



I have access	54	32.1%
I want access	67	39.9%
I don't desire access	30	17.9%
It's too far from my house	17	10.1%

Other destination (list below) [3. What destinations can you use (or want to use) "active transportation" to travel to?]



I have access	14	8.4%
I want access	45	27.1%
I don't desire access	55	33.1%
It's too far from my house	52	31.3%

3A. If you selected "Other," please list the destination (or destinations).

W. Hull Dr. bike path, so pathetic

Shopping districts other than downtown

Olentangy bike trail

It would be nice to have the bike path connected to other community bike paths

To Meijers, to Buehlers,

Strafford Road, Garth's / Delaware County Historical Society

Anywhere there is a road, I have access.

YMCA

Downtown Restaurants

Gallant Preserve

theater

smith park

Stratford Ecological Preserve; Smith Park; Oakhurst Park; Kroger on northwest side of town

Smith Park/Gallant Woods or other Preservation Parks

Connection to other bike paths, please!

Meijers on East side. Kroger on West side. Vary dangerous now.

Grocery Store

Staas Brewing Co.

Powell

From 36/37 to Kohl's/Meijer's

East side of Delaware

Grocery store (Meijer or Kroger)

Polaris

grocery

powell ymca

would like to have safe access to the city parks with multi-use trails

Isolated sections of trails

not app

link up to other bike trails

Grocery

North Columbus

Better access to Hayes Colony/fairgrounds area

Smith Park

Delaware State Park

Orange township trails

Grocery store

Other side of town/Carson Farms

shopping

Smith park

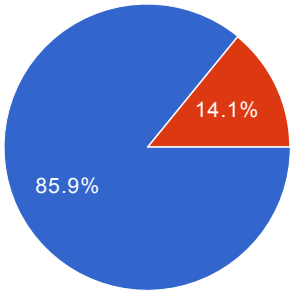
Linking parks together

the bike shop

Smith patk

From Kensington Place to Conger Elementary

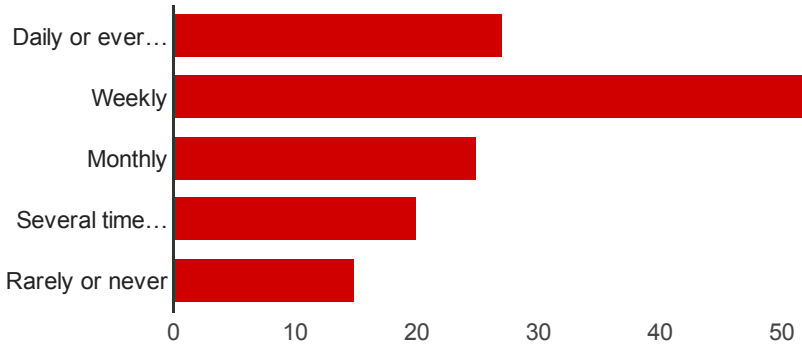
4. Do you use Delaware's multi-use path system?



Yes	146	85.9%
No	24	14.1%

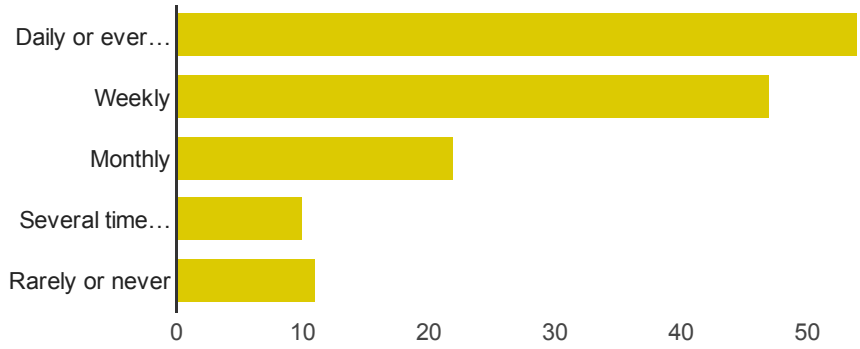
Multi-use Path Questions

Bicycling [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]



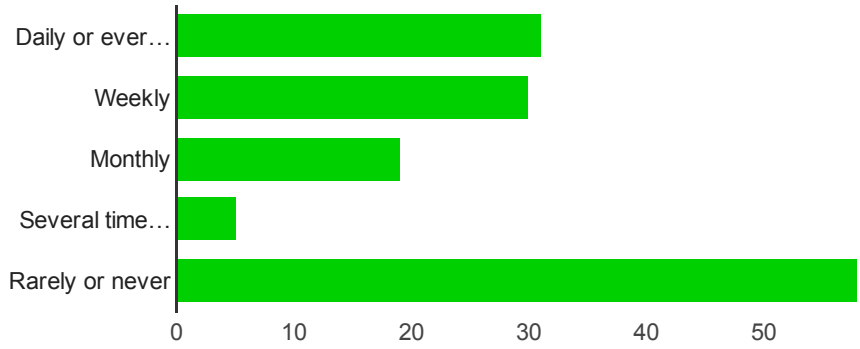
Daily or every other day	27	18.5%
Weekly	56	38.4%
Monthly	25	17.1%
Several times a year	20	13.7%
Rarely or never	15	10.3%

Walking [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]



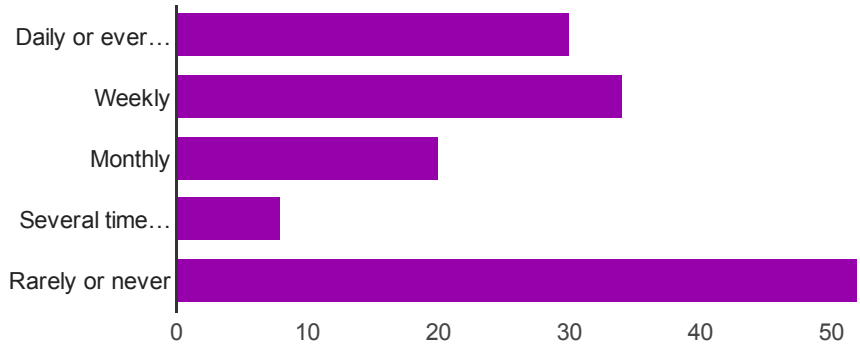
Daily or every other day	54	37%
Weekly	47	32.2%
Monthly	22	15.1%
Several times a year	10	6.8%
Rarely or never	11	7.5%

Running [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]



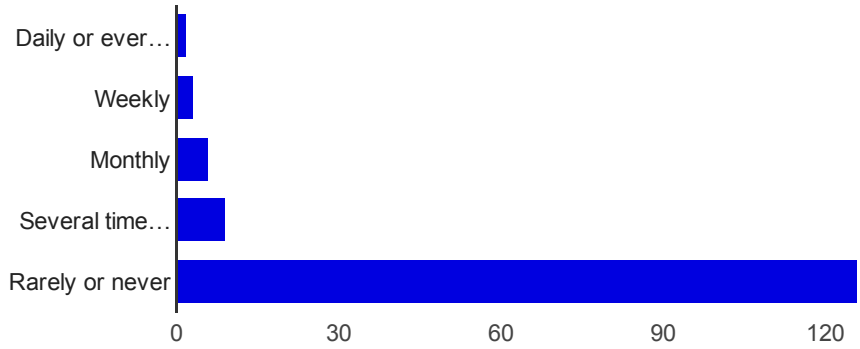
Daily or every other day	31	21.2%
Weekly	30	20.5%
Monthly	19	13%
Several times a year	5	3.4%
Rarely or never	58	39.7%

Distance training (walking, running, biking, etc.) [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]



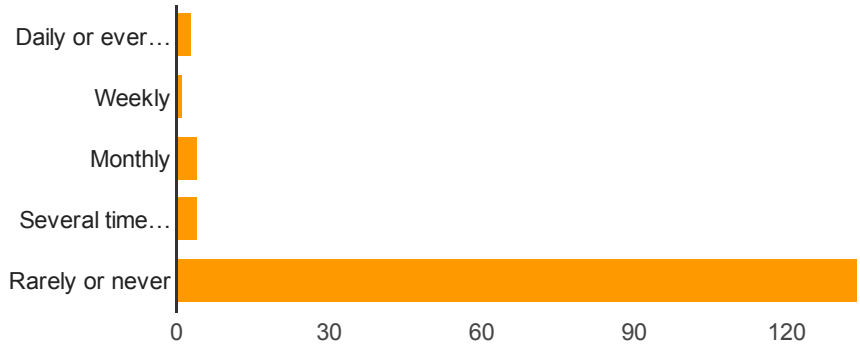
Several times a year	8	5.5%
Rarely or never	52	35.6%

Rollerblading [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]

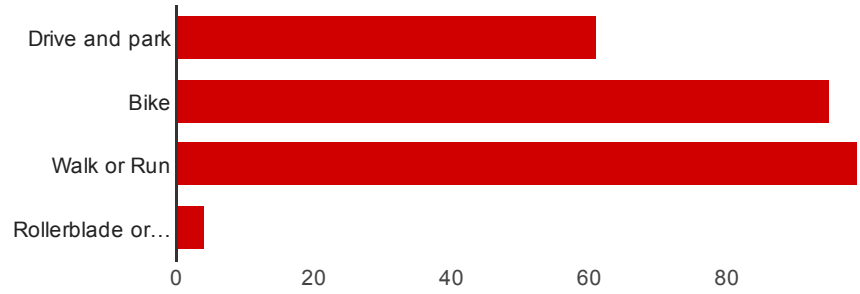


Daily or every other day	2	1.4%
Weekly	3	2.1%
Monthly	6	4.1%
Several times a year	9	6.2%
Rarely or never	126	86.3%

Skateboarding [5. How often, on average, do you use Delaware's multi-use paths for the following activities during fair weather (Spring through Autumn)?]

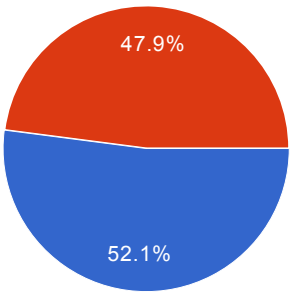


6. What are common ways you travel to Delaware's multi-use path system? Choose all that apply.



Drive and park	61	41.8%
Bike	95	65.1%
Walk or Run	99	67.8%
Rollerblade or Skatebooard	4	2.7%

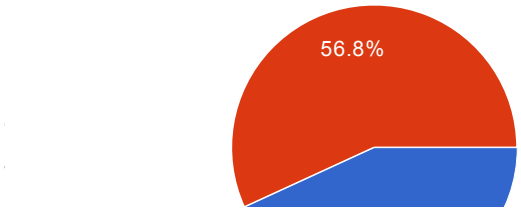
7. Do you use the path network during winter months?



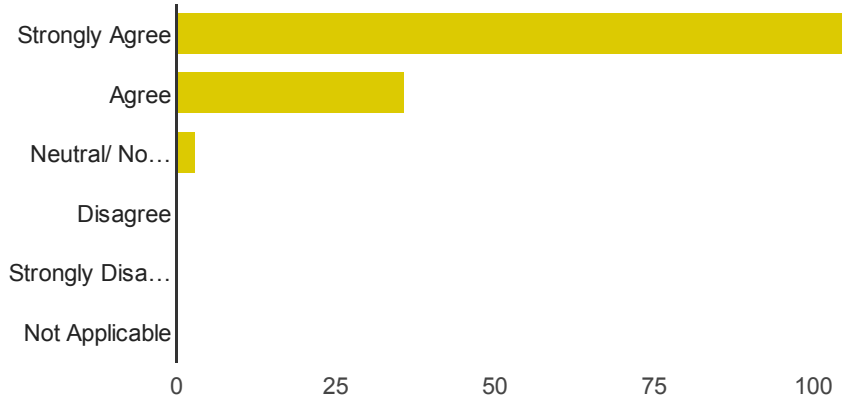
Yes	76	52.1%
No	70	47.9%

8. Do you use the path network at night?

Yes	63	43.2%
No	83	56.8%

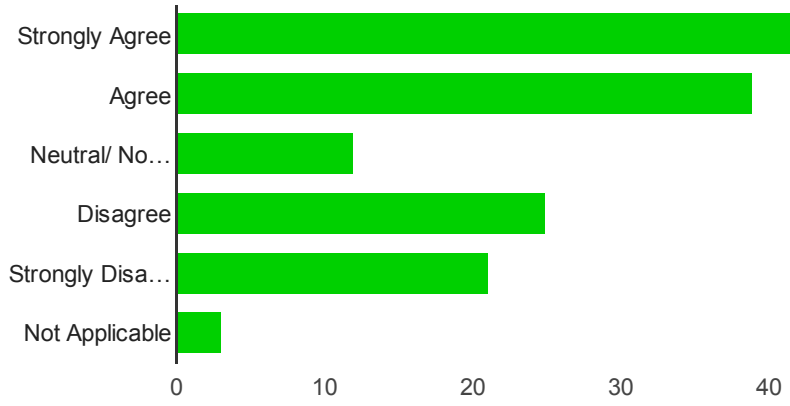


[9. Please express the degree statements.]



Strongly Agree	107	73.3%
Agree	36	24.7%
Neutral/ No Opinion	3	2.1%
Disagree	0	0%
Strongly Disagree	0	0%
Not Applicable	0	0%

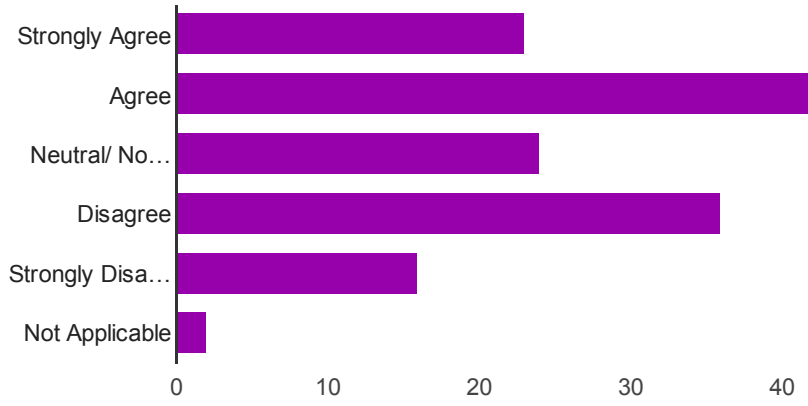
I can access the path network from my neighborhood [9. Please express the degree to which you agree or disagree with the following statements.]



Strongly Agree	46	31.5%
Agree	39	26.7%
Neutral/ No Opinion	12	8.2%
Disagree	25	17.1%

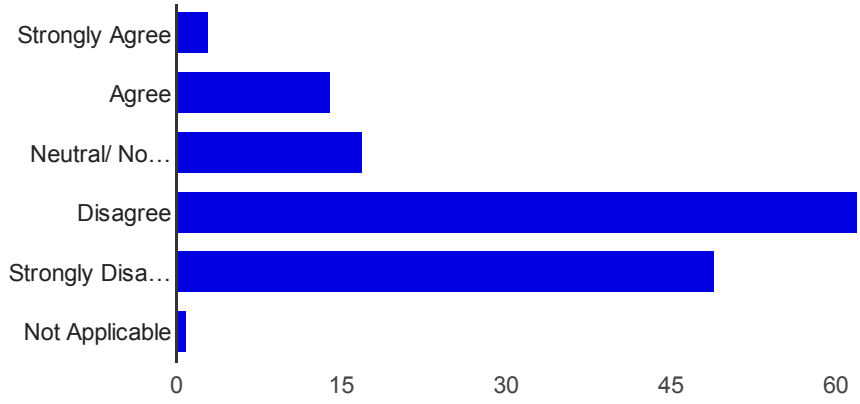
Strongly Disagree	21	14.4%
Not Applicable	3	2.1%

The path network helps me reach my desired destinations [9. Please express the degree to which you agree or disagree with the following statements.]



Strongly Agree	23	15.8%
Agree	45	30.8%
Neutral/ No Opinion	24	16.4%
Disagree	36	24.7%
Strongly Disagree	16	11%
Not Applicable	2	1.4%

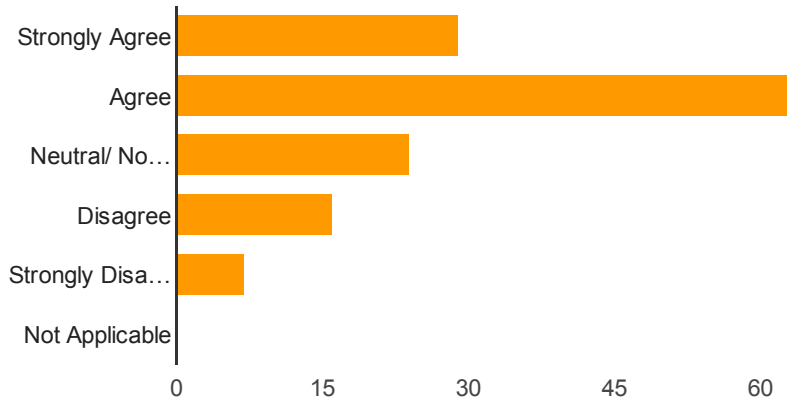
The path network is well connected [9. Please express the degree to which you agree or disagree with the following statements.]



Strongly Agree	3	2.1%
Agree	14	9.6%
Neutral/ No Opinion	17	11.6%

Disagree	62	42.5%
Strongly Disagree	49	33.6%
Not Applicable	1	0.7%

The path network is well maintained (pavement surface, snow removal, etc.) [9. Please express the degree to which you agree or disagree with the following statements.]



Strongly Agree	29	19.9%
Agree	70	47.9%
Neutral/ No Opinion	24	16.4%
Disagree	16	11%
Strongly Disagree	7	4.8%
Not Applicable	0	0%

10. Are there any specific problems with the path network we should be aware of?

Difficult to get from Cheshire to downtown

Path network needs to reach the east side all the way to Meijer

Path along Houk Rd is deteriorating and needs repaired in spots. Also during wet weather, a portion south of Cobblestone has standing water for a lengthy amount of time.

The City does not enforce snow removal from city sidewalks.

The path at Stratford woods would benefit from being connected to the path along 23 further north or at least connected to the parking lot at Wendy's.

The path network falls away at Delaware Community Plaza. (Walmart & Kroger strip mall). DANGEROUS to bike through here!! Please consider it a priority to connect bike trail between Stratford Woods and the neighborhood north of the shopping center. (By Chipotle)

There is a walking path in the Kensington Place subdivision that you can never access during the winter because it never is cleaned off

There need to be more interconnections between the paths that exist.

there is not a safe system for my children to ride their bikes to Mingo Park. nor is there a good east to west path system across town. Riding on the sidewalks is ok until one has to cross an intersection. The typical Delaware automobile driver does not yield to people on foot or bike until that person puts him/her self in the line of fire. You have to step out in front of the on coming car to get their attention. Riding on the street is safer for an adult but not for children.

Not really a network, yet. Disjointed requiring ridding on streets and in some cases sidewalks. I'm excited to see the proposed additions to the network

A "bike path" through a busy parking lot is ridiculous! Make a dedicated one that does not go through one of the worst parking lots in town! It is totally unsafe to walk #let alone push a stroller through there. Connect on the other side of liberty or through the neighborhood!

Absolutely no connectivity from Lexington Glen down Central to the Downtown or path network. This needs to be addressed.

From the east side such as Oakland nursery or Kensington Place, there is no safe access into town. There needs to be a safe sidewalk or path under or over railroad and into town. Partnering with the county to widen berms down 42 and 521 would also be very helpful. I like to bike in rural areas but there are no berms and steep ditches on roads out of town.

The bridges over 23 and Williams st are not safe at night. The bridges are always covered in graffiti and are not covered in a timely manor in the winter. I never feel safe running there. The path by the river to Mingo is always covered in water. In the winter, it's always iced over. I'm glad that I haven't fallen yet. There needs to be speed limit enforcement on Sandusky st, cars are zooming by so fast that they never stop for foot traffic, esp by the Hardware Exchange. In general people crossing the street walking or riding are seen as a nuance by auto traffic. People are getting run over by cars at William/Sandusky street- if enforcement isn't there, how can we expect it in other places? It would be great if we had a by-pass around Delaware for thru traffic. Thru traffic does not respect our town or its citizens and will only get worse with the building of the outlet malls.

Needs to be better connected!

There are areas where the path is too low and when it rains, puddles form and then ice over in the colder months. This happens on the short strip along 23 between Hawthorn and the Wendy's parking lot and also along 23 in front of the police station. It gets icy as you are coming up to Mingo from Central also.

connect the "cut thru" behind Carlisle Elementary there is a ~ 10 ft gap between the sidewalk and pavement.

There is no clear path from Carson farms to downtown or golf course

There is a lot of trash around the Rt. 23 overpass on the opposit side of OWU. There also needs to be lighting on those paths, such as solar lights

No bike lanes on the roads were the paths ends to its next beginning point

No access to Meijers on East side. Kroger on West side. Vary dangerous now. must be on busy street and Highways to get to these locations. Why build businesses before the infrastructure is there.

It would be nice to have the pathways connect before adding places. Houke Road should not have been added until sections of West William St going eastbound were connected into the city. The path east of Houke Road has a telephone pole at the end of it. I have to run either on the US36 berm (Yikes!) or the ditch to reach the path again near the bank - which also dead ends at a telephone pole. It would be a pretty funny comedy if it were not so frustrating. This is one reason I run along the berm most of the time. The paths do not provide a long enough connection from the west side into town.

There are too many dead ends. They dont all connect like they shoul. Plus finding a map of all the paths has been hard to find.

standing water/snow ice and pot holes

South end of path is poorly maintained, looks bad, and is crumbling. The "bike path" through the shopping center is a joke.

Cut through behind Carlisle Elementary needs repaired and extended 10 ft to tie into existing street

Getting to path from Stratford Rd is dangerous crossing 23 and riding on Stratford is very dangerous due to high level of traffic

The path network is very disjointed or disconnected. It is difficult to travel any distance on it. For example, I enjoy 25 mi bike rides, however, the path network is not connected enough for me to stay on the pathway for the whole distance, or even a large portion of the distance. The path network is difficult to access from the older neighborhoods in Delaware, you either have to drive and park or ride on the road. The sidewalks are not in great shape in many parts of the older neighborhoods so that is not a very good option for bicycling, roller blading, etc.

The path network uses sidewalks to connect it. These sidewalks are not maintained or are missing sections of them. Specifically alond Sandusky St. on the south side. I use the path network that runs between Hull Rd. and Wesleyan Woods. This section runs through a ravine. There is no lighting and I find it unsafe. There is no path network along Liberty Rd., which requires me to run along this road to connect to the path network. As of right now, there is only one path to get into town, which becomes very boring when you run several times a week year round. I drive to other path networks outside of Delaware the majority of the time, because Delaware's paths are limited.

Broken glass often in the downtown area. When there is a multi-use trail, often times people still use the street for running or cycling.

Crossing at Central is dangerous, wish there was a bridge or stop light. This intersection prevents a lot of people I know from using the path.

Additional access connecting all Delaware neighborhoods. While most neighborhoods offer sidewalks, bike paths provide additional access and are more aesthetically pleasing.

Path's in Locust Curve have cracks and low spots that fill with water. The pathway by the point 36/37 is disgusting and is hard to run on because it is dirt and uneven.

Along the Houk Rd path between Milbrook and Adele park there is a low grade curve that held water during the winter months and created a mud pit that should be repaired or built up. This issue could cause potential harm and or injury.

Crossing at Williams Street is dangerous. Crosswalk signage is minimal and traffic never stops -- nearly impossible to cross with children. Path switchbacks at Williams Street bridge is difficult to maneuver on a bike, and impossible if pulling our child trailer.

Need a connection from Kensington place to the west side, specially conger. It isn't safe for the kids to ride their bikes on the unpaved section of 36/37 under the railroad bridge

No problems that I can say except for the place where people die.

There could be safer crossings on main roads. Technically, I can access downtown and Mingo park, but not entirely safely with my kids on bikes and rollerblades. There are too few multi-use paths, so most of the paths seem too narrow to safely and courteously rollerblade around walkers. Currently, we often drive to Metro Parks to do these activities, would like to be able to do these activities in Delaware, accessing from our home (Northwest Neighborhood).

Glass fragments on Mingo section

The ugly plastic falling down fencing at W. Hull Dr. should embarrass the City of Delaware!

There are certain areas (i.e.: bridge over Rt. 23) that need pavement maintenance

More connectivity

The path network does not connect nearly enough communities, it seems to focus entirely on East/West with almost no north/south connectors to communities. The segments that do exist do not connect to each other making travel around the city on the path system almost impossible. You can't even get to the City High School or Middle School using the path system (even the proposed paths or recreation trails), who would be more likely to use it than students?

Not well connected in the newer parts of Delaware such as lantern chase and locust curve.

Snow removal - but not sure where the city starts and our neighborhood association picks up - so could be on our end of things. Also, paths aren't completely implemented - in Lantern Chase one can get to the Y, but harder to get to downtown without taking streets.

Not enough access

I have to go a long way before I can get to the paths. I live behind the fairgrounds. It is extremely difficult to cross main roads in town to get from one part of the path to another. Central Avenue is the worst.

There are no routes to the Polaris area or to the Dublin path network. It's taking your life into your own hands trying to ride on the road as the north-south routes are incredibly dangerous because of high traffic (US 23) and the alternate routes have little or no berm making it extremely easy to get hit by a motorist. (South Old State, Liberty Road, South Section Line).

Extend the path network between Hull drive and startford woods - people on hull have no safe way to access the park in Stratford woods.

Would like longer paths

Those of us on the east side have no access to these paths except by car. We would love to use them more, but we cannot connect unless we load bikes in a car. Since we have no racks or a pick up truck, we cannot access them for biking, though we would like to. Walking the paths is easier, but then we do drive there and park.

a map on the city website would be helpful. It would be nice to bicycle from N. Sandusky to Troy Rd. without having to use Central (suicidal) or Pennsylvania (unsafe).

Paths need to be maintained during warm months. Broken glass doesn't get removed. It's bad for bike tires and dig feet.

Too many disconnected sections. Delaware is not particularly bike friendly like other central Ohio towns.

Even a small gap from A to B makes some paths too dangerous and therefore the whole section is not visited by my family. some very nice paths have the gaps and it makes the whole distance hard to use.

large ice sheets and puddling along houk.

The crossing at Central is kind of dangerous.

Considering it is very dangerous to get from the Northwest side of town to down town (not even sidewalks on the sides of Central/37), this is the problem. I would love to be able to send my daughter to Mingo or the library, but she has to meander out of her way to get there.

Bikers are rude to runners and walkers.

connect the neighborhoods

Broken glass, litter, homeless persons or people loitering

I think WAY too much time / money has been sunk into this project already for a relatively few amount of people that use it..... There are other means throughout Delaware to travel. At any time, you can drive by one of the (empty) paths & find bikers & runners in the road that you have to maneuver around. Maybe money could be better spent educating Delaware's bikers on proper bike safety / road laws.....many fail to

signal, don't stop at intersections, and ride in groups across lanes of traffic

Most adult cyclists do not use the paths. They bike in the road and block traffic, often in groups.

I really wish it were better connected.

Some uneven surfaces, poor lighting, other areas are in need of repair. Lighting would be great. Mileage markers from one point to the next, etc could be implemented. Trash cans in outlying areas of the path would also be helpful.

Terrible transition around Winter St and getting to Mingo, not well marked and dangerous.

Would love a safe route for my children to use that could safely connect the Y, Mingo, the library and downtown.

I would just like access to downtown from Houk Rd.

Snow removal is sporadic at best. Understandably, roads have priority. Some trash containers here and there would be nice too.

Need safe connections to get from west side to downtown. Currently only sidewalks do this and they are narrow and not meant for this. Also crossing atCentral and Houk can be ddaunting. Many motorists are not accustomed to pedestrian traffic making it tricky. Additionally biking around downtown is a challenge. Not enough wiggle room .

I live on near downtown and it is very difficult to get to the YMCA

Nothing I can think of currently.

Gaps in the path network often mean you need to travel on very busy roads on your way to destinations.

IN the Glen Ross area we are disconnected from the rest of the City.

Certain parts of the bike path don't connect. I would also like them to connect to larger bikeways such as the heart of Ohio trail or a trail leading to the Columbus area. Perhaps the one off of old 315.

I would like to get to all areas of the city biking safely. I would like to get to the east end of the city safely from the west end, then I could bike to work. I work at NorthGate Churc by the freeway on 37. I don't feel safe traveling on 37 through the City. After you get out of town there is a lane I could bike on.

LACK OF EMPHYSIS ON TRANSPORTATION AS APPOSED TO RECREATION NO FINANCIAL SUPPORT FROM CITY. RELIANCE ON GRANTS ONLY IT SEEMS THAT ODOT GRANT REQUESTS ARE MINIMUAL. THE TRANSPORTATION DEPARTMENT SHOULD BE HANDLEING TRAIL DEVELOPMENT AND GRANT REQUESTS TO SHOW ODOT THE PATHS ARE TRANSPORTATION (THAT'S WHERE THE MONEY IS) BETTER COORDINATION WITH THE COUNTY TRANSPORTATION PLANNING

Multi-use Path Question

11. Please feel free to indicate why you do not use the Multi-use Path System

Don't know where it goes or how I connect to it.

Not Close.

Too far away - I live in NW neighborhood.

I am 65yo with chronic pain. And I do not want bike path on my property.

Does not go where I want it to

It's undesirable in my neighborhood. Not properly maintained.

It doesn't take me to the places I need to go and I think residents are not aware of the routes Available to them.

Does not extend from Lantern Chase to anywhere meaningful.

As an avid and experienced road cyclist, I feel that if I follow the law, ride predictably, and share the road respectfully, that riding the the streets is much safer and gets me to my destinations more quickly, and with less stopping and starting.

I live too far away

I don't know what these are.

it's not available where I live.

No good hook-up from home.

I tried a couple times, but since they don't connect or go to places that I want to go to, I stopped using them. Also, it was unsafe to take my kids on since parts of the system include going on busy roads and through walmarts parking lot.

Just use sidewalks

We live in Stratford Woods. My teenage son is primarily the one who could most benefit from more bike/walking trails. We are kind of cut off from the trails, as I don't think riding a bike or walking through the busy Walmart/Kroger shaping center is safe and that is the only way to get from our neighborhood to the bike path. For myself, I'd really like to see something put in place to allow pedestrian crossing 23 at Bob Evans.

Don't know about it.

Not close to my home at 6565 Dublin Road

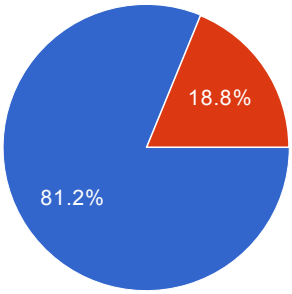
I would use if it was longer. I have double knee replacements so I ride my staationery bike 360 days a year. I only miss a few days. I ride on the road in Thompson Township. I would feel safer if I could be on a bike path versus the road. But, the length of the current bike path is not worth driving my bike into town to ride. I like to take it to INdian Lake and they have a pretty long bike path and they lead to not too busy roads. THey also have a fund raiser which I like to ride in. I would promote and support a bike path in the city or even in the county of Delaware. I feel it would be a wonderful addition.

None of it is close enough or connected to my house (Cheshire Crossing).

No idea where these are or that they exist or where they lead to

Bicycling

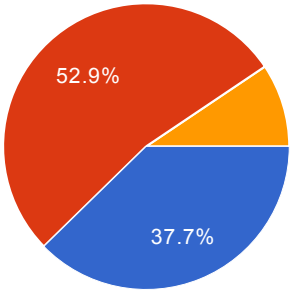
12. Are you a bicyclists?



Yes	138	81.2%
No	32	18.8%

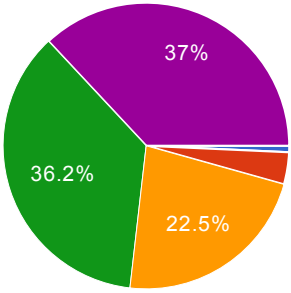
Bicycling Questions

13. Please pick the category that best reflects your skill and interest as a bicyclist.



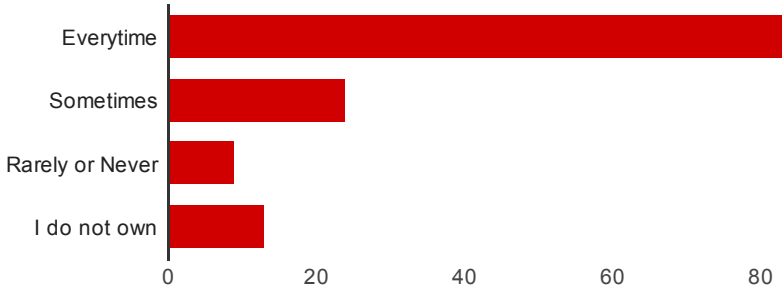
An experienced cyclist comfortable riding with traffic on busy city streets.	52	37.7%
A casual cyclists who rides on paths as well as quiet, neighborhood streets.	73	52.9%
A less confident or new bicyclist who prefers to ride on paths or sidewalks.	13	9.4%

14. How far do you ride your bike on a typical ride?



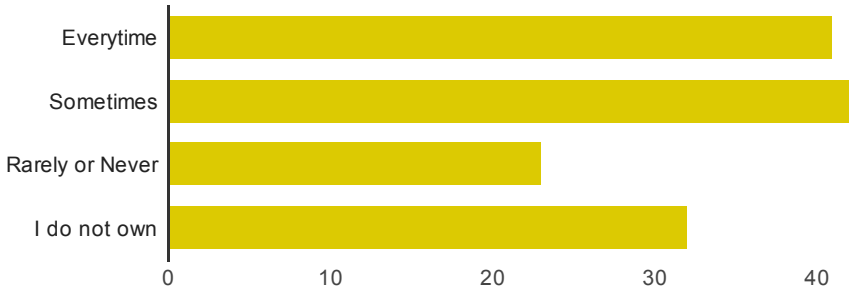
Around the block	1	0.7%
Less than a mile	5	3.6%
Several miles	31	22.5%
Three to 10 miles	50	36.2%
More than 10 miles	51	37%

Helmet [15. How often do you use the following safety equipment while riding a bike?]



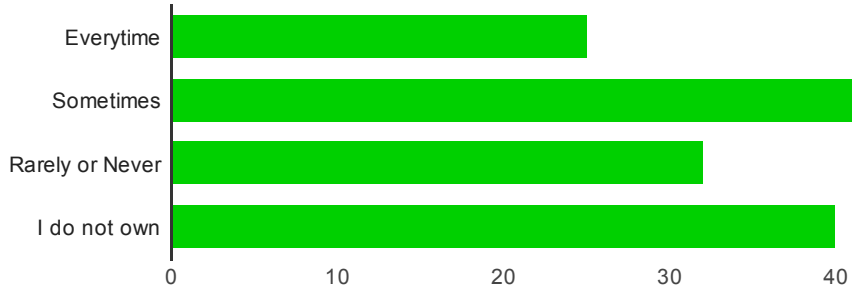
Everytime	92	66.7%
Sometimes	24	17.4%
Rarely or Never	9	6.5%
I do not own	13	9.4%

Taillight [15. How often do you use the following safety equipment while riding a bike?]



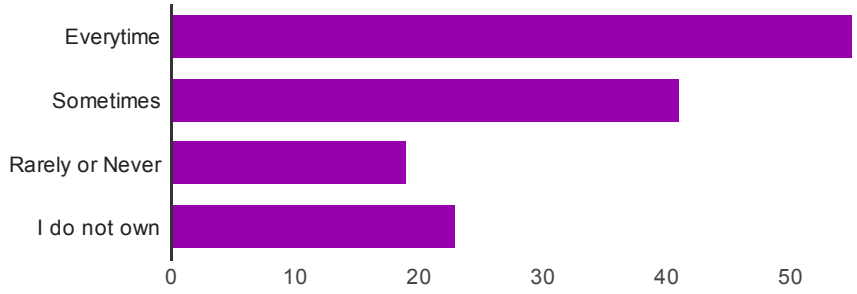
Everytime	41	29.7%
Sometimes	42	30.4%
Rarely or Never	23	16.7%
I do not own	32	23.2%

Headlight [15. How often do you use the following safety equipment while riding a bike?]



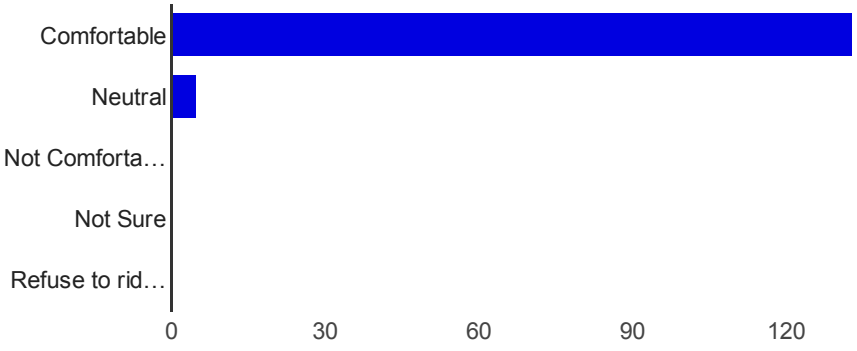
Everytime	25	18.1%
Sometimes	41	29.7%
Rarely or Never	32	23.2%
I do not own	40	29%

Light-colored clothing or reflective vest [15. How often do you use the following safety equipment while riding a bike?]



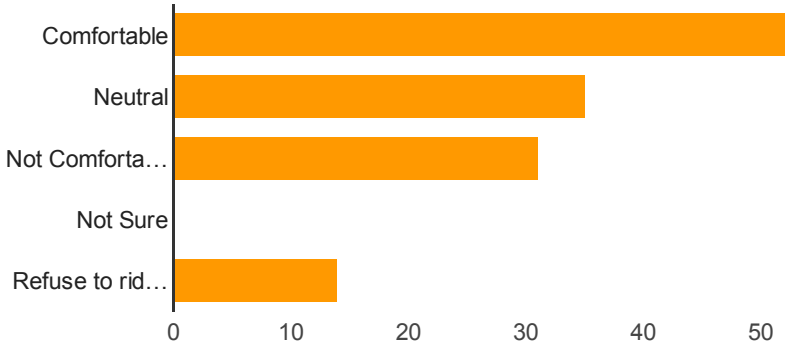
Everytime	55	39.9%
Sometimes	41	29.7%
Rarely or Never	19	13.8%
I do not own	23	16.7%

On paths [16. Where do you feel comfortable riding your bike? Select all that apply.]



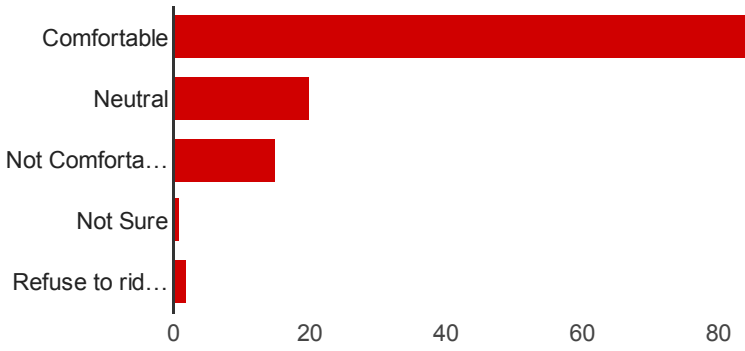
Comfortable	133	96.4%
Neutral	5	3.6%
Not Comfortable	0	0%
Not Sure	0	0%
Refuse to ride on	0	0%

On sidewalks [16. Where do you feel comfortable riding your bike? Select all that apply.]



Comfortable	58	42%
Neutral	35	25.4%
Not Comfortable	31	22.5%
Not Sure	0	0%
Refuse to ride on	14	10.1%

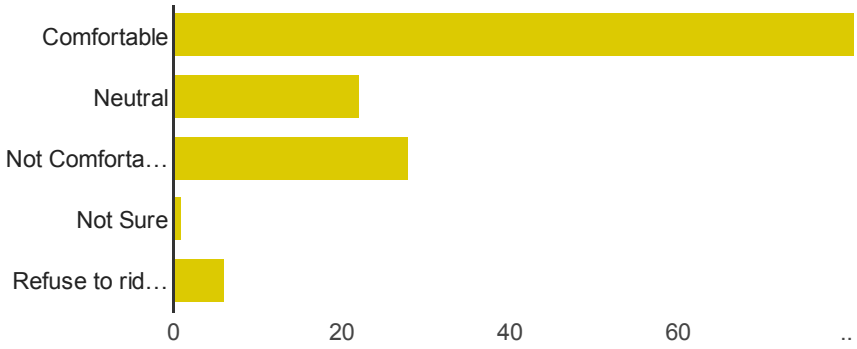
With traffic on neighborhood streets [16. Where do you feel comfortable riding your bike? Select all that apply.]



Comfortable	100	72.5%
Neutral	20	14.5%
Not Comfortable	15	10.9%

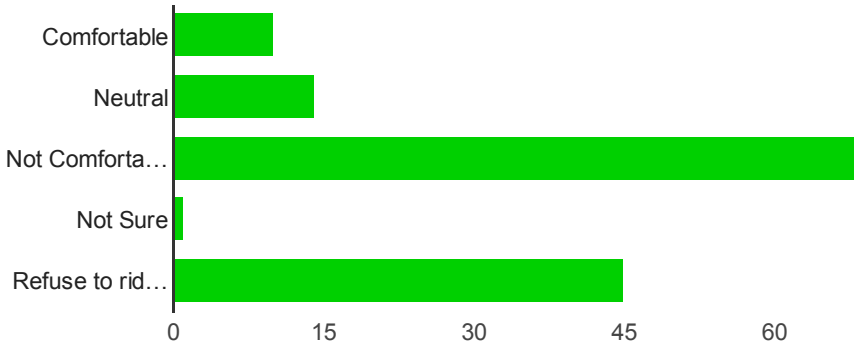
Not Sure	1	0.7%
Refuse to ride on	2	1.4%

With traffic on lower volume, collector streets like Winter Street [16. Where do you feel comfortable riding your bike? Select all that apply.]



Comfortable	81	58.7%
Neutral	22	15.9%
Not Comfortable	28	20.3%
Not Sure	1	0.7%
Refuse to ride on	6	4.3%

With traffic on higher volume, arterial streets like US-36 or SR-37 west of The Point [16. Where do you feel comfortable riding your bike? Select all that apply.]



Comfortable	10	7.2%
Neutral	14	10.1%
Not Comfortable	68	49.3%
Not Sure	1	0.7%
Refuse to ride on	45	32.6%

17. Any other suggestions which would help you (or others) feel more comfortable bicycling with traffic?

Paved path west of the point along 36/37 to Kensington place and surrounding areas.

Reliance on painted symbols on the roadway....like on Pennsylvania Ave 'not effective' to produce a safe bike way.

Bicycle lanes

Delaware drivers are notorious for hitting bicyclists and pedestrians. The paths are necessary if you aren't driving.

We need bike/walking paths similar to Westerville.

Separate bike lanes wide enough that cars can provide decent space.

Bike lanes

Increased bike routes/sharrows.

Would like a thru bike path from Houck to Downtown Delware via Central Avenue

A bike lane

Bike lanes, if not in place already

If we had designated bike lines I would feel more comfortable riding on busy roads. Even on country roads I have almost been run on and been forced into the ditch because I was biking. People are prejudiced against bicyclists as silly as it seems. We are yuppy or do-gooders. I'm your neighbor. So people need to be educated as well.

dedicated bike lanes would be nice where space is available

Driver awareness of bicycle rules/safety. Many drivers view cyclists on the road as a nuisance and expect that we should be riding on the sidewalk. There are also drivers that do not provide adequate clearance when passing - or think its fun to scare cyclists. This is extremely frustrating and unsafe. As a cyclist, I am always cautious and courteous. I expect the same from motorists.

Many parts of of the older neighborhoods, the roads are very narrow or have parked cars which makes it difficult for other vehicles to see you. Wider streets and dedicated bike lanes would make it more comfortable to ride on the streets. Enforce cyclists rights to the road.

Designated marked bike paths with bike right of ways

Designated bike lanes are a must in high-traffic areas. Driver education would be helpful too; motorists behave as if they own the streets and roads.

Bike lanes on the street where there is room, along sides of the streets that don't allow parking.

More room on the road! Some road there is no room for cyclists. More bicycle-friendly roads, especially where new construction or new roads are being built.

It would be better, though not ideal, if Ohio had more bike lanes, but the streets here are more narrow.

No, I don't trust that other drivers are paying attention to see a bicycle.

I would love an alternative to sidewalk for up central from my northwest neighborhood...

Bike lane on the roadways

Education and awareness training for cyclists AND automobiles.

Designated share ways on busy arterial streets would be huge advantage. The highway department should be more sensitive to the needs of cyclists. Pouring the concrete berm on West Central east of Houk Road was terrible.

Provide auto drivers cycling related laws so there is a clear direction that states bicycles belong on the road and have a right to the road and that the side walk is not an appropriate location to ride. Hopefully this law will be supported by local law enforcement. Additionally, the both groups need to get along. But auto drivers maim and kill when they hit someone. I've never heard of a case where a cyclist ran into a car and did injury to the occupants.

I ride on Williams St until I cross Sandusky going west to the Community Market. From there, traffic is CRAZY with people merging with the upcoming turn into 42. I always ride on the sidewalk there because there is no safe place for me to ride. Cars do not look out for cyclists. Bike lanes thru downtown would be helpful. There should be more bike parking downtown- esp on the corner of William/Sandusky st. (You know, where the fountain is that hasn't run for a year now!)

Bike lanes running parallel to the streets. Additional signs to watch for cyclists would be helpful as well.

bike lanes

if you could get the typical Delaware auto driver to respect the rights of those on bicycles...

I wish Delaware had a path network that would connect the paths on the west side to the paths on the east side downtown (Henry Street), and also a path that would cut through from Merrick Blvd to Troy Road/Smith Park. Also, it would be nice if we had bike lanes on our major roads or a recommended bike route through downtown.

require tree limbs on sidewalks to be trimmed 7' high.

The signs on Pennsylvania are nice.

Bike lanes (if possible). Pennsylvania Ave used to have more room and the shoulder acted as a bike line which felt much safer. The shared arrows now on the road do not feel as comfortable. Sandusky with no shared lanes can also be a pain when trying to access the path.

Where sidewalks are used, trees and bushes need to be cut back to compensate for the extra height.

Designated lane

The answers to these questions above reflect my comfort levels, however, this would not be the case if I'm bicycling with my daughter (age 11). I think that a bike lane with

adequate signage in the major streets would benefit families who want to bike downtown to get ice cream or dinner, etc.

5' - 6' Bike lanes on roads are great when the width of the roadway permits.

Teaching drivers the rules of the road. To many times I have seen drivers nearly hit pedestrians in marked cross walks crossing with the correct walk signs.

Dedicated bike lanes would help

Access paths Meijers on East side and Kroger on West side. Vary dangerous now.

Having a wider area to the right of traffic (a bike lane) would encourage more cycling and may be easier than laying the asphalt paths?

see previous comment

it would be nice for them all to connect

Dedicated bike areas on the berm with rumble strips between the road and the biking lane to alert distracted drivers when they are wandering into the bike lane.

Bike lanes would be nice.

Motorists are not aware of laws for sharing the road; I would never allow child to ride on the street

If there was a designated bike lane.

campaign to local motorist abput cycle awareness

More paths strictly for recreational purposes. Roadways with traffic are too dangerous for any amount of use. Drivers using cell phones are a huge problem

Real bike lanes with a curb between the bike lane and the car lane. I was in Europe and in cities like Austria and Amsterdam, bicycling is the primary mode of transportation. They have a great set up there where bikes have their own lane which is separated by a small curb to prevent cars from wandering into the bike lane. Bikes also have the right of way there over pedestrians and have equal right of way as cars.

SR-37 Central Avenue is not safe for bicycling.

Signage for motorists to remind them of bike traffic.mayne a free course

Need to have switches on busier intersections to control traffic to permit safe crossing of intersections. Concerned about cyclists on sidewalks because of safety for pedestrians which is for whom sidewalks are designed.

Have wider street berms and signage.

All multi use paths need to connect through out the city

Would love to see a safe path from Kensington Place towards Conger Elementary, which could also lead into downtown

Wider side lane on us 23

Bike paths/multi-use paths are fine for tooling around with the kids at slow speeds, but actual dedicated bike lanes are really the only efficient way to travel in an urban/suburban environment.

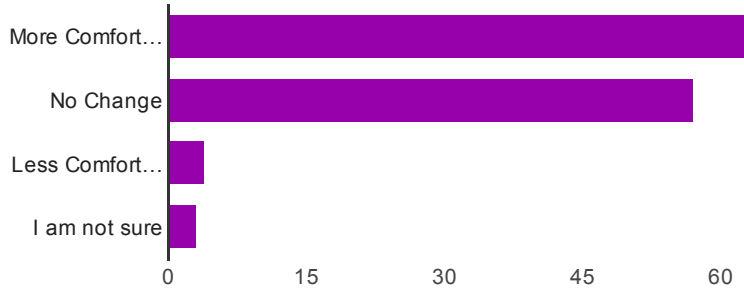
Bike paths on roads and streets

Bike symbols similar to what is on Pennsylvania Avenue are great

designated bike lanes., or at least mark the right most lane with a bike symbol even if it is for cars too

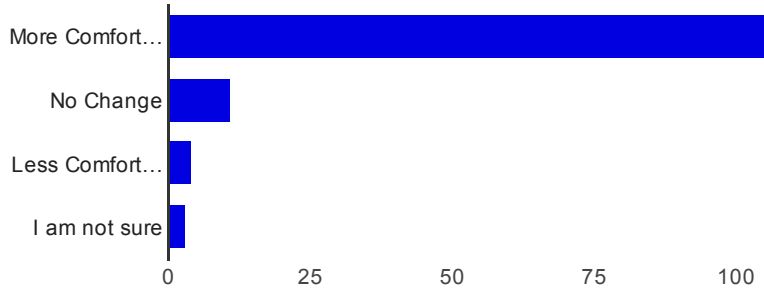
Potential Recommendations for Bicyclists

Signs and pavement markings instructing motorists to "share the road" [18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets?]



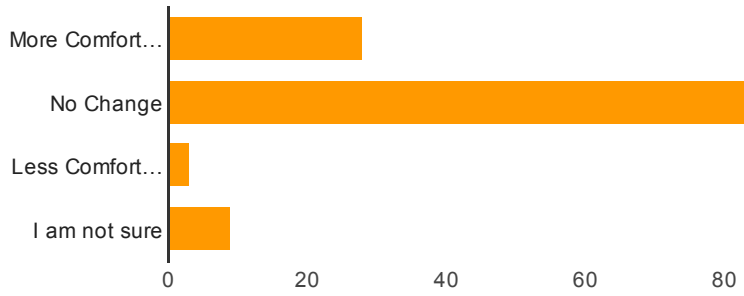
More Comfortable	74	53.6%
No Change	57	41.3%
Less Comfortable	4	2.9%
I am not sure	3	2.2%

Dedicated space on the road for bicyclists (e.g. bike lanes) [18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets?]



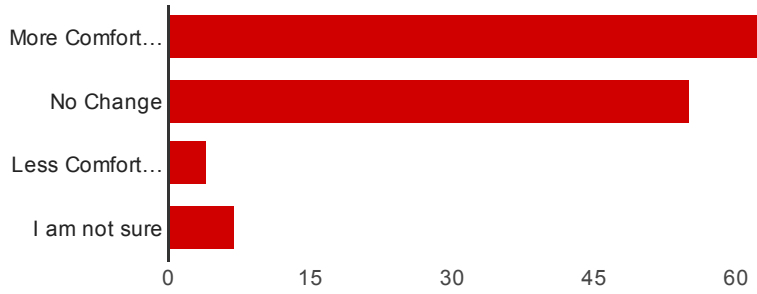
More Comfortable	120	87%
No Change	11	8%
Less Comfortable	4	2.9%
I am not sure	3	2.2%

Bike safety and skills class on how to ride with traffic [18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets?]



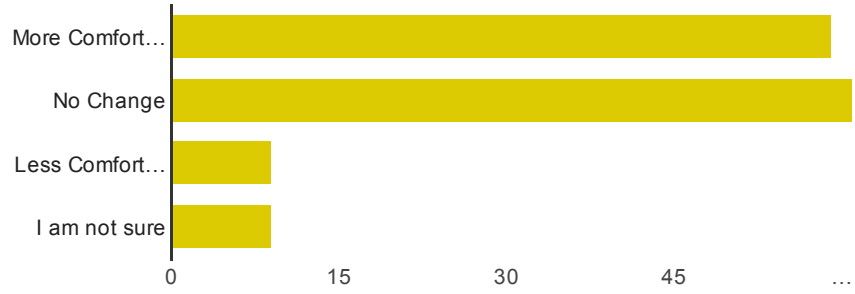
More Comfortable	28	20.3%
No Change	98	71%
Less Comfortable	3	2.2%
I am not sure	9	6.5%

3' minimum passing distance ordinance and reminder signage for motorists [18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets?]



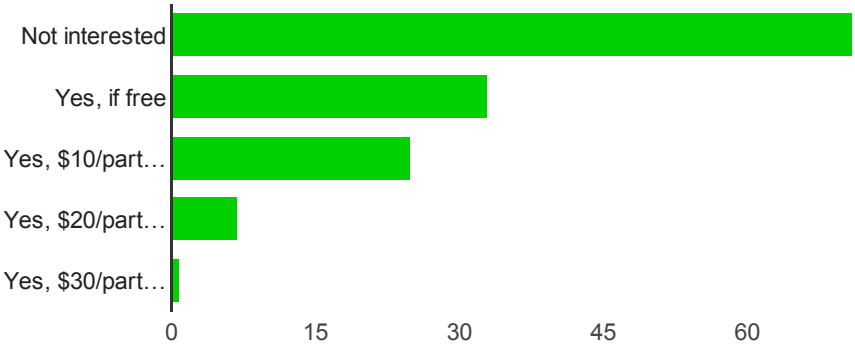
More Comfortable	72	52.2%
No Change	55	39.9%
Less Comfortable	4	2.9%
I am not sure	7	5.1%

Riding in groups with other bicyclists [18. What, if any of the following improvements or activities might make you more comfortable riding bicycles on city streets?]



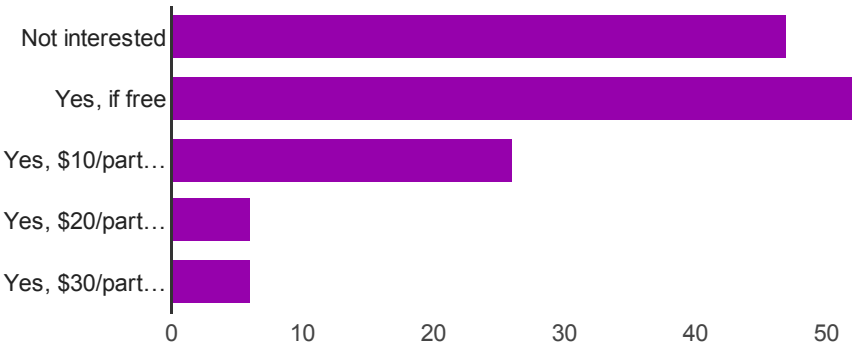
No Change	61	44.2%
Less Comfortable	9	6.5%
I am not sure	9	6.5%

For an adult [19. If a bike safety and skills class were offered, would you participate and what do you feel is a fair price for such a course?]



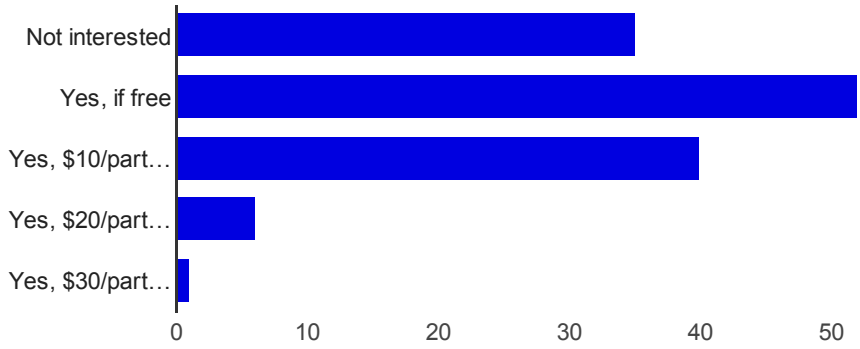
Not interested	71	51.4%
Yes, if free	33	23.9%
Yes, $10/participant	25	18.1%
Yes, $20/participant	7	5.1%
Yes, $30/participant	1	0.7%

For a family [19. If a bike safety and skills class were offered, would you participate and what do you feel is a fair price for such a course?]



Not interested	47	34.1%
Yes, if free	52	37.7%
Yes, $10/participant	26	18.8%
Yes, $20/participant	6	4.3%
Yes, $30/participant	6	4.3%

For a child [19. If a bike safety and skills class were offered, would you participate and what do you feel is a fair price for such a course?]

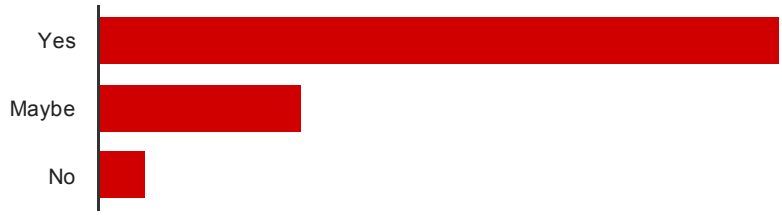


Not interested	35	26.1%
Yes, if free	52	38.8%
Yes, $10/participant	40	29.9%
Yes, $20/participant	6	4.5%
Yes, $30/participant	1	0.7%

Bike racks, unattended [20. If bike parking was provided for festivals and other events, would you use the following options?]

Yes	77	55.8%
Maybe	50	36.2%
No	11	8%

Bike racks or bike coral attended by volunteers [20. If bike parking was provided for festivals and other events, would you use the following options?]



Yes	101	73.2%
Maybe	30	21.7%
No	7	5.1%

Non-bicyclists

21. If desired, please share why you do not ride a bicycle.

Currently I rarely bike as my children are small and I fond running with a jogging stroller easier than biking with a trailer but once they're old enough to bike for distances we'll definitely utilize the paths asmall a family.

I prefer to walk or run, but I bike occasionally.

I do not have one right now

Prefer running.... Paths not extensive or scenic enough to bike for exercise

Chronic back pain.

I don't feel safe riding on the road. I am close enough to walk to most destinations.

I am a runner

ease of use in Delaware. Roadways with too much traffic and are unsafe.

I have to cross too many major intersections. I do bike some but I enjoy running more for exercise and use the paths for that.

Don't have a good one. If paths connected west side to downtown might ride more.

I don't own one at the moment.

I never learned. I grew up in a place that didn't have sidewalks or trails to learn how to ride one.

No really dedicated bike path

Do not own

Lazy

Streets have too much traffic and I don't close to a trail.

I just moved into a home with path access and bought a bike. I hope to ride recreationally in the near future.

I am purchasing one soon, but do not currently own one.

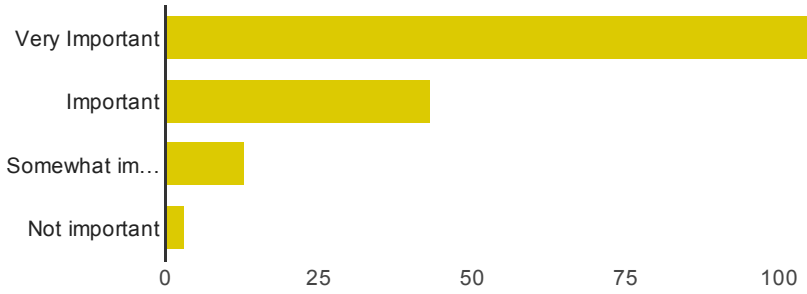
Traffic - drivers in town not particularly courteous to bikers and there are no designated bike lanes in town.

I don't like biking on roads, and the path network is not extensive enough tow warrant bicycle riding for exercise.

I prefer to run. I will bike with the kids but if I'm going out by myself, it's always to run.

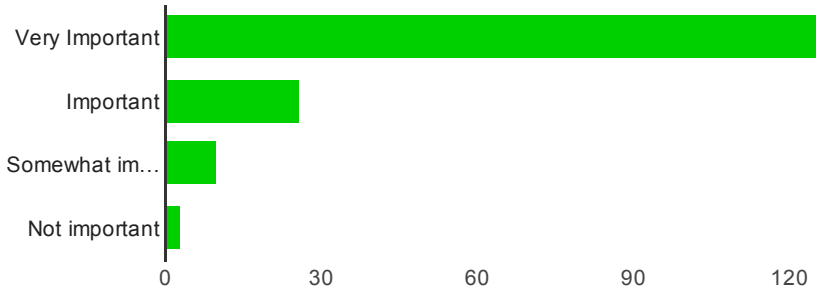
Potential Recommendations and Priorities

Maintenance of the path system [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



Very Important	111	65.3%
Important	43	25.3%
Somewhat important	13	7.6%
Not important	3	1.8%

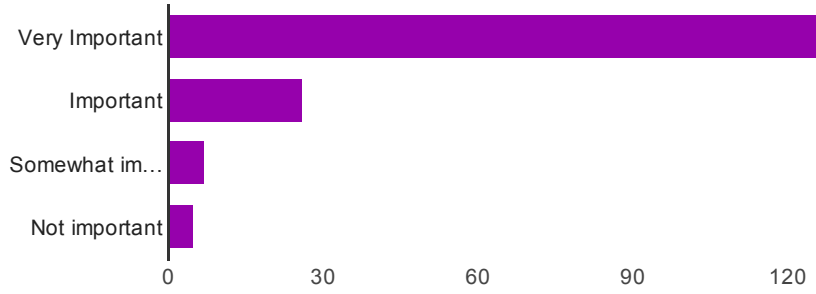
Closing short gaps in the existing system [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



Very Important	131	77.1%
Important	26	15.3%
Somewhat important	10	5.9%

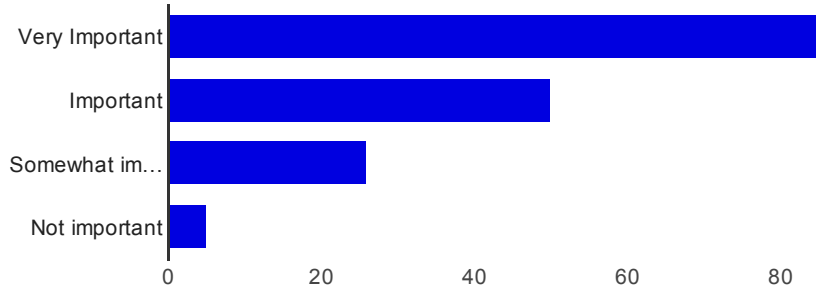
Not important	3	1.8%

Expanding the system across the city [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



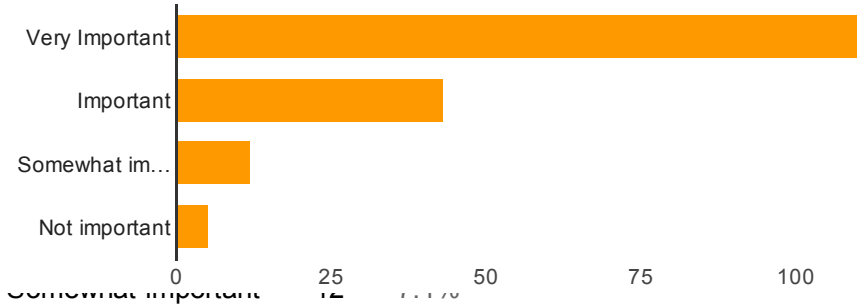
Very Important	132	77.6%
Important	26	15.3%
Somewhat important	7	4.1%
Not important	5	2.9%

Making streets safer to ride on [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



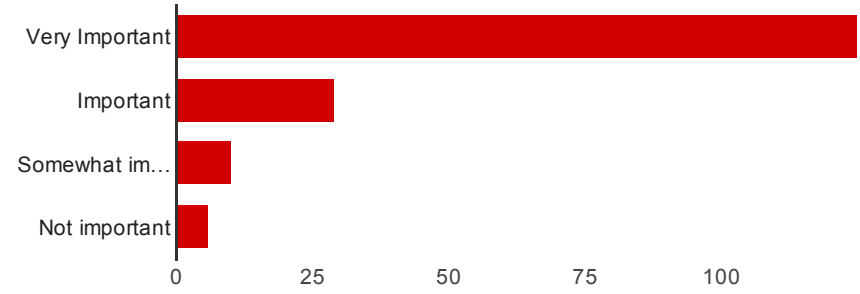
Very Important	89	52.4%
Important	50	29.4%
Somewhat important	26	15.3%
Not important	5	2.9%

Connecting the system to nearby neighborhoods [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



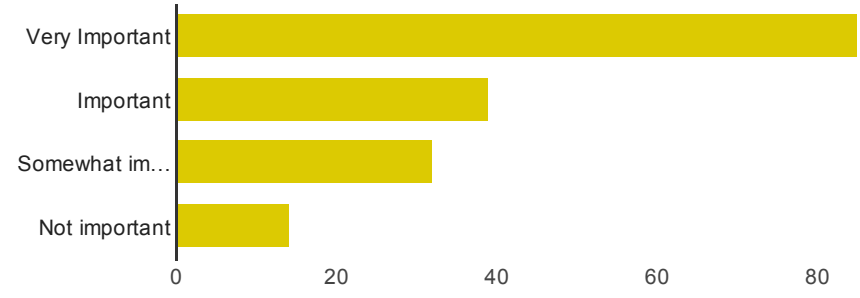
Not important	5	2.9%

Connecting the system to Downtown [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



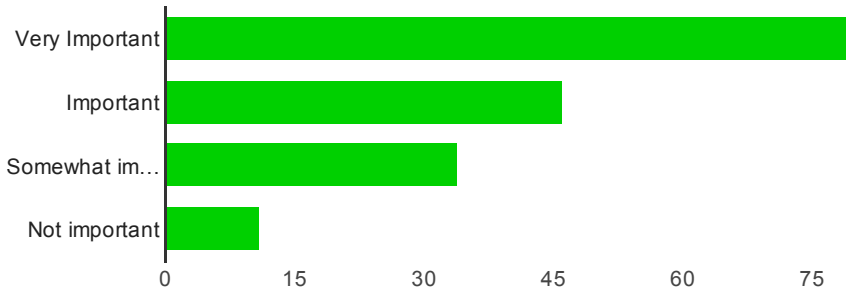
Very Important	125	73.5%
Important	29	17.1%
Somewhat important	10	5.9%
Not important	6	3.5%

Connecting the system to the YMCA [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



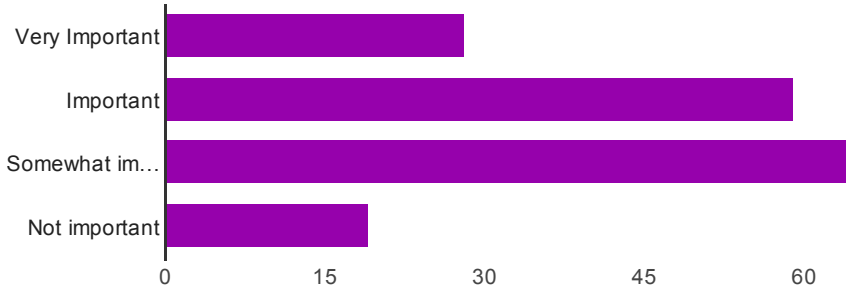
Very Important	85	50%
Important	39	22.9%
Somewhat important	32	18.8%
Not important	14	8.2%

Connecting Delaware to nearby cities and parks [22. Please indicate how important the following objectives are for improving mobility in Delaware.]



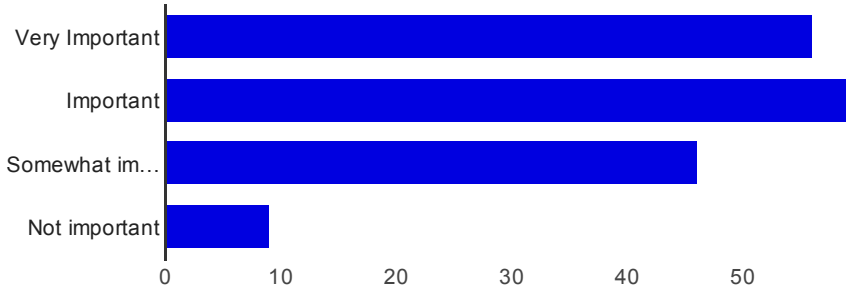
Very Important	79	46.5%
Important	46	27.1%
Somewhat important	34	20%
Not important	11	6.5%

Bicycling safety and skills programs [22. Please indicate how important the following objectives are for improving mobility in Delaware.]

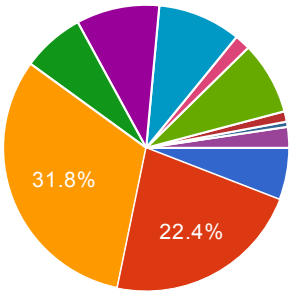


Very Important	28	16.5%
Important	59	34.7%
Somewhat important	64	37.6%
Not important	19	11.2%

Placing more bike racks at destiniations [22. Please indicate how important the following objectives are for improving mobility in Delaware.]

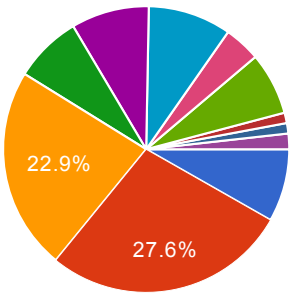


23. Of the above objectives, which would be your first priority?



Maintenance of the path system	10	5.9%
Closing short gaps in the existing system	38	22.4%
Expanding the system across the city	54	31.8%
Making streets safer to ride on	12	7.1%
Connecting the system to nearby neighborhoods	16	9.4%
Connecting the system to downtown	16	9.4%
Connecting the system to the YMCA	3	1.8%
Connecting Delaware to nearby cities and parks	14	8.2%
Bicycling safety and skill programs	2	1.2%
Placing more bike racks at destinations	1	0.6%
Other	4	2.4%

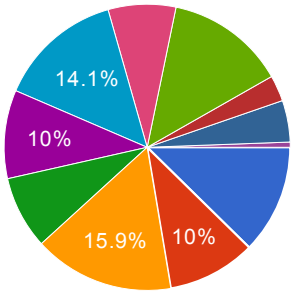
24. Which would be your second priority?



Maintenance of the path system	14	8.2%

Closing short gaps in the existing system	47	27.6%
Expanding the system across the city	39	22.9%
Making streets safer to ride on	13	7.6%
Connecting the system to nearby neighborhoods	15	8.8%
Connecting the system to downtown	16	9.4%
Connecting the system to the YMCA	7	4.1%
Connecting Delaware to nearby cities and parks	12	7.1%
Bicycling safety and skill programs	2	1.2%
Placing more bike racks at destinations	2	1.2%
Other	3	1.8%

25. Which would be your third priority?



Maintenance of the path system	21	12.4%
Closing short gaps in the existing system	17	10%
Expanding the system across the city	27	15.9%
Making streets safer to ride on	14	8.2%
Connecting the system to nearby neighborhoods	17	10%
Connecting the system to downtown	24	14.1%
Connecting the system to the YMCA	13	7.6%
Connecting Delaware to nearby cities and parks	23	13.5%
Bicycling safety and skill programs	5	2.9%
Placing more bike racks at destinations	8	4.7%
Other	1	0.6%

Maintenance of the existing system [26. While City officials desire to find grant sources for large projects, how supportive are you of spending City tax dollars on the following objectives?]

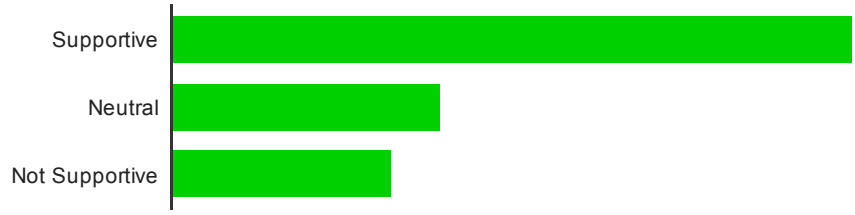
Closing small gaps in the existing system [26. While City officials desire to find grant sources for large projects, how supportive are you of spending City tax dollars on the following objectives?]

Supportive	139	81.8%
Neutral	24	14.1%
Not Supportive	7	4.1%

Expanding the system across Delaware [26. While City officials desire to find grant sources for large projects, how supportive are you of spending City tax dollars on the following objectives?]

Supportive	145	85.3%
Neutral	16	9.4%
Not Supportive	9	5.3%

Expanding the system to nearby cities and places [26. While City officials desire to find grant sources for large projects, how supportive are you of spending City tax dollars on the following objectives?]

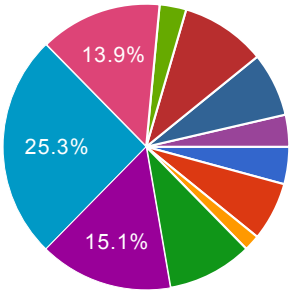


Supportive	99	58.2%
Neutral	39	22.9%
Not Supportive	32	18.8%

Priority Corridors

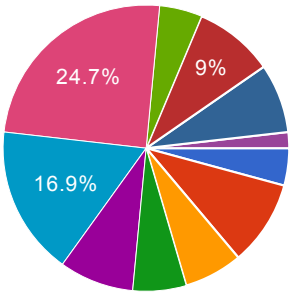
The exhibit below shows potential corridors along which multi-use paths or on-road shared routes could be implemented.

27. Considering the exhibit above, which corridor is your first priority?



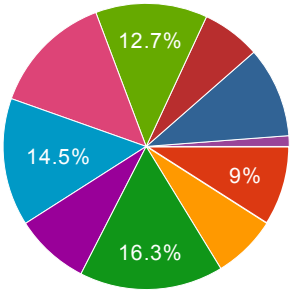
Route 1: Channing St/Vernon Ave Bike Boulevard	7	4.2%
Route 2: Bowtown Rd/SR-37/Winter St	11	6.6%
Route 3: Winter St Bike Boulevard	3	1.8%
Route 4: Liberty St Bike Boulevard	16	9.6%
Route 5: Troy Rd/Merrick Blvd	25	15.1%
Route 6: Delaware Run	42	25.3%
Route 7: YMCA/Rail with Trail Extension	23	13.9%
Route 8: Olentangy St/S Sandusky St	5	3%
Route 9: US-23/Walmart Link	16	9.6%
Route 10: US-23 - Walmart to Cheshire	12	7.2%
Other	6	3.6%

28. Considering the exhibit above, which corridor is your second priority?



Route 1: Channing St/Vernon Ave Bike Boulevard	7	4.2%
Route 2: Bowtown Rd/SR-37/Winter St	16	9.6%
Route 3: Winter St Bike Boulevard	11	6.6%
Route 4: Liberty St Bike Boulevard	10	6%
Route 5: Troy Rd/Merrick Blvd	14	8.4%
Route 6: Delaware Run	28	16.9%
Route 7: YMCA/Rail with Trail Extension	41	24.7%
Route 8: Olentangy St/S Sandusky St	8	4.8%
Route 9: US-23/Walmart Link	15	9%
Route 10: US-23 - Walmart to Cheshire	13	7.8%
Other	3	1.8%

29. Considering the exhibit above, which corridor is your third priority?



Route 1: Channing St/Vernon Ave Bike Boulevard	0	0%
Route 2: Bowtown Rd/SR-37/Winter St	15	9%
Route 3: Winter St Bike Boulevard	12	7.2%
Route 4: Liberty St Bike Boulevard	27	16.3%
Route 5: Troy Rd/Merrick Blvd	14	8.4%
Route 6: Delaware Run	24	14.5%
Route 7: YMCA/Rail with Trail Extension	23	13.9%
Route 8: Olentangy St/S Sandusky St	21	12.7%
Route 9: US-23/Walmart Link	11	6.6%

Route 10: US-23 - Walmart to Cheshire	17	10.2%
Other	2	1.2%

Please feel free to provide any other comments on proposed routes

Need more auto parking downtown, get rid of all of the no turn on red signs around town.

Thank you!

I would like to be able to get from the west side of town/YMCA area to downtown

Need more route options on the south side of town along Liberty Rd.

Route 6 and 7 would be awesome. Route 6 would get a lot more access to the YMCA.

A connector from behind Meijer/Office Max to Nutter Farms/Kroger DC to open up better employment access.

Would like to see more paths to parks along O'Shaugheassy and Dublin Rd. Like Concord park and Nature preserves.

I live in Stratford Woods and there is a small trail up to the Wendy's parking lot and then I have to run through that lot and through the Kroger parking lot and across two lanes of traffic and then along the road to get over to the trail again. I do it but it's always scary going through there and I don't like to do it with the kids. I would love it if Stratford Woods were connected to the existing bike trail along 23!

Would love to ride to Gallant Woods and Farm on Buttermilk Hill rd

Sunbury connection

please fix and maintain what we have before expanding the path.

Thank you for your efforts! An active city is a successful city.

It seems like a no brainer that the most disconnected part of the City is the Cheshire Crossing area, which seems to be next up for some regional investment by the City given the recent investments to parks and the YMCA in other areas of town and none of that going to that Southeast areas two parks or other public areas. We're paying taxes too!

PRESIDENT HAS BEEN ESTABLISHED FOR A BIKE PATH IN A LOW USE ACTIVE RAIL CORRIDOR. EXCEPT FOR THE BRIDGE OVER THE NORTH-SOUTH RAIL LINE, THE ROUTE TO THE Y SHOULD BE RELATIVELY CHEAP AND WITH MINIMUM OF LOCAL WINING THE HOUK ROAD TO THE GOLF COURSE ALONG DELAWARE RUN ALSO LOOKS EASIER THAN.MOST. THE EXTENSION TO DOWNTOWN WOULD FACE MORE OPPOSITION FROM LAND OWNERS BUT CLEARANCE UNDER THE RAILROAD IS ALREADY THERE.

Connect from Liberty Twp into Delaware;maybe by Sawmill Parkway extension from SR42. Other from Chapman Road.

The Delaware Run trail is controversial and should be taken off the table. Bike trails along W. Central (37) and W. William (36) would be quicker to get to and from school

and work.

Would like to see it come out to Thompson Township.

Lots of improvements can be made within the city. However, branching out of the city would be a major improvement. There aren't any paths for those who want to put in a lot of miles for exercise without having to deal with traffic. It would also allow people to use their bikes for transportation outside of the city limits.

No to Delaware Run.

I would like to see Delaware focus on creating more scenic paths, perhaps following river or connecting to Stratford Ecological Center or something. Our paths are convenient and well-maintained, but they're not very scenic

Thanks ~~ mOngO

Our children need crosswalks/stop signs on Liberty street so they can bike across Liberty street to school safely.

Close the gaps from Houke Rd to the sidewalk east of the Grace Community School.

I hope that the city will consider expanding multi-use paths in Delaware and create safe pathways to those. Thanks!

Route 6, along the Delaware Run, does not make any sense. It is a low lying area prone to flooding, freezing in the winter, etc. This would make it extremely difficult to maintain the walkway. Also, this is would be a back entrance to many private homes and is a security risk. Additionally, this is a feeder into the Olentangy River, construction along this would create an environmental hazard. This route should be removed from consideration.

Thank you for the survey!

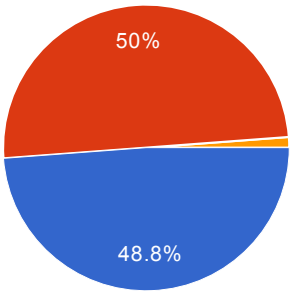
I see no connector proposed from Houk to downtown via Central - just on the William Street side. Would be nice to have two connectors that ran E/W like Central and William do.

Would love a cross at RT 23 to get from Pollock Rd or Stratford Rd to Chapman Rd. would also like a safe route from town to Deer Haven--path or Kane in Liberty would be nice. A safe route to Smith Park would also be nice. & a link from Delaware to Hills Market/olentangy trail would also be nice.

A bike path on W Central between the railroad tracks (Can Opener) and Houk to Lantern Chase would make more sense than Delaware Run. Maintaining bike paths along the Run will be difficult as it is flood plain area. Creating Multi use path is necessary along Central Avenue to access businesses.

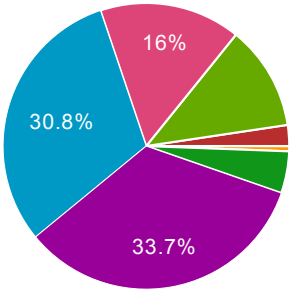
Demographic Information

30. Please select your gender



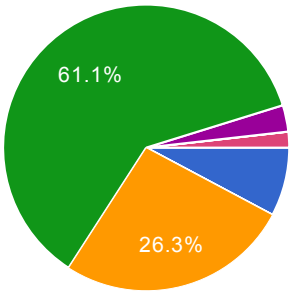
Male	82	48.8%
Female	84	50%
Prefer Not to Answer	2	1.2%

31. Please choose the range of ages which includes your age.



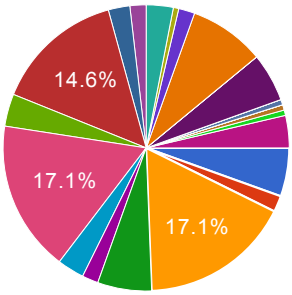
Age 0-12	0	0%
Age 13-17	0	0%
Age 18-22	1	0.6%
Age 23-29	8	4.7%
Age 30-39	57	33.7%
Age 40-49	52	30.8%
Age 50-59	27	16%
Age 60+	20	11.8%
Prefer Not to Answer	4	2.4%

32. Choose the category that best reflects your living situation



Living with parents	0	0%
Prefer Not to answer	3	1.8%

33. Use the map below to find your residence (else, your place of work) and note which number is closest to this location. Select that number (or an appropriate option) from the following list.

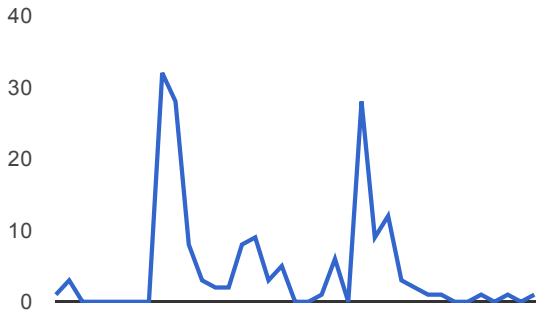


1	9	5.4%
2	3	1.8%
3	28	16.7%
4	10	6%
5	3	1.8%
6	5	3%
7	28	16.7%
8	6	3.6%
9	24	14.3%
10	4	2.4%
11	3	1.8%
12	5	3%
13	1	0.6%
14	3	1.8%
15	14	8.3%
16	0	0%
17	9	5.4%
18	0	0%
19	1	0.6%

20	0	0%
21	1	0.6%
I do not live or work in the City of Delaware.	1	0.6%
Prefer Not to Answer	6	3.6%

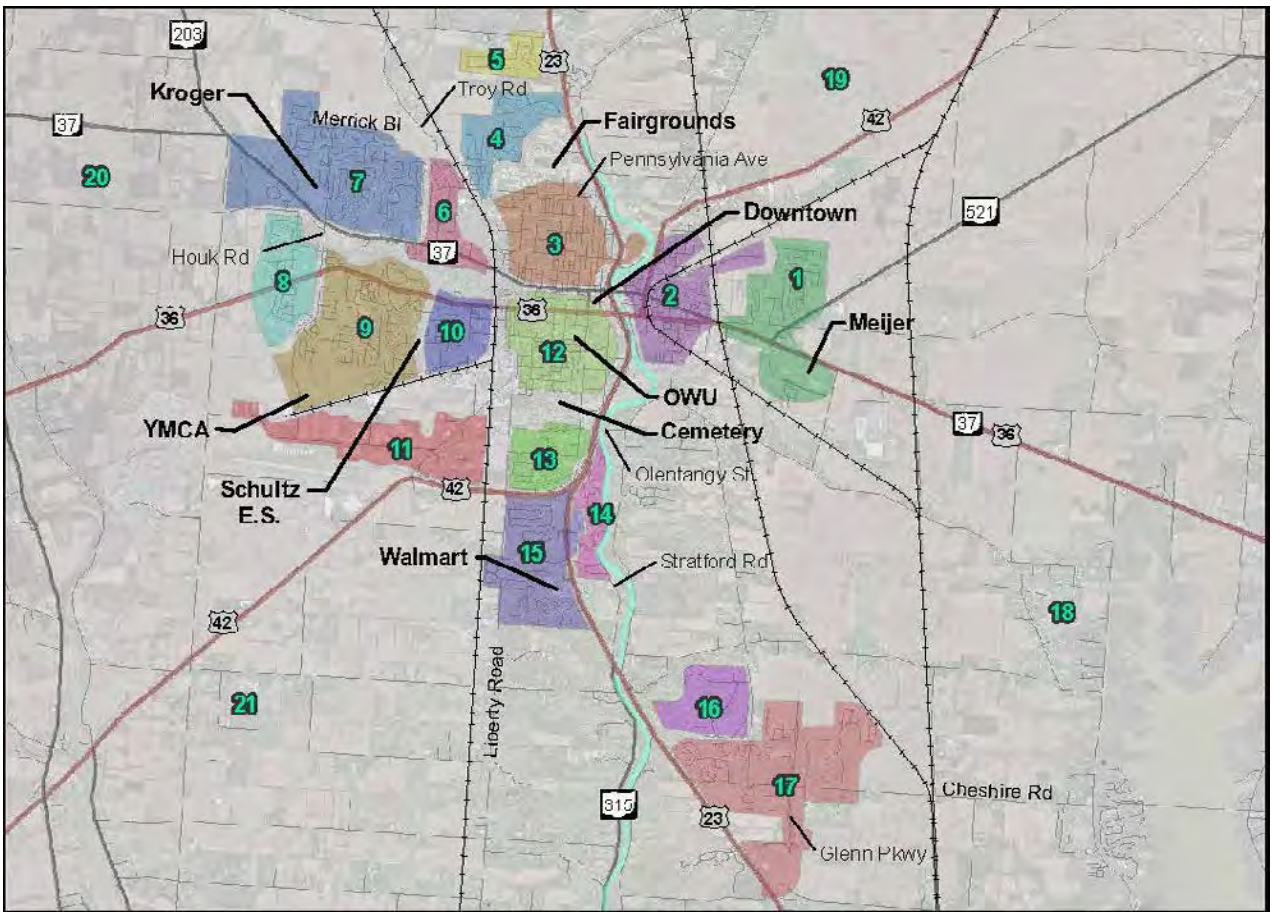
Location Map

Number of daily responses



▼

Location Map



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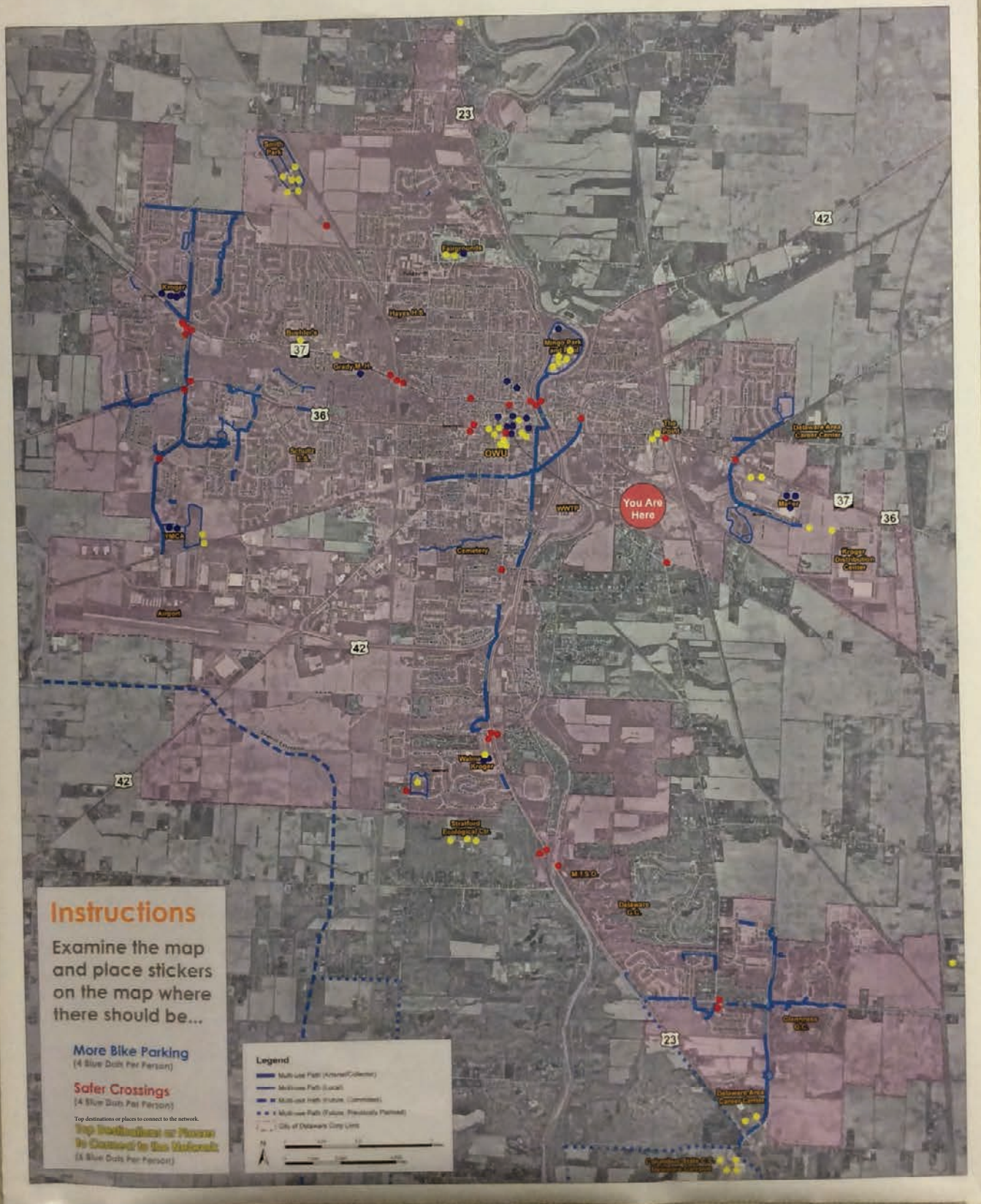
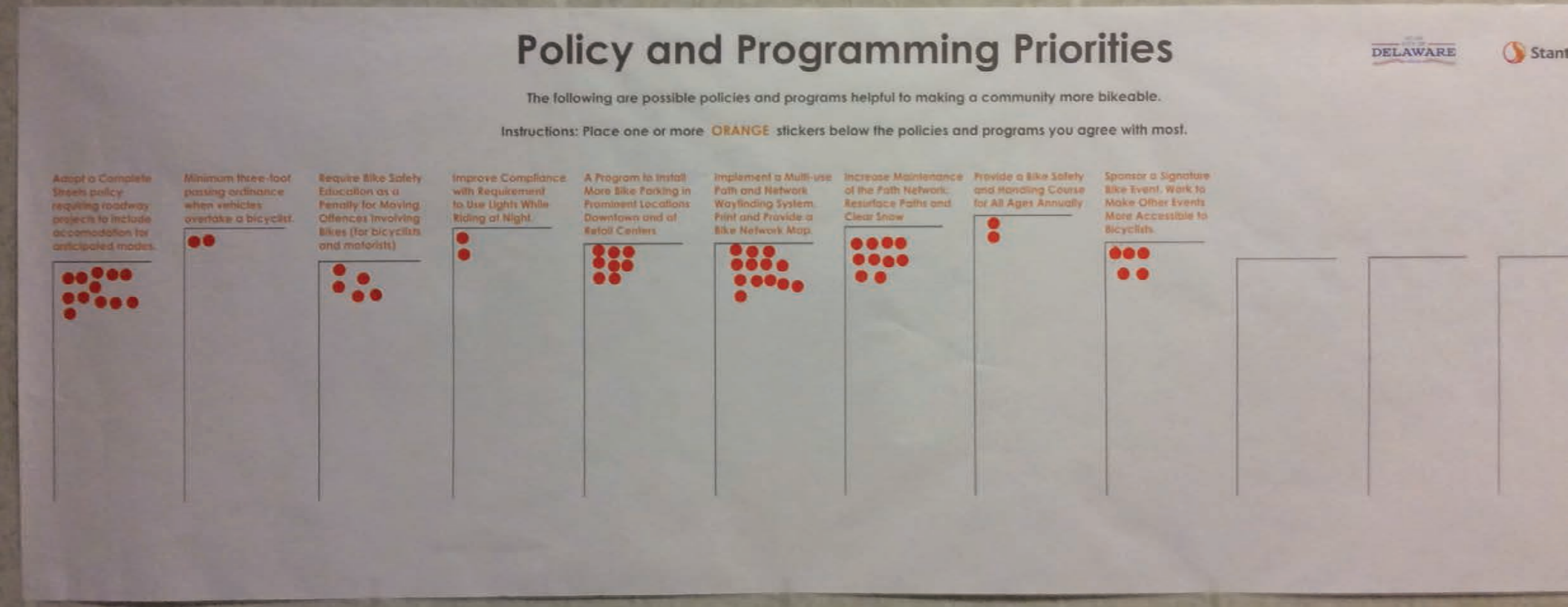
Bike Parking, Safer Crossings, and Destinations Exercise

CITY OF DELAWARE OHIO

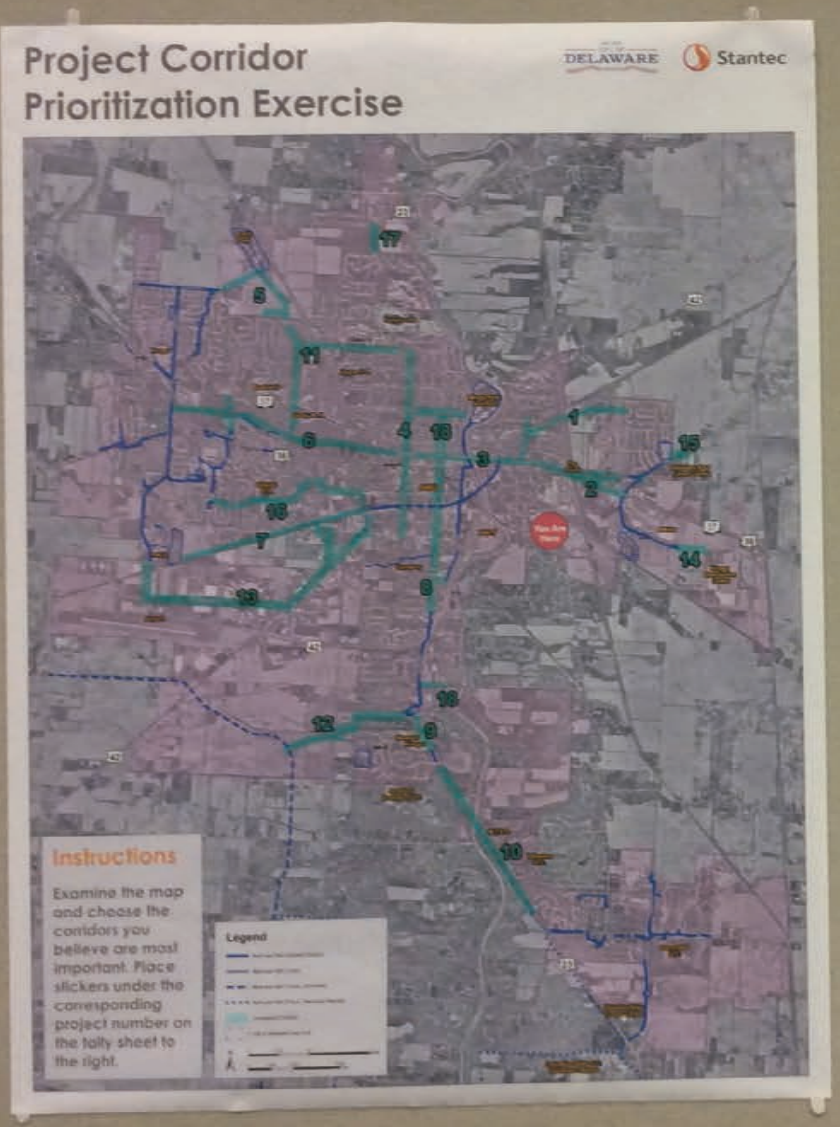
Stantec

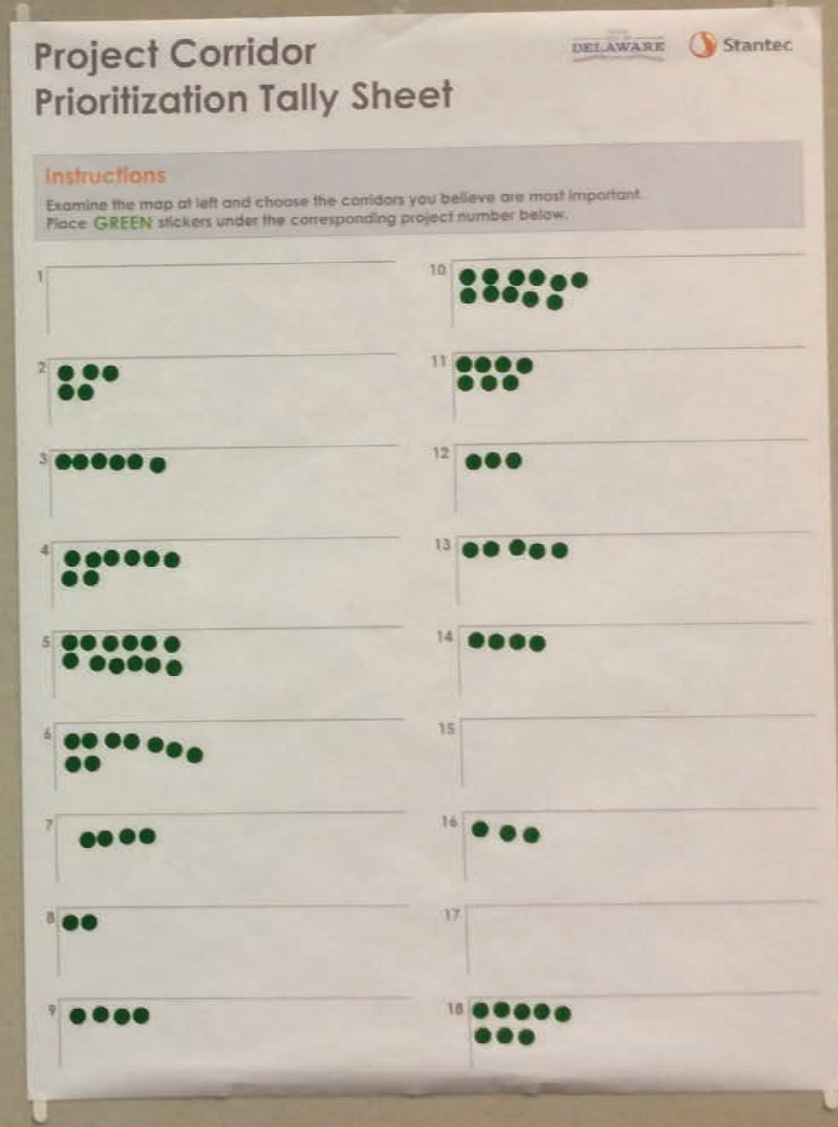


Public Meeting Feedback Station

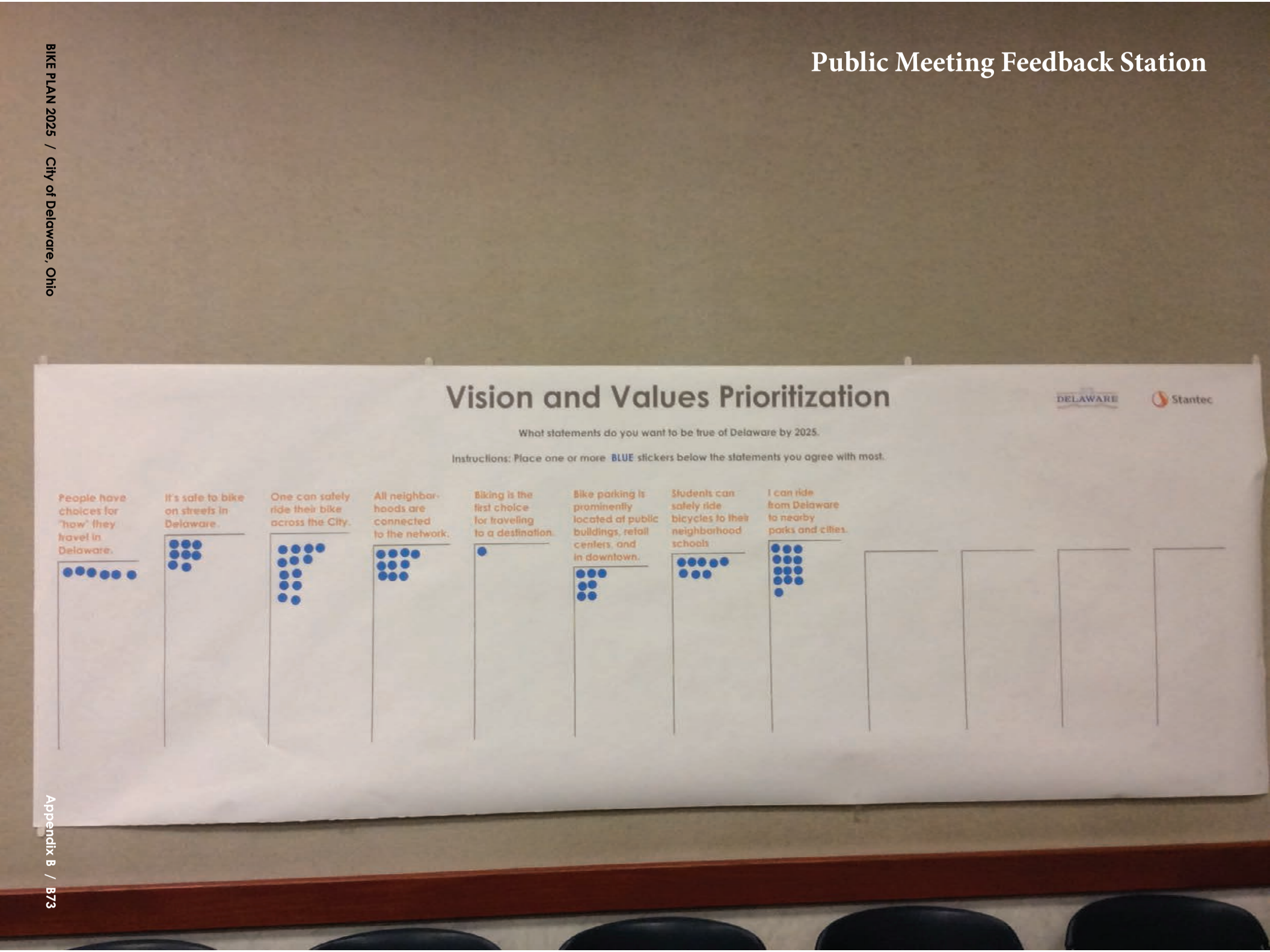


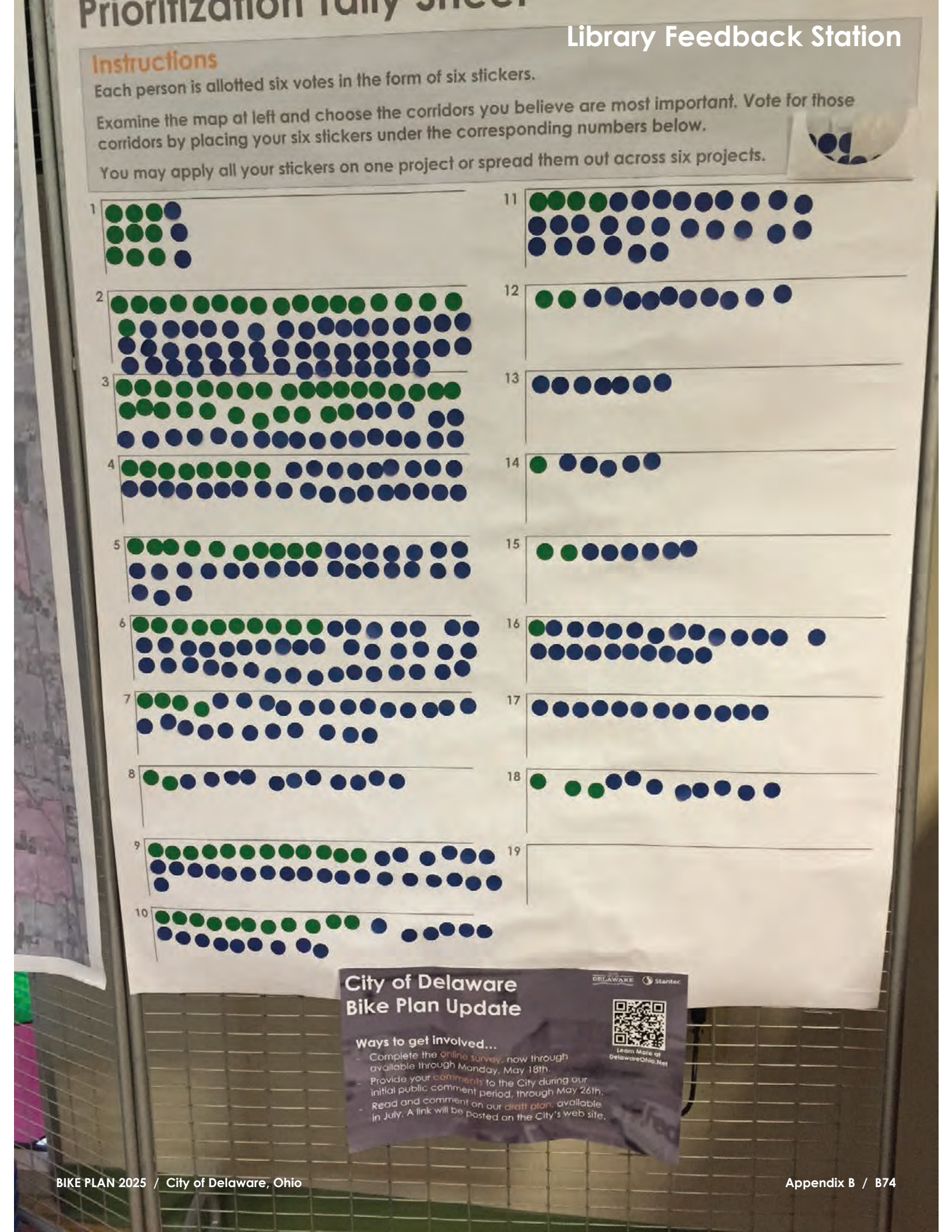
Public Meeting Feedback Station





Public Meeting Feedback Station




Prioritization Tally Sheet
Instructions
Each person is allotted six votes in the form of six stickers.
Examine the map at left and choose the corridors you believe are most important. Vote for those corridors by placing your six stickers under the corresponding numbers below.
You may apply all your stickers on one project or spread them out across six projects.
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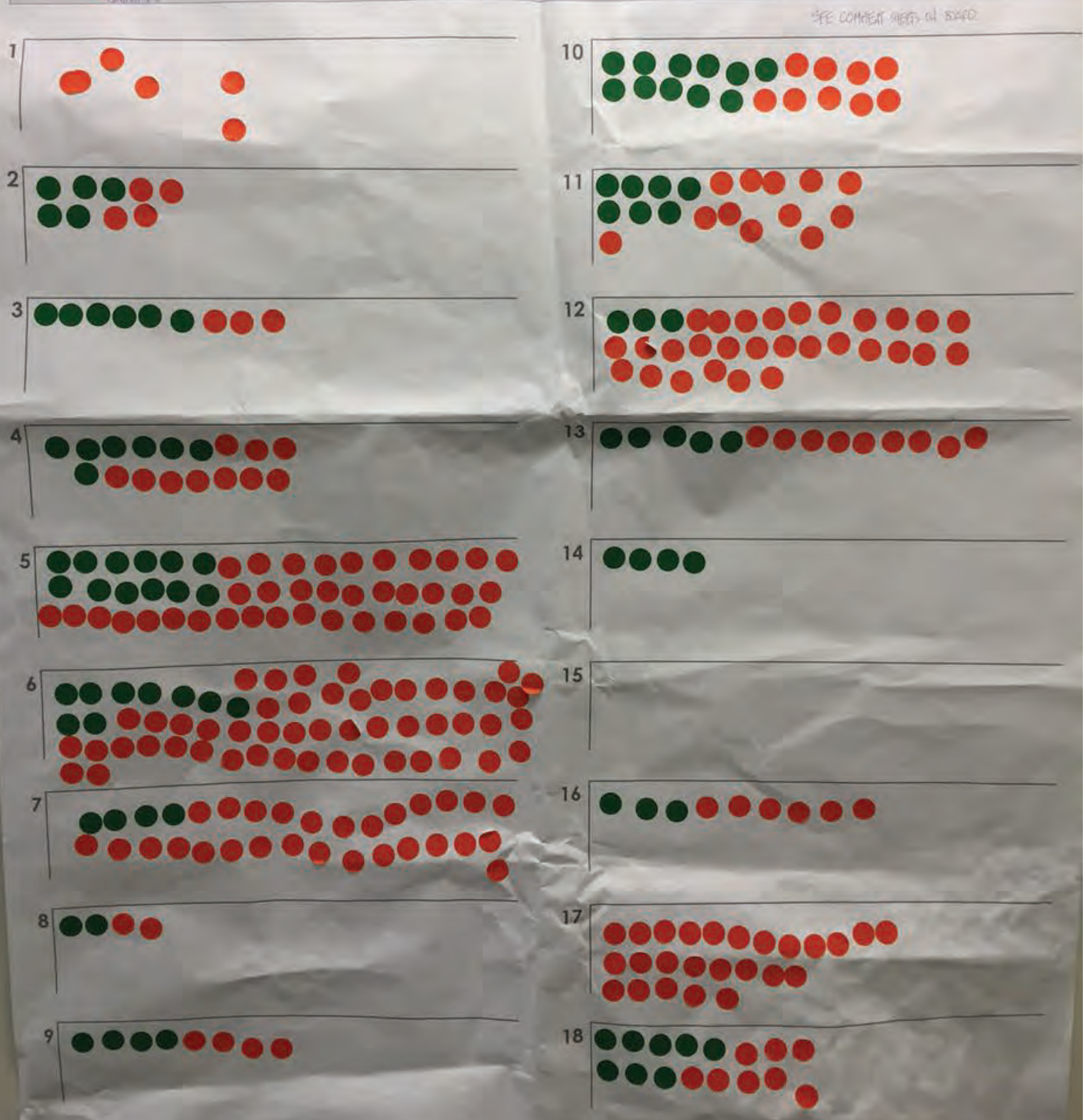
City of Delaware
Bike Plan Update
Stantec
Ways to get involved...
- Complete the online survey, now through available through Monday, May 18th.
- Provide your comments to the City during our initial public comment period, through May 26th.
- Read and comment on our draft plan, available in July. A link will be posted on the City's web site.
Learn More at DelawareOhio.Net

Project Corridor Prioritization Tally Sheet

YMCA Feedback Station

Instructions

Examine the map at left and choose the corridors you believe are most important.
Place GREEN stickers under the corresponding project number below.



Delaware Bike Plan Update
Public Meeting Comment Sheet

Please feel free to provide comments below and use additional sheets as necessary. Comments can be provided at the public meeting, or by email or mail until May 26th.

Please send comments to Dan Whited, PE, Public Service Director, dwhited@delawareohio.net, or 1 S. Sandusky Street, Delaware, Ohio 43015

My first priority would be bike routes connecting the schools to home neighborhoods (easier @ elem. level, I understand, but kids at Dempsey + H.S. have many activities. Not sure it's worth the investment to include Willis if Willis will no longer hold students)

Delaware Bike Plan Update
Public Meeting Comment Sheet

Please feel free to provide comments below and use additional sheets as necessary. Comments can be provided at the public meeting, or by email or mail until May 26th.

Please send comments to Dan Whited, PE, Public Service Director, dwhited@delawareohio.net, or 1 S. Sandusky Street, Delaware, Ohio 43015

Would love to see something on the South side of town. (Section 12) These neighborhoods are surrounded by busy roads with no access between them for kids to safely travel. Unfortunately, due to population, this area would never get enough pitches to get a bike path. Perhaps we should look @ safety (needs before wants).

Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Monday, May 11, 2015 6:51 AM
To: Lowry, Eric
Subject: Fwd: Bikeway Plan Public Comment

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Delaware Bike Plan

Dan Whited, P.E.
Public Service Director
City of Delaware, Ohio
1 S. Sandusky St
Delaware, OH 43015
740.203.1013 Direct
614.419.1713 Mobile
dwhited@delawareohio.net<mailto:dwhited@delawareohio.net>

Begin forwarded message:

From: "Thompson, Chrissie" <cthompson@enquirer.com<mailto:cthompson@enquirer.com>>
Date: May 9, 2015 at 5:33:27 PM EDT
To: "dwhited@delawareohio.net<mailto:dwhited@delawareohio.net>"
<dwhited@delawareohio.net<mailto:dwhited@delawareohio.net>>
Subject: Bikeway Plan Public Comment

I would like to see Delaware focus on paths in scenic locations. Our paths are well-maintained and convenient, but we could work harder to place them in beautiful places (along river, under trees, connecting with Stratford Ecological Center, etc). It would also be great if we could have a goal of connecting our paths to Delaware State Park.

Thanks.

Chrissie Thompson Fink
71 N Liberty St.
513-368-2883

Sent from my iPhone

Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Wednesday, June 03, 2015 8:23 AM
To: Lowry, Eric
Subject: FW: Bike path crosswalk

Categories: Delaware Bike Plan

Please include with the other comments

Daniel W. Whited, P.E.
Public Service Director

City of Delaware
1 S. Sandusky St.
Delaware, OH 43015
740-203-1013 – Phone
614-419-1713 – Mobile

dwhited@delawareohio.net

www.delawareohio.net

From: Bill Ferrigno
Sent: Wednesday, June 03, 2015 8:16 AM
To: David M. Efland; cheryl.copley.cimino@gmail.com
Cc: Dan Whited
Subject: RE: Bike path crosswalk

Hello Cheryl –

We have received similar concerns in the past at this crossing location and agree that the amount of traffic on Central Avenue make safe pedestrian crossing very difficult. With the amount of traffic movements from the four-lane roadway combined with the numerous vehicles entering and exiting US23, improving safety remains quite challenging. As David indicated, we are accepting comments regarding the bikeway master plan elements to which your comment can be added. The plan will allow for the prioritization of the many bikeway needs in the community, all competing for limited funding.

Thank you again for your input and concern.

William L Ferrigno, P.E.
Director of Public Works/City Engineer

From: David M. Efland
Sent: Wednesday, June 03, 2015 7:39 AM
To: cheryl.copley.cimino@gmail.com
Cc: Dan Whited; Bill Ferrigno
Subject: RE: Bike path crosswalk

Cheryl. Thank you for your email and thought. You may know that the city is in the midst of updating our bike way plan. This comment fits in with that effort which, among other things, seeks to identify and prioritize improvements to our

system. I will ensure this comment gets into that process. Also copied here are the director of public works and city engineer who can speak more directly to your thought if they have anything else to add at this time. Again, thank you for taking the time to think about an issue and thoughtfully present it to the city of Delaware!

David Efland, Director
City of Delaware
Planning & Community Development

Sent from my mobile device

-----Original Message-----
From: Cheryl Copley [cheryl.copley.cimino@gmail.com]
Received: Tuesday, 02 Jun 2015, 6:25PM
To: David M. Efland [defland@delawareohio.net]
Subject: Bike path crosswalk

Good evening. I would like to make a suggestion for improving the safety of the bike path crosswalk at Central Ave near the police station and on ramp to 23N. Honestly, I'm terrified the stop there because people seldom do. Being that the road is four lanes I fear if I stop my vehicle, the vehicle in the lane beside me will not. Then my vehicle will be blocking the pedestrian's ability to see the other vehicle and be struck. I would love to see a crosswalk sign with warning lights like the one on Orange Road between Old State and the rail road. It requires the pedestrian to press a button to activate warning lights for traffic to stop. Thank you for your consideration.

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Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Thursday, May 21, 2015 7:50 PM
To: Lee Yoakum; Lowry, Eric
Subject: Fwd: Bike plan

Categories: Delaware Bike Plan

Dan Whited, P.E.
Public Service Director
City of Delaware, Ohio
1 S. Sandusky St
Delaware, OH 43015
740.203.1013 Direct
614.419.1713 Mobile
dwhited@delawareohio.net<mailto:dwhited@delawareohio.net>

Begin forwarded message:

From: Gary Meckler <gmmeckler@gmail.com<mailto:gmmeckler@gmail.com>>
Date: May 21, 2015 at 6:43:20 PM EDT
To: <dwhited@delawareohio.net<mailto:dwhited@delawareohio.net>>
Subject: Bike plan

Dan, I saw a form at the library to give comments on the bike plan update. My comment is that I think there really needs to be improved crossing of Central Ave, by the path along the river. The cars zip by without regard to people in the crosswalk. It is really quite dangerous. How about a button that a pedestrian or bike rider could press that would trigger a lighted sign across Central to tell drivers to stop (similar to one in downtown Worthington)? Or a more expensive solution would be to either build a pedestrian bridge over Central or possibly a path that goes under the Central bridge (like the path along the Olentangy that goes under the I-270 bridge)?
Thanks, Gary Meckler

Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Thursday, May 21, 2015 12:01 PM
To: Lowry, Eric
Subject: FW: Bikeway Plan Public Comment

Categories: Delaware Bike Plan

Daniel W. Whited, P.E.
Public Service Director

City of Delaware
1 S. Sandusky St.
Delaware, OH 43015
740-203-1013 – Phone
614-419-1713 – Mobile

dwhited@delawareohio.net

www.delawareohio.net

From: John Williams [mailto:john.abby.williams@gmail.com]
Sent: Wednesday, May 20, 2015 10:33 PM
To: Dan Whited
Subject: Bikeway Plan Public Comment

Live in Kensington place. Would love to see the path connected to Glenwood commons and into town at the 36/37 split

Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Tuesday, May 26, 2015 8:54 AM
To: Lowry, Eric; Hagerty, Brian
Cc: Lee Yoakum
Subject: FW: Bikeway Plan Public Comment

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Delaware Bike Plan

Daniel W. Whited, P.E.
Public Service Director

City of Delaware
1 S. Sandusky St.
Delaware, OH 43015
740-203-1013 – Phone
614-419-1713 – Mobile

dwhited@delawareohio.net

www.delawareohio.net

From: Rayna Patton [mailto:rpatton61@gmail.com]
Sent: Sunday, May 24, 2015 9:22 PM
To: Dan Whited
Subject: Bikeway Plan Public Comment

Bike Paths in Delaware

I recently returned from a trip to Northern Germany, where I saw large numbers of well dressed men and women who were clearly commuting to work on their bicycles, riding on designated paths alongside sidewalks, or on bicycle lanes in city streets. Thanks to the feasibility of using bicycles as opposed to driving a car, (not to mention the splendidly efficient and widespread public transportation), city streets were far less congested than their equivalents in the United States. I was filled with envy.

Thinking about this successful European model, I realized that there are two main impediments to constructing truly useful bike paths in Delaware. By useful, I mean that they would allow cyclists to go where they need to go without using their car, whether to work or to shop.

1. 1. Tree lawns are sited between sidewalks and streets, and these often have large trees on them. No one would seriously want to see these trees removed.

2. More significantly, power lines are almost all above ground, necessitating a large number of power poles along one or both sides of every major street. Europeans seem to have agreed some time ago that power lines belong below ground, where they are safe from storm damage and also not a public eye sore.

Extensive development on the west side of Delaware has certainly increased the need for bicycle-dedicated lanes along, or beside, increasingly congested streets.

The easiest solution would seem to be connection of the existing river/OWU path to Park Avenue, and creation of a bike lane from Park Avenue to Curtis Street. This easily connects via Hill Street, Richards Street, and Penick Avenue, to West

William Street. This could join a dedicated bike lane on West William Street west of Curtis, which would connect with Houk Road. The north south bike path along Houk Road should certainly extend to the YMCA.
Alternatively, but more expensively, West William Street could be widened from Curtis to Sandusky, both on the north and south side. This would require reducing the width of tree lawns on both sides of the street and re-striping to include a designated bicycle lane. This bikeway would connect with existing paths west of Curtis. If such project were undertaken, surely it would not be unreasonable to ask the electric utility to bury their wires along the whole route?
Along some other Delaware streets, allowing parking on only one side of the street would create space for a designated bike lane.
The idea of a bicycle path along Delaware Run from Houk Road to Blue Limestone Park has many drawbacks and should be opposed. There are several technical issues: topography, a tunnel under the railroad, flooding many times a year, abundant thorn trees, a need for continual maintenance by city workers. Additionally, this last remaining wildlife corridor in Delaware would not recover from the habitat loss that constructing such a path would require. The path would not serve the needs of bicycle commuters, since it would lack adequate access points, and because of its isolation, it would raise security concerns for residents on either side of the Run.
Thank you for your attention,
Rayna Patton
740-201-5719
86 Delaware Crossing East, Delaware, Ohio.
May 25th, 2015

Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Thursday, May 21, 2015 12:01 PM
To: Lowry, Eric
Subject: FW: From FB on Bikeway plan

Categories: Delaware Bike Plan

Daniel W. Whited, P.E.
Public Service Director

City of Delaware
1 S. Sandusky St.
Delaware, OH 43015
740-203-1013 – Phone
614-419-1713 – Mobile

dwhited@delawareohio.net

www.delawareohio.net

From: Lee Yoakum
Sent: Thursday, May 21, 2015 11:47 AM
To: Dan Whited
Subject: From FB on Bikeway plan

Chad Harris I like the survey option for residents. Getting to council or committee meetings is not always easy but the survey is very convenient - we need more of them.

LEE YOAKUM
Community Affairs Coordinator
City of Delaware
1 South Sandusky Street
Delaware, Ohio 43015
740-203-1015
740-203-1024 (fax)
lyoakum@delawareohio.net

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Lowry, Eric

From: Dan Whited <dwhited@delawareohio.net>
Sent: Tuesday, May 26, 2015 8:53 AM
To: Lowry, Eric; Hagerty, Brian
Cc: Lee Yoakum
Subject: FW: The need for Corridor 17 - Delaware Bike Plan Update

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Delaware Bike Plan

Daniel W. Whited, P.E.
Public Service Director

City of Delaware
1 S. Sandusky St.
Delaware, OH 43015
740-203-1013 – Phone
614-419-1713 – Mobile

dwhited@delawareohio.net

www.delawareohio.net

From: Rick [mailto:rdessecker@columbus.rr.com]
Sent: Monday, May 25, 2015 8:13 AM
To: Dan Whited
Subject: The need for Corridor 17 - Delaware Bike Plan Update

Mr. Whited:

The need for Corridor 17 from Bruce Road to Woodhaul Drive is a matter of safety and not a matter of popularity.
I live in an apartment complex on Bruce Road and have three alternatives to walk on foot or ride my bicycle south.

I can climb Hills-Miller to the west and take Troy Road south. This is a major detour if one is heading to the downtown area.
Climbing the steep hill is a good workout, but Hills-Miller is narrow and requires constance vigilance. In some places,
if one needs to escape traffic in an emergency, the only option is a drainage ditch.

An easier alternative is the crude path that currently follows Corridor 17, that is, unless overgrowth prevents passage.
When passable, the path is irregular and, combined with plant growth, requires a bicyclist to walk their ride through,

and occasionally stop to pull thorns from their skin. Once through, Executive Drive provides them a route to
Pennsylvania Avenue and all points south or west.

The final alternative is the worst. State Route 23 is a major thoroughfare between central Ohio and Michigan.
Traffic is constantly heavy including many tractor-trailer trucks. One can brave a crossover to face northbound
traffic while walking or riding south only to brave a crossover to take the exit at Sandusky. Or one can remain
on the southbound side with traffic whizzing pass from behind, but that includes navigating a narrow section
of rough terrain on the safe side of a guardrail. I've walked on foot or ridden my bicycle south on State Route 23
with only my paranoia to keep me from harm.

Again, this not a matter of popularity, but instead provides the citizens in the Bruce Road and Oakhurst area
a safe route so they walk, run, or bicycle to the main part of town. For a low cost, the short stretch of Corridor 17
could be leveled and laid with asphalt to provide a prudent passageway that connects the small island that is
the Oakhurst area to the rest of the city of Delaware.

Thank you.

With respect,

Rick Lee Dessecker

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intentionally blank.

Appendix C

- *Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects* C2
- *Exhibit 6-1p: Bike Network Plan (Ranking and Funding Corridors)* C11

Grant Funding Program Key:
The following programs are listed as recommended sources of funding for projects in the following table. STP - Surface Transportation Program (federal funds, MORPC), SRTS - Safe Routes to School (federal funds, ODOT), RTP - Recreational Trails Program (federal funds, ODNR), COTF - Clean Ohio Trail Fund (state funds, ODNR), Safety - Highway Safety or other discretionary safety funding (ODOT or MORPC), ODOT Urban Paving. Projects identified with "ATP" are located along a MORPC Active Transportation Corridor. Projects identified with "SBR" are on ODOT's draft State Bike Route system.

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding	
S1 Mingo Path / SR-37 Crossing	Designate the inside east-bound lane as a left-only turn lane onto US-23 north. Construct a median island with rectangular rapid-flashing beacon immediately east of the US-23 NB Ramp/SR-37 intersection. Adjust northeast corner to remove the switchback and provide an 8-foot wide north approach while providing barrier protection from the river. This may require adjusting the alignment of the entrance ramp or other likely costly or significant changes.	Project Rank: Cost (2016-$): Sponsors/Partners: CIP, ODOT Grant Funding: STP, Safety	1 $80,000
S2 Sandusky Street / Springfield Branch Crossing Upgrades	The existing multi-use path crossing of Springfield Branch at S Sandusky Street is better than most; however, improvements are needed due to the complexity of the intersection and crossing traffic volumes. A pedestrian-activated rapid-flashing beacon is recommended at the crosswalk, combined with signage identifying the crossing location (W11-15, W16-7P). The existing advanced warning beacon should be removed. If possible, it is recommended to restrict some movements at the intersection in favor of allowing a larger median island and alignment of the crosswalk with the path (rather than forcing users out of their way to reach the crosswalk). If project 149 is implemented, users would be served by increasing the width of the island to 12 to 14 feet, and the width of the opening and crosswalk to 14 feet, providing ample storage room for those waiting in the median.	Project Rank: Cost (2016-$): Sponsors/Partners: CIP Grant Funding: Safety	2 $70,000

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
665 W William Street (Carson Farms Boulevard to Curtis Street): Bike Lanes with Multi-Use Path.	Construct a continuous parallel multi-use path and connect it to sidewalks on intersecting streets. Stripe existing wide paved shoulders as bike lanes and restripe right-turn lanes. Evaluate options to add bike lanes from 600 feet west of Applegate Lane/Delaware Crossing E to Curtis Street. Options may include shifting the crown/center line to utilize existing shoulder and/or minor widening on one or both sides of the street.	Project Rank: 1 Cost (2016-$): $1.43M Sponsors/Partners: City, ODOT, Developer Fees Grant Funding: n/a
664 W William Street (Houk to Carson) Road Diet w/ Bike Lanes & Parallel Multi-Use Path	Construct multi-use path on the south side of W William Street, completing gaps in the existing network. Upgrade curb ramps and queuing areas to be at least as wide as the path at nearby signals. Modify signage and striping to make the marked shoulder a bike lane and establish the bike lane at intersections and in queuing areas. Costs should be less if completed as part of a resurfacing project. Connects to project 665 and existing path.	Project Rank: 2 Cost (2016-$): $550,000 Sponsors/Partners: City, ODOT, Developer Fees Grant Funding: n/a
680 W Central Avenue (Kroger to City Limits) Multi-Use Path	Construct a multi-use path along W Central Avenue connecting the Trotter's Landing apartment complex to the Westfield Shopping Center. The project includes a bridge over Delaware Run and a signed and marked crosswalk across W Central Avenue (OH-37). Repair work (path reconstruction, reduced path slope) needed on the existing path east of this project should be completed with this project. Connects to existing path.	Project Rank: 3 Cost (2016-$): $470,000 Sponsors/Partners: City, ODOT Grant Funding: STP, COTF

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
371 Sunbury Road (The Point to Mill Run Crossing) Multi-Use Path	Construct a multi-use path along the north or south side of Sunbury Road (US-36, OH-37) between Bowtown Road and Mill Run Crossing. Reconstruct curb ramps at Mill Run Crossing/OH-571/Sunbury Road to be at least as wide as the path. Consider options such as a median refuge island and crosswalk to allow users to cross Sunbury Road in the vicinity of Bowtown Road and the trailor park opposite Bowtown Road, regardless of whether the path is built on the north or south side of Sunbury Road. Connects to projects 368 and 362, as well as existing path.	Project Rank: 4 Cost (2016-$): $1.07M Sponsors/Partners: City, ODOT Grant Funding: STP, TA, COTF, Safety, ATP
125 Blue Limestone to Winter Street Shared Roadway	Connects the W Winter Street Bike Boulevard (project 144) to a Delaware Run path (project 624) with a shared roadway including sharrows and signage.	Project Rank: 5 Cost (2016-$): $23,000 Sponsors/Partners: City Grant Funding: n/a
343 E Winter Street (Library to Channing) Bike Boulevard	Sign and mark E Winter Street as a bike boulevard. Consider restricting seldom-used parking to provide for an uphill bike lane between Estelle and Lake streets. Consider adding wayfinding and bike parking along the route. (Connects to projects 144, 345 and 384, as well as the Springfield Branch and Mingo trails)	Project Rank: 6 Cost (2016-$): $54,000 Sponsors/Partners: City, ODOT Grant Funding: STP, TA, SBR, ATP

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
151 W William Street (Curtis to Downtown) Road Diet with Bike Lanes	Add bike lanes to William Street between Curtis Street and Henry Street. Between Curtis and Toledo Street there is 30 feet of pavement. To add bike lanes, the road would need to be widened two feet to provide for two 11-foot lanes and 2 five-foot bike lanes. Between Toledo and just east of Catherine streets, the width is approximately 38 feet. Parking may be prohibited to ensure space for two travel lanes and two bike lanes else, provide two 11-foot travel lanes, two five-foot bike lanes and a 6+ foot parking lane—a substandard width but it is seldom used. Between Catherine and Franklin streets, consider eliminating on-street parking and the westbound right turn lane at Liberty Street to provide space for two bike lanes. Between Franklin and Henry streets, consider eliminating on-street parking, else remove a westbound travel lane to provide space for bike lanes. Traffic volumes in this area are asymetrical with westbound volumes during the peak hour, and the lack of a second lane east or west of the downtown area likely reduce the utilization of the second westbound lane. Traffic analysis is necessary to verify it is feasible to remove the lane while still maintaining a satisfactory level of service (LOS) for motorists.	Project Rank: 7 Cost (2016-$): $515,600 Sponsors/Partners: City, ODOT Grant Funding: ODOT Urban Paving
368 E Central Avenue (E Winter Street to the Point) Multi-Use Path	Remove existing sidewalk and construct a multi-use path along E Central Avenue linking Winter Street and the Point. If not yet constructed, a crosswalk and beacon system may need to be constructed to help users cross Central Avenue to reach the proposed multi-use path (if built on the north side of Central Avenue). Connects to projects 345, 302, and 371).	Project Rank: 8 Cost (2016-$): $736,500 Sponsors/Partners: City, ODOT Grant Funding: STP, TA, COTF, Safety, SBR, ATP

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
144 Winter Street (Elizabeth St to Library) Bike Boulevard	Sign and mark Winter Street as a bike boulevard. Consider adding wayfinding and bike parking along the route. (Connects to projects 125, 148, 149, and 343, as well as the Mingo Trail)	Project Rank: 9 Cost (2016-$): $47,000 Sponsors/Partners: City, ODOT Grant Funding: STP, TA, SBR
345 E Winter Street (Channing to E Central) Bike Boulevard and Enhanced Crossing.	Sign and mark E Winter Street as a bike boulevard. Consider adding wayfinding and bike parking along the route. (Connects to projects 343, 384, and 368)	Project Rank: 10 Cost (2016-$): $45,000 Sponsors/Partners: City, ODOT Grant Funding: STP, TA, Safety, SBR, ATP
572 US-23 (Kroger to North of Hull Drive) Multi-Use Path	Construct a multi-use path along US-23 from approximately 350 feet north of W Hull Drive to the existing path north of Hawthorn Boulevard. Signalized crossings should be provided at the shopping center signals with US-23, and spur connections should be made with the shopping center parking lot. A culvert may need to be extended and some storm structures modified to accomodate the path.	Project Rank: 11 Cost (2016-$): $1.35M Sponsors/Partners: City, ODOT Grant Funding: STP, TA, COTF, Safety, ATP
559 Liberty Road (London to Somerset) Bike Lanes / Paved Shoulder	Along 1.1 mile of Liberty Road, add three feet to the paved shoulder on both sides of the roadway; relocate signs, mailboxes, guardrail, and culvert headwalls within two feet of the edge of paved shoulder; and, as needed, regrade adjacent ditches to flow where the paved shoulder impacts the foreslope of the ditch. Add bike lane markings and appropriate signage as needed to ensure motorists do not park on the bike lane and roadway users understand the shoulder is a bike facility.	Project Rank: 12 Cost (2016-$): $407,000 Sponsors/Partners: City, ODOT Grant Funding: STP, TA, SBR

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding	
149 Sandusky Street (Oak Grove Cemetery to Pennsylvania Avenue) Road Diet w/ Bike Lanes	Evaluate the feasibility of reducing the number of travel lanes in the corridor to one in each direction with a center turn lane from the Cemetery to just north of Central Avenue, and one lane in each direction with turn lanes at signals between Central and Pennsylvania avenues. Current traffic counts indicate volumes are within a range which would allow for a three-lane roadway facility with reasonable delay and doing so would likely result in a reduction in 85th percentile speeds closer to the desired 25 mph speed limit. Where volumes are too high to eliminate turn lanes, the bike lane may be discontinued or overlap with turn lanes for short stretches. Consider removing the Rowland Avenue (OWU) pedestrian signal and replace it with a median island and RRFB treatment to improve traffic flow and reduce delay for pedestrians. Consider adding midblock crosswalks with median islands downtown to improve cross-street access for pedestrians. Modifications may be required to adjust signal head positions on several signals.	Project Rank: Cost (2016-$): Sponsors/Partners: City Grant Funding: n/a	13 $403,000
566 S Henry Street to S Sandusky Street Connector along US-23 Multi-Use Path	Construct a path east of the intersection of Belle and S Sandusky streets toward US-23, then turn north along the right-of-way fence and then down to the intersection of Olentangy Avenue and S Henry Street. Construct a crosswalk across Olentangy Avenue. Most of the improvement should be able to be constructed within the limited access right-of-way of US-23. This project is to connect the Henry Street/Olentangy Avenue paths with the US-23 path ending at Belle Avenue, and may be implemented instead of or with project 567.	Project Rank: Cost (2016-$): Sponsors/Partners: City, ODOT Grant Funding: STP, TA, COTF, ATP	14 $710,700

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
629 Delaware Run (Houk Road to West of Hidden Valley Golf Club) Multi-Use Path	Construct approximately 5,300 feet of multi-use path along Delaware Run between Houk Road and Hidden Valley Golf Club. This project may require several small bridges over Delaware Run and would largely be built within the floodplain. The project would pave over an existing gravel path behind the Willow Brook assisted living facility, and connect to projects 630 and 624, as well as the existing trail along Houk Road. Some right-of-way aquisition will be required along Delaware Run.	Project Rank: 15 Cost (2016-$): $1.67M Sponsors/Partners: City Grant Funding: COTF, RTP
435 US-23 (Crystal Petal Drive to Stratford Road) and Stratford Road (US-23 to Meeker Way) Multi-Use Path	Construct a path along the east side of US-23 from Crystal Petal Drive north to and then along Stratford Road to Meeker Way. Several culvert extensions are expected, as well as strip right-of-way impacts along most adjacent properties. Some right-of-way impacts may be substantial. Evaluate an option to not extend the path along Stratford Road, instead continuing the path northwest along US-23 to its intersection with Meeker Way. Such an alternative may have less substantial right-of-way impacts.	Project Rank: 16 Cost (2016-$): $3.03M Sponsors/Partners: City, County, ODOT Grant Funding: STP, TA, COTF, Safety
582 US-23 (Meeker Way to Hawthorne Boulevard) Multi-Use Path	Construct a path along the west side of US-23 from Meeker Way to Hawthorn Boulevard. This alignment may require a culvert extension. Alternatively, construct the path on the east side of US-23 (from Meeker Way to the Kroger signal), in conjunction with and connected to anticipated development.	Project Rank: 17 Cost (2016-$): $654,000 Sponsors/Partners: City, ODOT, Developer Grant Funding: STP, TA, COTF, ATP

Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding	
624 Delaware Run (West of Hidden Valley Golf Club to Blue Limestone Park) Multi-Use Path	Construct a path from the existing gravel trail west of Hidden Valley Golf Club to Blue Limestone Park and John Street. Cost assumes a 30-foot steel railroad underpass bridge will be built and that work could occur over a holiday with a full track closure. If a Shoo Fly (temporary track) is required, this may need to be upwards of 3,000 feet and cost upwards of $3M (not included in the cost estimate) given the topography. If needed, it is recommended that an alternative crossing locaiton be explored, specifically crossing at W William Street or W Central Avenue. A preliminary engineering study is the next step to further determine the alignment and cost. Connections between the Delaware Run path and SR-37 (622, Grandview Avenue) and US-36 (626/627/628, Hidden Vallye Golf Club driveway) should be constructed with this project.	Project Rank: Cost (2016-$): Sponsors/Partners: City Grant Funding: COTF, RTP	18 $1.88M
567 S Sandusky Street (Belle Avenue to Olentangy Avenue) Multi-Use Path	Remove the existing sidewalk on the west side of S Sandusky Street and replace it with a 10-foot multi-use path (asphalt or concrete), including a 5 foot minimum tree lawn/separation from the face of curb. Right-of-way may be required from up to four property owners based on GIS data. Path may also be placed on the east side of S Sandusky Street where a wider tree lawn and more right-of-way may exist, to be determined during a PE study. This project is to connect the Henry Street/Olentangy Avenue paths with the US-23 path ending at Belle Avenue, and may be implemented instead of or with project 566.	Project Rank: Cost (2016-$): Sponsors/Partners: City, ODOT Grant Funding: STP, TA, COTF, ATP	19 $828,750

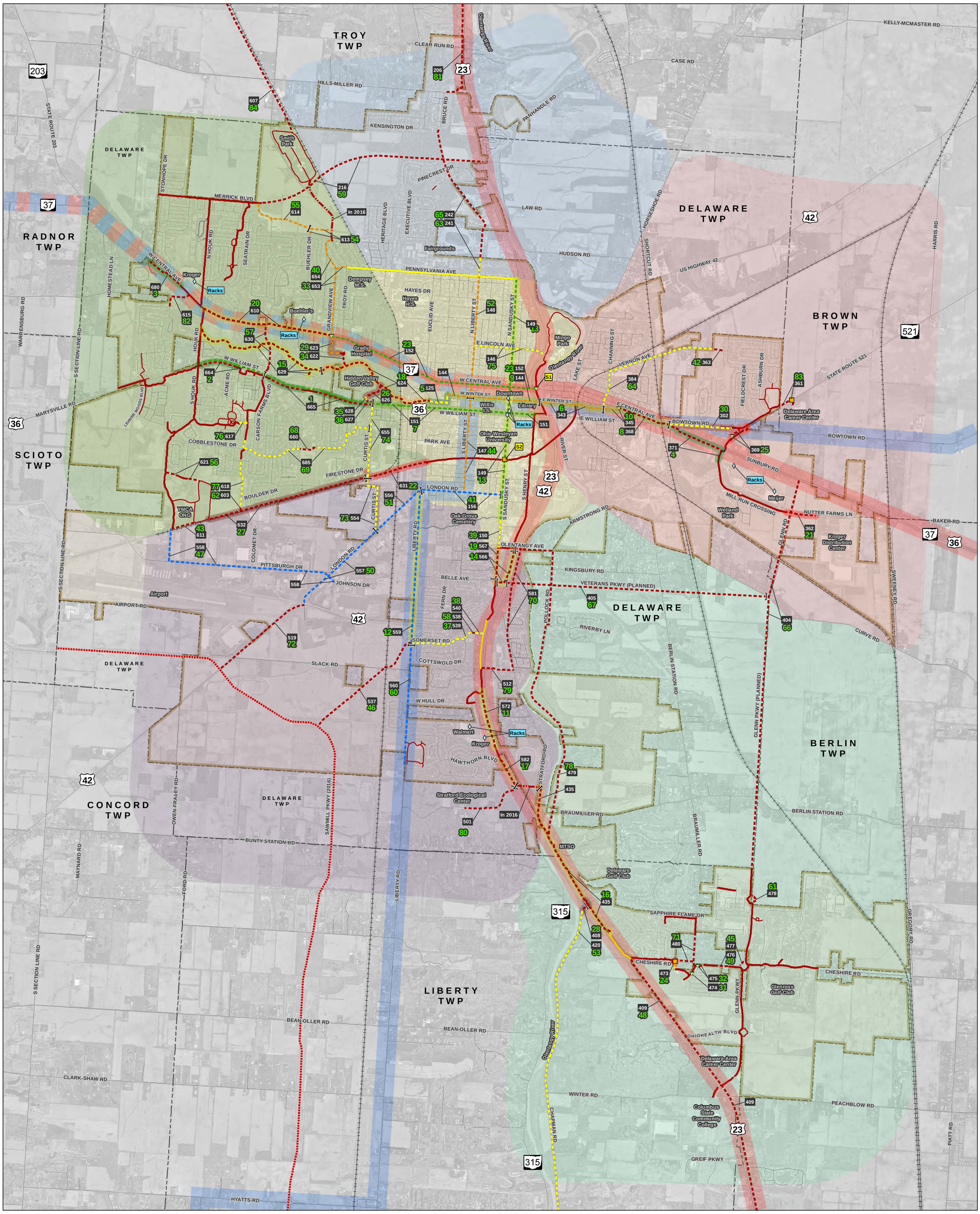
Appendix Table 6-1d: Detailed Project Descriptions for Safety Projects and Top 20 Projects

Project Number and Name	Description	Rank, Sponsors/Partners, Costs, and Grant Funding
610 W Central Avenue (Houk Road to Grandview Avenue) Multi-Use Path	Construct approximately 5,000 feet of path along Central Avenue (SR-37) between Houk Road and Grandview Avenue. This project will require some right-of-way from adjacent parcels, as well as a culvert extension and some grading work. This project would connect to projects 630, 623, 653, and 152; as well as a path along Houk Road and a path along W Central Avenue west of Houk Road.	Project Rank: 20 Cost (2016-$): $2.08M Sponsors/Partners: City Grant Funding: STP, TA, COTF, Safety, SBR, ATP

Exhibit 6-1p (Prioritization, Funding Corridors)

Bike Network Plan (Ranking and Funding Corridors)

City of Delaware
Bike Plan Update



Legend

Type of Facility

Existing	Committed	Proposed	By Others
			Multi-use Path
			Bike Boulevard
			Signed, Shared Route
			Bike Lanes, Paved Shoulder
			Road Diet with Bike Lanes

Spot Improvements

- Basic Crossing
- Enhanced Crossing
- Median Crossing
- Parking Corrals

Project Identification

- 101 — Project Number

Functional Classification

- Route*
- Local*
- Private**

*Route and Local improvements vary in color and dash pattern based on type of facility.

**Private paths are signed as no trespassing, or are not open 24-hours a day.

Other Modes

- Roadways
- Railroad

Jurisdiction

- City of Delaware
- Township Boundary

Proj. No. Zones

- 100
- 200
- 300
- 400
- 500
- 600

Project Ranking

- 1-5
- 6-10
- 11-15
- 16-20
- 21-25
- 26-30

Funding Corridors

- MORPC ATP Route
- State Bike Route (SBR)
- ATP and SBR

N

0 0.5 1 Mile

Full size: 34" x 22" — 1 inch = 1/3 miles
Half size: 17" x 11" — 1 inch = 2/3 miles