

COMMUNITY CONNECTING PLAN

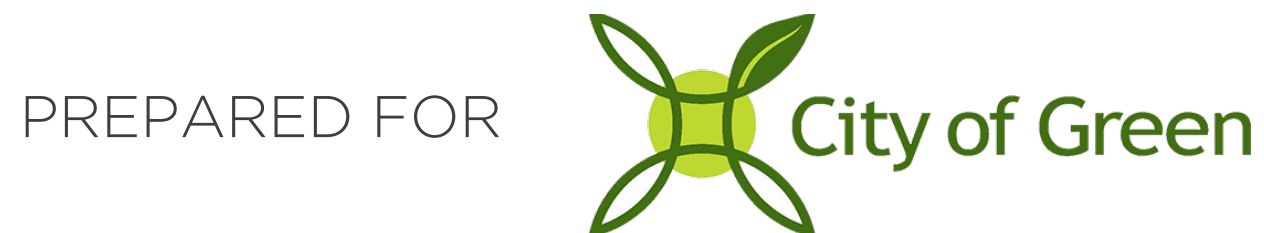
CITY OF
GREEN

JUNE 2018

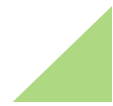


City of Green

STAKEHOLDERS



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EXECUTIVE SUMMARY

Within the City of Green's corporate boundaries there are three major interchanges that provide access to I-77. These are located on Arlington Road, Massillon Road, and Lauby Road. Additionally, SR 619 and SR 241 provide regional vehicle connectivity from neighboring communities to the interstate. Development has occurred over time resulting in an increase in local traffic, and transient traffic accessing the interstate; which at peak travel times has caused congestion on certain roadways.

This has prompted the need for transportation infrastructure improvements to provide an acceptable level of service on certain City roadways. In concert with the need to address vehicle mobility in various corridors, the City recognizes that pedestrian and bicycle mobility are just as important. While some of the City's roads include a place for pedestrians and bicyclists, many do not.

Additionally, since the City's incorporation in 1992, the City's development code requires sidewalks in all new subdivisions. This has left the City with a number of gaps in their connectivity. This study identifies those gaps and develops the tools needed to improve the infrastructure for pedestrians and bicyclists, bringing it to the same level of service envisioned for vehicles. Additionally, this study provides a sensible, convenient, and interesting connectivity network throughout the City so that residents will embrace the walkable/bike-able options, which in turn will reduce the number of vehicles on City roadways. Convenient connectivity provides recreation, exercise, enhances quality of life; and helps meet transportation needs while reducing congestion and improving the quality of our natural environment.

The goal of this planning study is to develop a vision and framework for making decisions about where and how to provide connectivity in the City of Green, Ohio. This study is sponsored as a joint effort by the Akron Metropolitan Area Transportation Study (AMATS) and the City of Green. The study is funded through a Connecting Communities 2016 Planning Grant and local funds from the City.

In achieving this plan's goal, following elements are also considered:

- Location and type of connectivity improvements to destinations within the City, as well as being part of a regional connectivity plan to trails and points of interest outside the City.
- Cost opinions and funding sources including grants and loans, piggybacking with other public works projects, and funding by private developers or a TIF, as subdivisions or large commercial sites come online.
- Prioritization schedule and integration with future capital improvement projects;
- Implementation strategies including City Code review/revisions;
- Design guidance including design standards that meet ODOT and AASHTO requirements, and incorporate them in a design toolbox.
- Public involvement, social media outreach and education.

Public engagement was recognized as a crucial element in this study. The public was solicited for input as the first step in this planning process through public meetings, social



EXECUTIVE SUMMARY (CONT.)

media outreach, and city-wide public survey process, and their thoughts and comments were solicited additionally at three other events including a public involvement meeting and other public events. The City's website also included a page dedicated to the connectivity planning process with periodic updates on progress, and files for review and sharing.

The process that was followed includes four phases. Phase 1 is the Discovery Phase in which the project sponsors identify key issues, focus areas, expectations, and outcomes. Phase 2 is the Development phase in which the draft plan was developed to address the identified issues and expectations, and provide solutions and recommendations. Development of the draft plan was a multi-step process described in further detail in subsequent sections of this Summary Document. Phase 3 includes review and feedback by the project sponsors and the residents of Green (public involvement meetings). Phase 4 includes development of the final plan based on comments and feedback.

The results of this planning study include:

- A compilation of local destinations that have been ranked based on voting by the residents of the City;
- A network of connectivity routes between population centers (neighborhoods) and identified destinations;
- A ranking of the connectivity routes using a matrix that includes various attributes;
- Cost estimates for the various connectivity routes

The results of this planning study have revealed that connectivity between the center of the City and Boettler Park, and between the center of the City and Nimisila Reservoir are ranked

the highest. Also, the type of connectivity facility most preferred includes a 10-foot wide side path or a 10-foot wide off road shared use path. The preference for these facility types reinforces the desire for family friendly facilities when implementing connectivity. In total, 32 destinations were identified, with 67 connectivity routes identified between these destinations and various population centers (neighborhoods) within the City. To provide regional connectivity, within the 67 routes there are three routes that traverse from the City's southern border to its northern border, along with two routes that traverse from the City's eastern border to its western border. A preliminary construction cost opinion was developed for each of the 67 routes, that total's \$78,600,000. The construction cost opinion for the top two routes totals approximately \$4,800,000.

Furthermore, the results of this planning study provide a vision and framework regarding where and how to provide connectivity in the City of Green. Based on the financial commitment alone, this plan will take years to implement. The end result will be a sensible, convenient, and interesting connectivity network throughout the City that residents will embrace.

BACKGROUND + GOALS

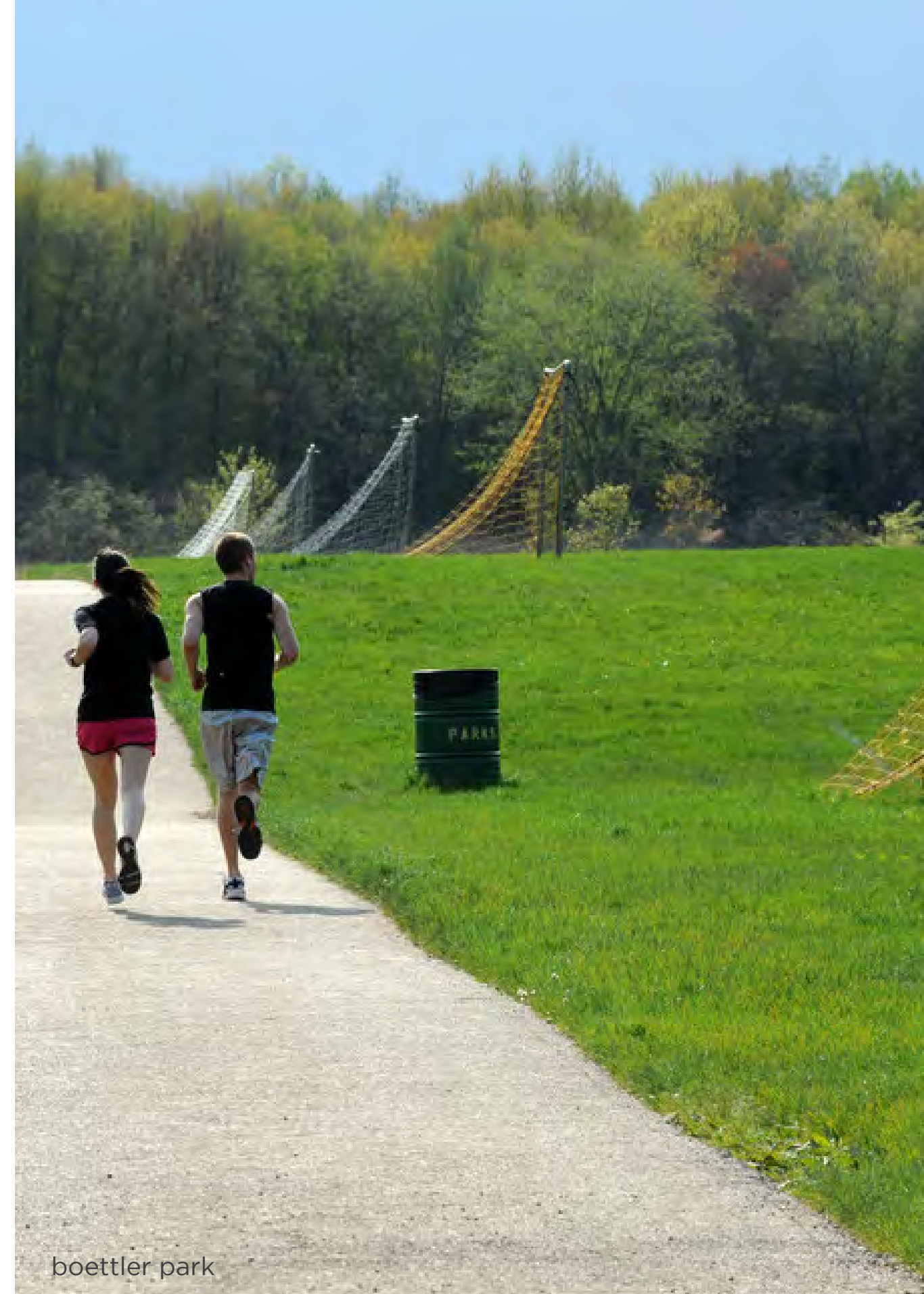
Infrastructure is more than just elements of pavement, sidewalk, utilities, and drainage; it helps define the community. When done well, infrastructure becomes the asset that drives positive community impression and addresses multiple needs of the community. We call this a well-connected community, and this impacts the approach to planning and design. The City of Green recognizes the value of a well-connected community.

The City is focusing on a walking and biking system that connects its neighborhoods to the City's schools, parks, businesses, ballfields, shopping, and entertainment located within the City; as well as other destinations and regional trails outside the City. The City recognizes that this type of connectivity promotes a healthy lifestyle, provides a sense of community, improves quality of life, and sparks economic investment.

This plan's goal is to provide vision and guidance regarding where and how to develop connectivity within the City of Green's approximate 33 square mile landscape. Upon completion, this plan's results can be incorporated into the City's Land Development Code, the Land Use Plan, and the Transportation Plan, thus, providing a means for implementation.

To achieve this plan's goals, the following key points were addressed:

- public involvement
- key destinations
- location and types of connectivity
- prioritization of connectivity routes
- cost opinion development
- funding opportunities and sources
- implementation strategies
- design guidance



boettler park



PREVIOUS PLANS

Since Green became a City in 1992, there has been a steady evolution from a rural and agricultural landscape to one that is more suburban in nature. Additionally, with the construction of the Central Administration Building, the Torok Community Center, Veteran's Park, Central Park, and the Central Fire Station, a "City Center" has been formed along the busy Massillon Road Corridor. In order to properly support and control the growth and change that has occurred, the City has engaged itself in updating its Land Development Code, and has also developed a number of other plans such as a Long Range Land Use Plan and a City-Wide Transportation Plan. Each of these plans considers connectivity at various levels.

One plan, the 4 Trail Focus Plan was developed by the Hike and Bike Committee and included in the Transportation Plan. This committee was created in 2007 by the Mayor at the request of citizens interested in advancing pedestrian and bicycle connectivity within the City. The committee included City staff, elected officials, City Parks & Recreation Board members, Planning & Zoning Commission member and volunteer citizens. This plan provides a comprehensive approach to pedestrian and bicycle connectivity by means of 4 trail segments that connect neighborhoods to the center of the City at the school cluster (Green Middle School, Green Intermediate School and Green High School).

Additionally, the Public Service and Transportation Strategic committee was formed in 2009 and they developed recommendations regarding future sidewalk locations. In 2014, the Living Green Task Force identified connectivity as one of its educational and promotional priorities. The Task Force reviewed the previous work by the Hike and Bike Committee and the Public Service and Transportation Strategic committee, and considered additional connection points. This culminated in a master trail plan that would serve as the single point of reference for pedestrian connections throughout the City. This Plan is included in the City Land Use Plan, 2014 update.

While the Master Trail Plan provides a vision for the connectivity, it did not include a holistic look at connectivity to all destinations within the City plus other regional destinations. This plan carries connectivity for the City's residents to that next level.



MAPPING + ANALYSIS

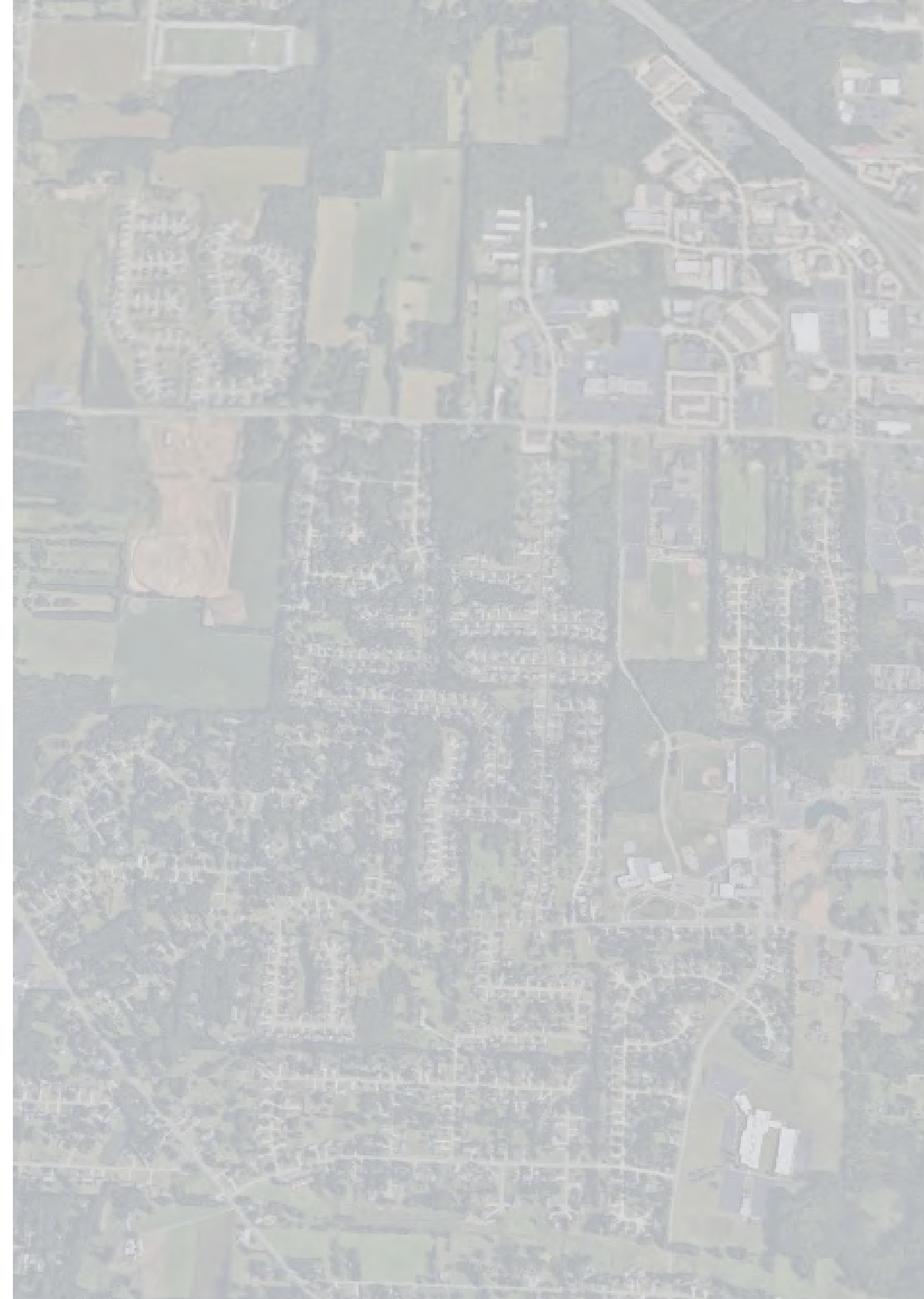
Prior to developing the connectivity routes for the plan, an extensive analysis of the existing conditions and priorities was developed. Critical factors, be they man-made or natural, were studied in detail to ensure that alignments were considerate of their surroundings and feasible for implementation.

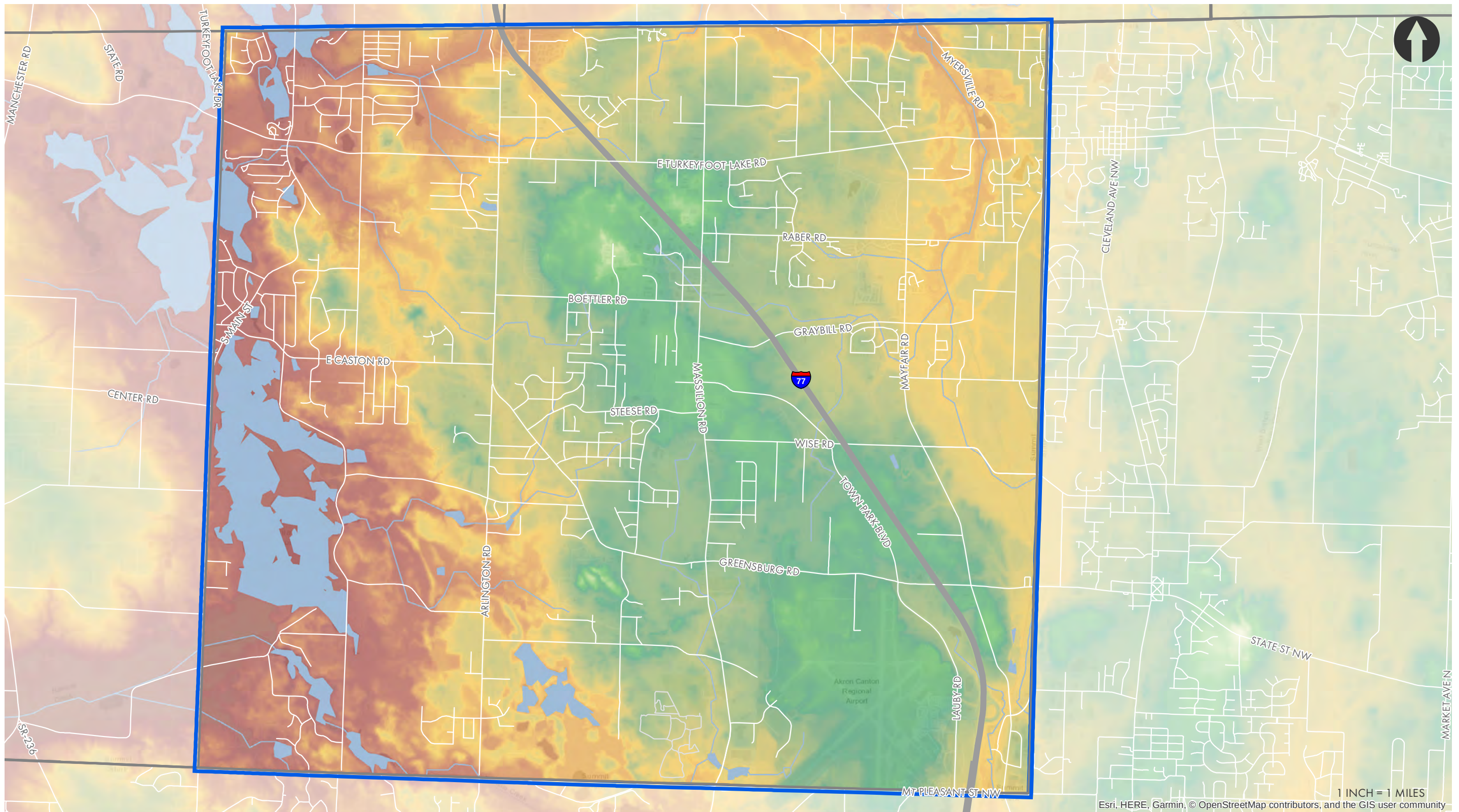
Topographic conditions proved to be the most impactful factor when developing potential alignments, due to how they impact design standards, costs, and potential funding sources. In some instances alignments traverse away from road corridors, or take less direct routes to avoid significant design challenges that would otherwise be faced by a direct route. Additionally, land use also provides context for determining the feasibility of a route, and can even enhance the viability of a route by providing an improved trail experience.

Destination connectivity was identified by the stakeholders and the public as a key desire for new bicycle and pedestrian facilities. Shopping centers, public recreation spaces, and school campuses were identified during the analysis to help drive decisions for alignment placement. An understanding of existing local infrastructure and surrounding regional trail networks was also needed to leverage the proposed plan in the context of impactful connectivity from the neighborhood to a regional level.

The following mapping tools were used in this plan:

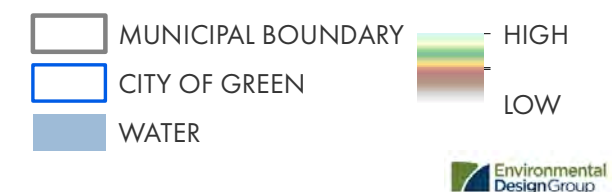
- USGS Elevation Model
- Community Parks
- Land Use
- Existing Sidewalk Network



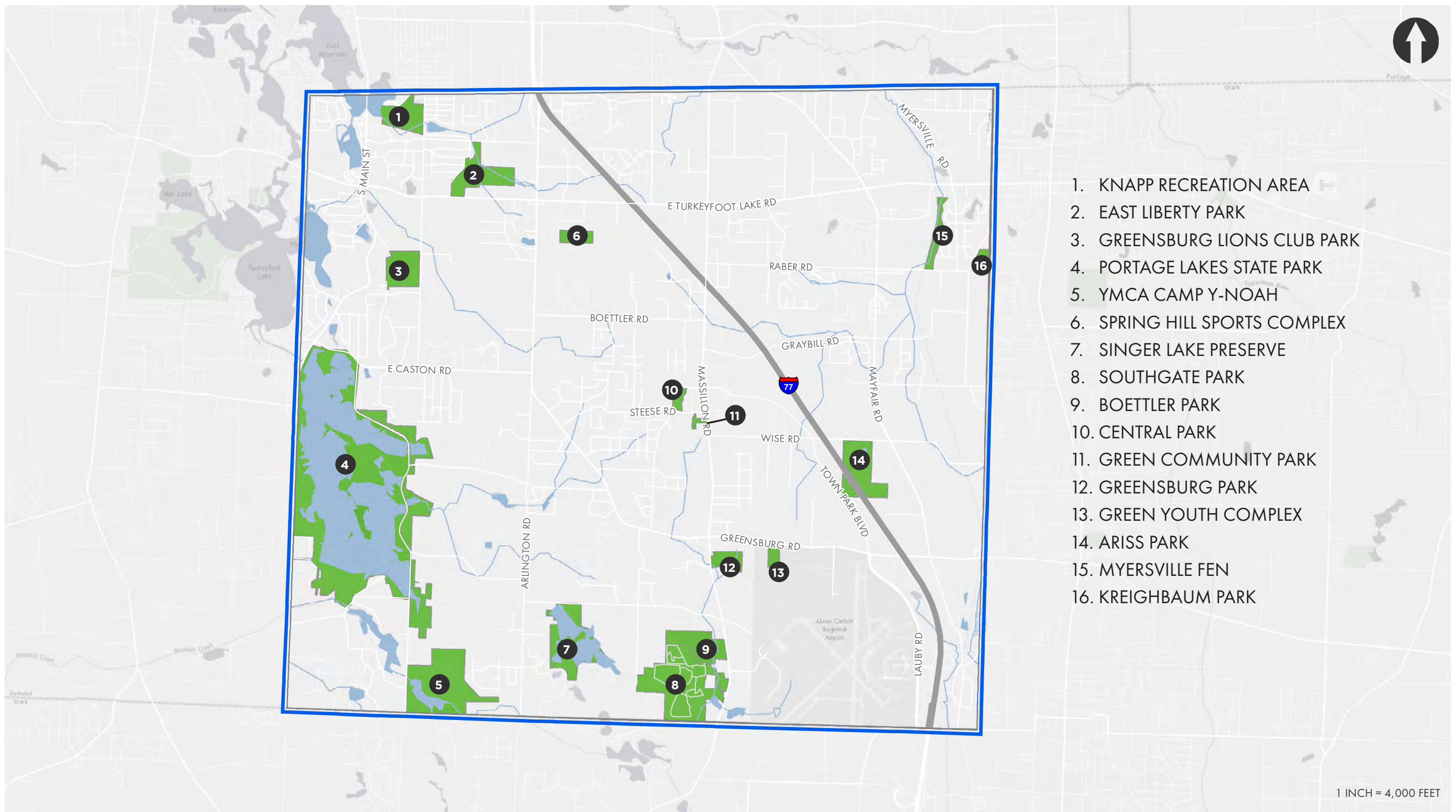


green connecting communities plan

USGS elevation model



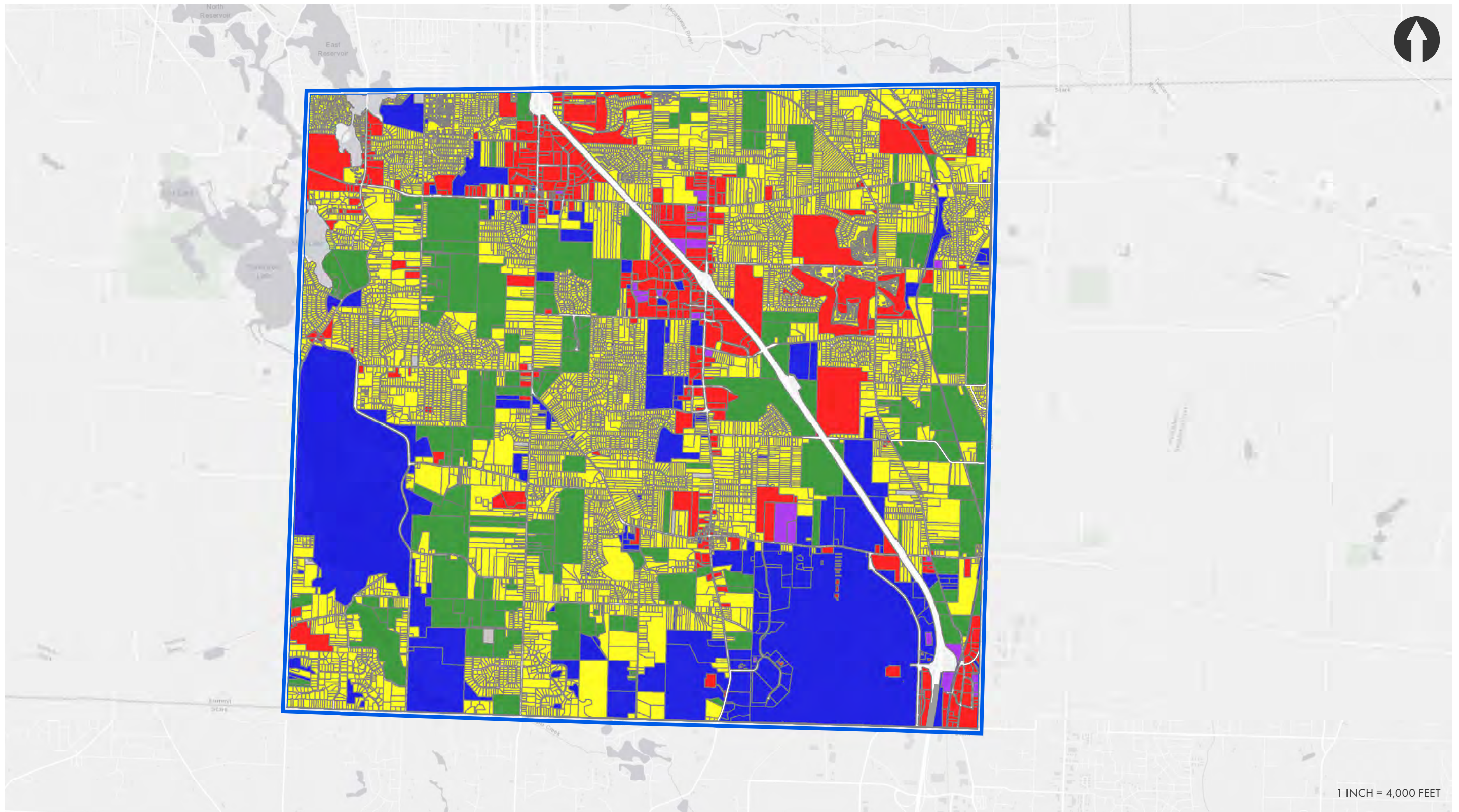
[TOPOGRAPHY] Though relatively flat, the City of Green is topographically dominated by the Nimisilla Reservoir. Elevation gradually increases heading east toward I-77.



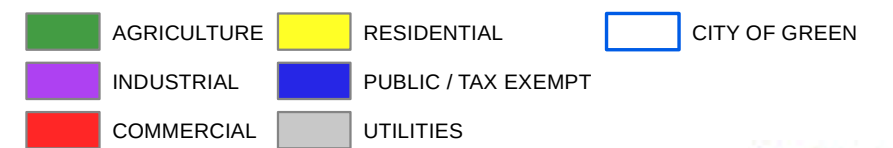
green connecting communities plan community parks

- MUNICIPAL BOUNDARY
- CITY OF GREEN
- WATER
- CITY PARKS + METROPARKS

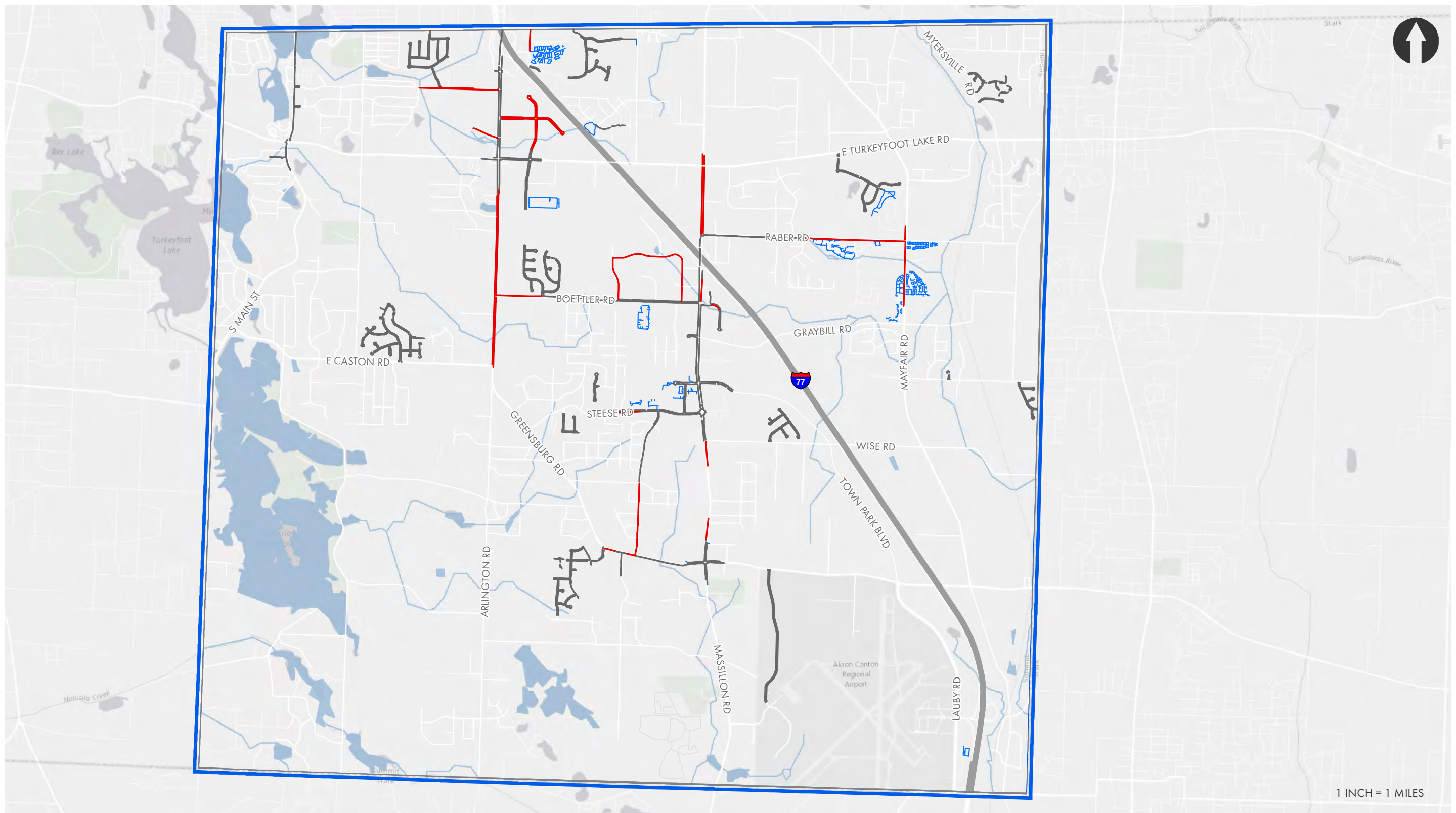
[PARKS] Recreation connectivity was a major factor when considering potential trail alignments. Several state and local parks, sports fields, and schools make up the majority of public green spaces.



green connecting communities plan land use



[LAND USE] Historically an agricultural area, the City has gradually built out many residential and commercial areas, and is dominated by the Akron-Canton Airport to the southeast.

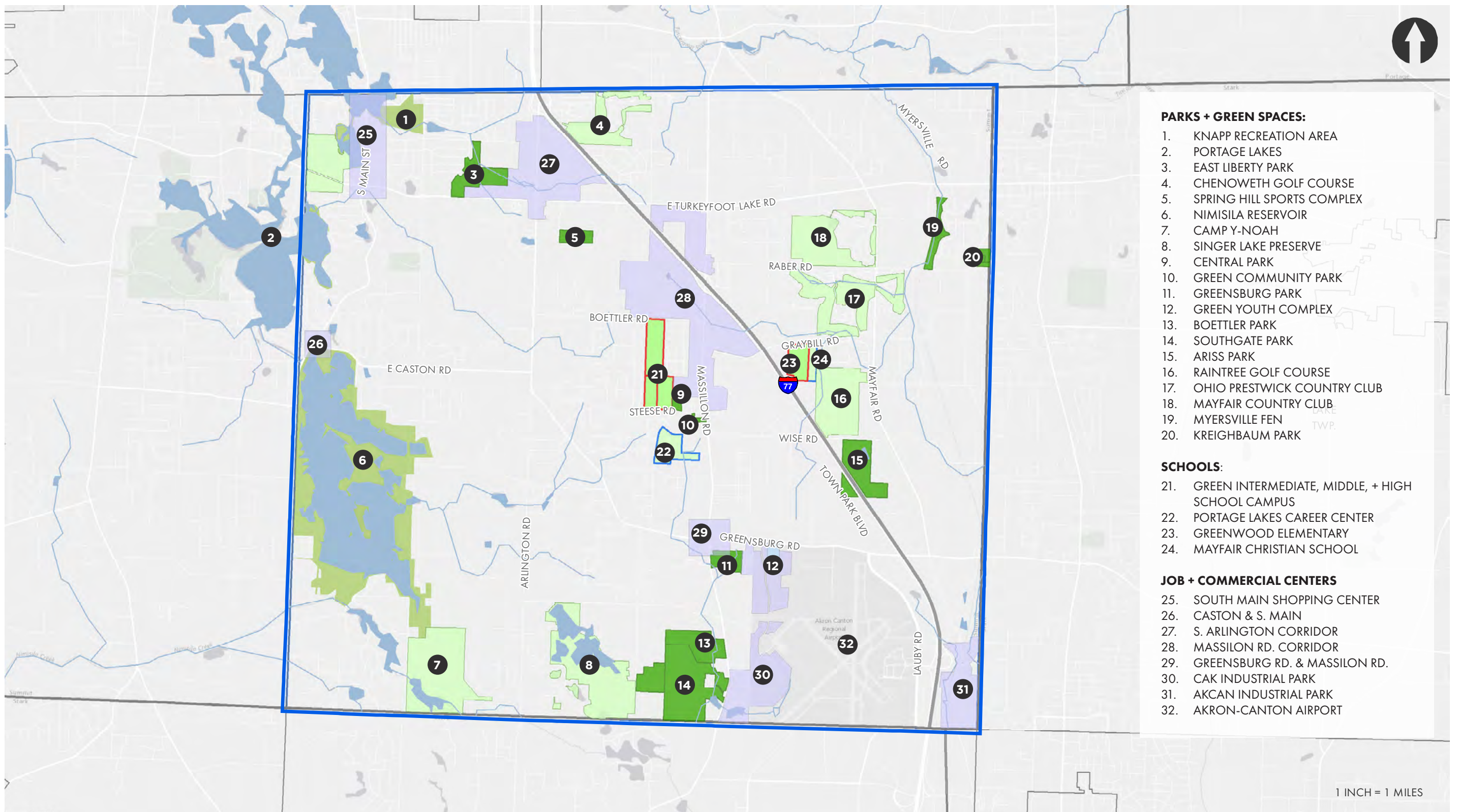


green connecting communities plan sidewalk network

- PUBLIC SIDEWALK
- RECOMMENDED SIDEWALK
- PRIVATE SIDEWALK
- MUNICIPAL BOUNDARY
- CITY OF GREEN
- WATER



[SIDEWALKS] By analyzing the existing and planned sidewalk networks, existing connectivity can be leveraged to help fill in gaps within the larger proposed network.



green connecting communities plan

local destinations

- CITY PARK
- GOLF COURSE
- PRIVATE SCHOOLS
- PUBLIC SCHOOLS
- SEMI-PUBLIC PARK
- STATE PARK
- JOB + COMMERCIAL CENTERS
- MUNICIPAL BOUNDARY
- CITY OF GREEN



[DESTINATIONS] Stakeholder and public input assisted in generating a list of priority destinations that would form the basis for connectivity decisions.



PUBLIC ENGAGEMENT

Successful planning relies upon creative and thoughtful input gained from community engagement. Project stakeholders, local political leaders, and the public at large can provide meaningful ideas and feedback enabling the project to better fulfill the community's needs and objectives.

Engaging these parties into the project from the beginning raises the status and potential impact of the plan. In the case of this plan, the residents of Green were solicited for input by means of a comprehensive public survey to better understand their desires and concerns to the ability to walk, bike, or run safely and conveniently. The details of the public survey are outlined separately in this document, and the full results may be found in the appendix.

Additionally, public engagement was solicited in three separate public meetings. The first public meeting was held on January 19, 2018 at the City's Central Park Community Hall. The meeting format included three stations, each containing a separate element for discussion, including destination locations, facility types, and connectivity routes. Voting and written comments were encouraged to solicit input and aid in ranking these elements. A formal presentation was also provided at this meeting, a copy of which is included in the appendix. Additionally, at the Mayor's State of the City Address and the Green Schools Celebration of Education Event, the stations provided at the first public meeting

were available for voting and discussion by those in attendance. The voting information and commentary received at these meetings was utilized in ranking the connectivity routes. The voting results indicate the top five destinations as Boettler Park, Green Schools Campus, Central Park, Nimisila Reservoir, and the Massillon Road Corridor. The voting results for Route Type indicate a preference tie for 10'-wide sidepath and 10'-wide off-road shared use path. A full tally of the destination and route type voting results can be found in the appendix. As part of the overall public engagement strategy, the City published frequent updates on their website and social media platforms to ensure the public was informed of plan progress and upcoming meetings.

Project stakeholders were engaged over the course of six total formal meetings. The stakeholder meetings provided crucial technical and advisory feedback on the pieces and parts of the plan, and refinement of the ideas to be presented at the three public meetings. As the study progressed, all aspects of the public and stakeholder feedback were considered and thoughtfully applied to the plan to ensure a final product that would generate excitement and consensus from the community.

ENGAGEMENT TIMELINE

PUBLIC MEETINGS

PUBLIC MEETING 1
1.19.2018

PUBLIC MEETING 2
1.25.2018

PUBLIC MEETING 3
2.24.2018

STAKEHOLDER MEETINGS

TEAM MEETING 1
9.20.2017

TEAM MEETING 2
11.14.2017

TEAM MEETING 3
12.19.2017

TEAM MEETING 4
4.27.2018

TEAM MEETING 5
5.29.2018

TEAM MEETING 6
6.22.2018

CONNECTIVITY DEVELOPMENT

In generating the plan, the stakeholders followed a logical progression of tasks and deliverables to ensure the plan was fully thought-out and validated. The four major steps consisted of the start-up phase, route development phase, recommendation and review, and lastly the final plan deliverables.

The start-up phase focused on preliminary data gathering and analysis including, but not limited to, existing transportation networks, environmental constraints, land use, topography, regional trail networks, schools locations, and key community destinations. These analyses were used as the fabric on which to weave the potential alignments.

Based on responses from the city-wide survey and meeting with adjacent communities, a destinations plan was developed that included 32 destinations within the city focusing on parks and green spaces, schools, and job and commercial centers. The destination plan is included on Page 13.

This was followed by the route development phase in which a gap analysis was performed to determine where new connectivity routes were needed. From that, a draft connectivity plan was created and presented to the stakeholders. The draft was also presented to the public through meetings and social media outreach. Due to Green's history as a rural township, it consists of a large landmass with population centers and destinations spread across the landscape. These unique circumstances resulted in a significant number and length of connectivity routes. The draft plan included 68 connectivity routes between identified local destinations. Regional connectivity was also addressed by providing two continuous routes between the city's eastern and western borders and three continuous routes between the northern and southern borders.

Following the draft plan development, stakeholder comments, and public input were incorporated into a revised plan was developed that reflected the desires and priorities of the community. This revised plan was then presented to stakeholders for comment and feedback.

These final comments and feedback were incorporated into a final connectivity plan, and priority recommendations were identified using a matrix to prioritize the routes. The connectivity plan with prioritized routes is included on Page 19. These plans and findings culminated in the creation of this document and supporting appendices to be used as a tool by the City of Green to further implement the recommendations.

START UP

**ROUTE
DEVELOPMENT**

**RECOMMENDATION
+REVIEW**

FINAL PLAN

ROUTE MATRIX

With concurrence achieved on the various route segments, a detailed route matrix was created that allowed the segments to be ranked and prioritized based on several attributes. The two primary types of alignments, “main” and “future/alternate”, were assigned a rank based on direct/indirect/no connectivity to a ranked destination, and on direct/indirect/no connectivity a population center/residential neighborhood. These weighted criteria created a baseline to see which alignments, if developed, would provide the best connectivity for residents.

Since future/alternate routes are dependent on future development, these routes were all ranked below the main routes, which are generally located within or parallel to a roadway or easement. Additional detail was then added by considering right-of-way availability, length, alignment complexity, regional impact, and potential cost. These additional data points provided in-depth detail needed by the stakeholders to complete the matrix analysis and determine an initial phasing plan for connectivity implementation. The complete list of field definitions and ranking weights are included in the table to the right. The matrix is included in the appendix.

FIELD	DEFINITION
Segment ID	GIS Assigned Segment ID
Alignment Type	Main = Primary Proposed Alignment Future/Alt = Alignment dependent on future/planned residential or commercial development. Typically shorter segments connecting paper streets or unbuilt home plots.
Destination Rank (1-4)	4- Connects directly to highly Ranked Destination(s) 3- Indirectly connects/passes near to a highly ranked destination(s) 2- Limited destination connectivity, typically short connector route 1- Future/Alternate Route upon development
Population Rank (1-4)	4- Directly connects to dense residential neighborhood developments 3- Indirectly connects/passes near to a dense residential area 2- Limited residential connectivity, typically a short connector route 1- Future/Alternate Route upon development
Length	Linear Feet of Alignment
In-ROW	No = Segment, or a portion of, impacts property outside of the public right-of-way.
Regional Connectivity?	Yes = the segment is part of an overall longer route that extends to/from other neighboring communities.
Intersections (Per Mile)	Number of intersecting roadways averaged over the segment length.
Drives (Per Mile)	Number of driveways averaged over the segment length.
Cost (Per Mile)	Project cost averaged of the segment length.



PRIORITY RECOMMENDATIONS

The completion of the matrix provided a clear ranking of the various route segments. The ranking permitted the stakeholders to prioritize potential projects and determine which routes would be carried forward to receive a detailed cost estimate.

Two routes tied for top ranking and they include a connection from the City's Central Park to Nimisila Reservoir via Steese Road, Greensburg Road, and a powerline connector; and completing a trail around the reservoir using ODNR and Summit County Metro Parks land, and along Comet and Christman Roads. Additionally, the top ranking routes resulted in a connector from the City's Central Park to Boettler Park via Shriver Road and easements over privately owned land. For these routes, detailed cost estimates were developed and are included in the appendix.

SOUTHGATE CONNECTOR

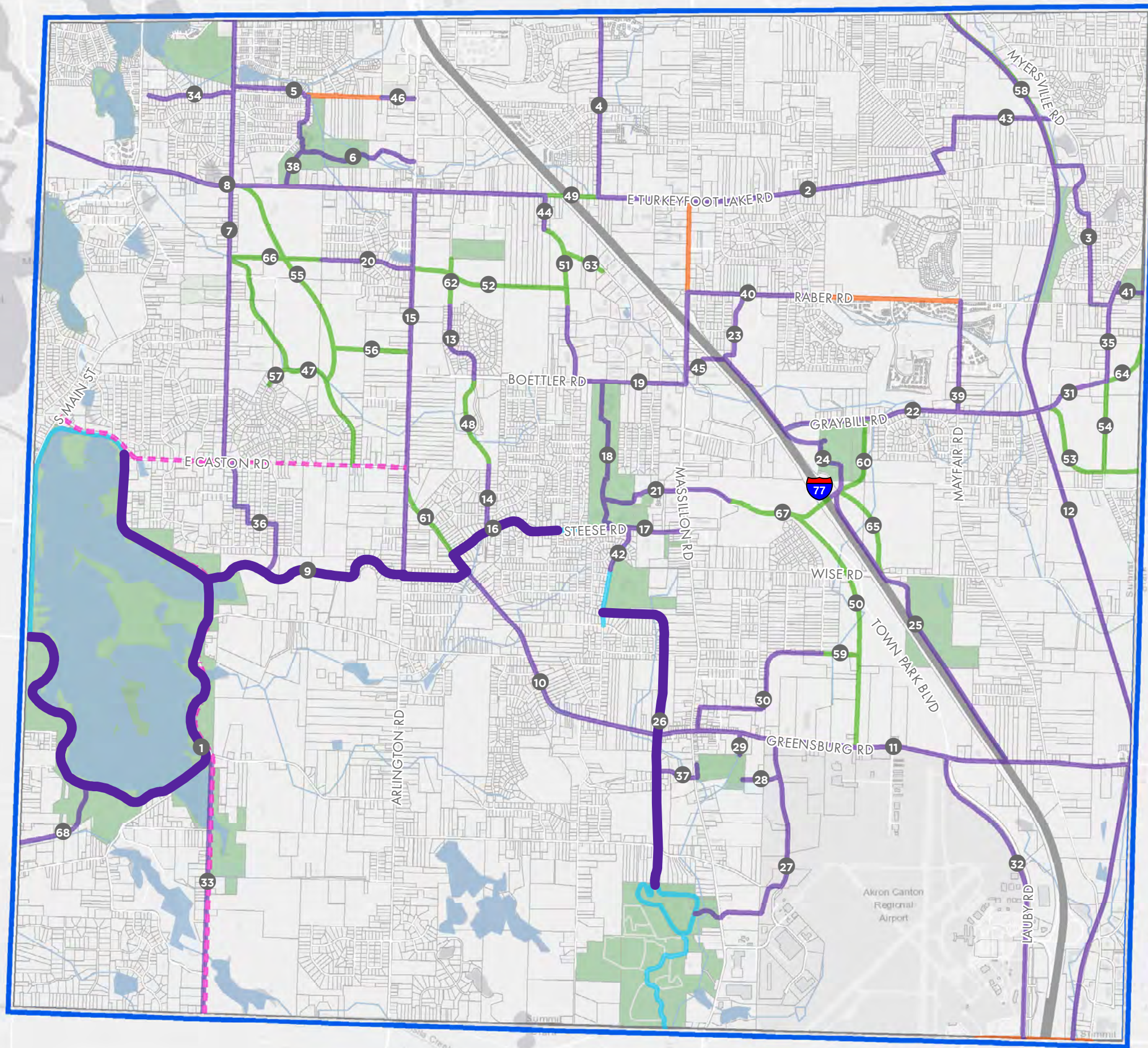
The Southgate Connector is a primarily a north/south route between an existing trail that terminates at the Shriver Road/King Drive intersection and Boettler Park. This route parallels public roadway, but also traverses developed and undeveloped land, some of which parallels Anderson Ditch. The route is approximately two miles long and will provide access to the trail for families that reside along various neighborhood streets including Melanie Drive, Sunnyview drive, Shriver Road, King Drive, Forsythia Drive, Wildflower Drive, and Greenbrook Road. Additionally, a portion of the trail abuts the Portage Lakes Career Center. For areas where wetlands and stream crossings are located, boardwalks will be incorporated into the route.

NIMISILA LASSO

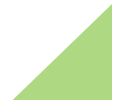
The Nimisila Lasso is primarily an east/west route between an existing trail that terminates near the Steese Road/Meadow Wood Lane intersection and the east side of Nimisila Reservoir. This route parallels public roadway, but also traverses undeveloped land

along a power transmission route. An aggregate trail has been constructed along a portion of the north and west sides of the reservoir. Completing the trail around the reservoir is included in this connectivity route. Note that there is an existing bicycle path adjacent to Christman Road along the east side of the reservoir. This path is narrow and is not conducive to expansion for a 10-foot wide trail. Thus, a separate an off-road trail that parallels the Christman Road is proposed. The route from Steese road to the reservoir is approximately two miles long and will provide access to the trail for families that reside along various neighborhood streets including Steese Road, Slaughter Road, Ridgeview Drive, Springdale Road, Pazzotti Lane, Greensburg Road, Newcomb Drive, and Alpine Boulevard. Completing the loop around the remainder of the reservoir requires approximately four miles of trail and boardwalk.

The un-constructed portion of the trail shown in this plan that circumferences the reservoir will be on land that is controlled by the Ohio Department of Natural Resources (ODNR) or by Summit County Metroparks. As such the stakeholders conducted a meeting on May 22, 2018 with representatives of these agencies to discuss the concept of completing the loop around the reservoir. Both agencies indicated that they would partner with the City to provide access for this great natural resource. Summit County Metroparks has developed a concept plan for a primitive trail within the confines of land that they control. ODNR is constructing an extension to the existing aggregate trail on the north side of the reservoir. Based on discussions at the meeting, Metroparks will proceed with their primitive trail system. The City will focus on the portion of the trail from Steese Road to the campground at the reservoir. Over time the primitive trails may evolve into a 10-foot shared use path, and/or the route shown in this study could be implemented.



- | | | |
|---------------------------|-------------------------------|--------------------|
| PHASE ONE RECOMMENDATIONS | FUTURE ROUTE UPON DEVELOPMENT | MUNICIPAL BOUNDARY |
| POTENTIAL ROUTE | EXISTING TRAIL | CITY OF GREEN |
| PLANNED IMPROVEMENTS | EXISTING BIKE LANE | |



FUNDING PROCESS

BACKGROUND

Budget priorities and constraints at the national and state levels has created greater challenges in funding capital projects. Communities are trying to perform a balancing act between the needs and demands for equipment, personnel, maintenance and critical capital expenditures along with making infrastructure investments that improve the quality of life for their residents.

One thing is very clear; funding capital projects will be more different and challenging than it has been in the past. The demand for grant funds and other financial assistance from state and federal sources will increase and be more competitive as the availability of these funds is reduced. Likewise, it will be imperative to develop a variety of funding streams to pay for a system of connectivity routes within the City.

PRIORITIZE ROUTES

The first step in developing a funding strategy is to prioritize the connectivity routes. This has been completed as part of this study. A detailed funding plan should be developed for the top ranked routes. A funding plan could be developed for all the identified (67) routes. However, due to the large number of routes, funding sources and grant opportunities will most likely change before many of these routes are selected for implementation, requiring a review/revision to the detailed funding plan.

DETAILED COST ESTIMATES

The next step is to develop a detailed cost opinion costs each route. Besides the construction cost, this includes items such as land acquisition and/or easements, design and administrative costs, and permits. It is critical to have an accurate cost opinion for each recommended route so that when funding becomes available, a proposal may be submitted. Many times, there is not significant lead-time available to prepare accurate cost estimates for a specific project. This study includes a detailed construction cost opinion for the top routes. A cost opinion was provided for the remaining routes on a cost per foot basis, and is included in the appendix

FUNDING AND FACILITY MATCHING

This step includes analyzing each recommended route for applicable or relatable funding. For example, a recommended route that has connectivity to an existing regional facility might be available for funding through that organization. Or a route that is contiguous to a private business might be funded by that business in a private-public partnership. Many larger businesses have developed Employee Wellness programs for their employees and they see value in providing opportunities to improve the health of their associates.



FUNDING SOURCES

Recreation Trails Fund and the Clean Ohio Fund are the two Ohio Department of Natural Resources grant programs available to communities for funding connectivity routes that are in alignment with the State of Ohio's priorities for these similar capital projects. The recommended routes that can qualify for this program should be identified so that the preliminary work needed for the grant application can be accomplished well in advance of the annual deadlines. Many times, a community must submit these grant applications each year over a period of years in order to receive funding. The grants typically provide 75% or 80% of the needed project funds. Other state funding sources administered through ODOT include the Transportation Enhancement Program and Multi-modal Planning.

An additional program is the Safe Routes to School program. This program encourages children to walk and ride bikes to school in a safe manner. In Ohio, this program is administered through the Ohio Department of Transportation.

Funding sources administered through the Local Transportation Planning Agency (AMATS) includes Congestion, Mitigation and Air Quality (CMAQ); Surface Transportation Program (STP); Transportation Program (TIP); and Transportation Enhancement (TE).

On a local level, other sources of funding may be secured from private foundations that have an interest in the community. Private foundations have stated missions and purposes for their funds. Most are interested in public projects that enhance the quality life of the populace. Information on private foundations can be found in the Foundation Center site available online at foundationcenter.org.

Another local funding method is a Special Improvement District (SID) as defined in the Ohio Revised Code (ORC) Section 1117.02, which allows property owners to pay an additional tax designated for specific services or improvements within a designated area or district. Government and religious property is exempt unless representatives of these properties request in writing to be included. The SID enables a community, neighborhood, or business district to tax itself for specific improvements and services. A SID can capture the energy of property owners motivated to make community improvements, and can provide benefits to the community-at-large with no additional financial burden to the City.

Establishing dedicated revenues through development impact fees is another potential funding method. These revenues apply to new residential and commercial developments. Funds received are typically deposited into a dedicated fund, established by City Council, to pay for connectivity improvements.

The City has a portion of its income tax mandated for parks funding through its Charter. An amendment could be presented to City voters to allow a portion of the percentage dedicated to park funding to also be used for connectivity route construction and maintenance.

Finally, as many of the connectivity routes identified in the study parallel an existing roadway, piggybacking the construction of the connectivity route within a roadway project footprint provides a means to offset some of the soft costs. Where federal highway funds are provided for the project, a portion of the connectivity construction may be funded as well.



IMPLEMENTATION + DESIGN AIDS

The land development process is key to implementing the routes that traverse undeveloped land. Adopting this plan and referencing it to the City's Land Development Code by ordinance, can facilitate the construction of sections of connectivity routes as land is developed for residential or commercial purposes. As all subdivision are required to include sidewalks along public streets, portions of the walk could be widened to become a side path; or an off-road trail could be constructed within the open space that is set aside within the subdivision. The cost of these improvements can be included in the development cost of the subdivision.

A majority of the connectivity routes parallel existing city streets and roadways. Also, a majority of the City's transportation improvement projects include sidewalks. Exchanging sidewalks for sidepaths or an off-road trail within the project footprint is a logical means of implementing this plan. A policy that requires each transportation project to consider a side path or an off-road trail in accordance with this plan is critical. Other projects such as storm sewer improvements, particularly those located outside road right of way should consider purchasing a sufficient right of way or easement width to support the implementation of a trail.

Design aids that are critical for the consistent implementation of a side path or off road trail include typical sections for side path and off road trail. These details are provided in the appendix. Design guidelines for shared use paths, including side paths, are provided in the ODOT Location and Design manual, Volume 1, Section 700, Multi-modal Considerations. These design aids and the ODOT design guidelines should be adopted by the City, and referenced in the City's Land Development Code. Design guidelines are also provided in Designing Sidewalks and Trails for Access (FHWA, September 2001, and the Guide for the Development of Bicycle Facilities (AASHTO, 4th Edition). These design aids and design guidelines should be adopted by the City, and referenced in the City's Land Development Code.

Additionally, there may be situations when various physical constraints lead to the need for a design exception from the established criteria, particularly when considering design items that are not safety related. It is recommended that the City develop a formal process to provide flexibility to designers if such situations arise.



nimisila reservoir (ohio.com)

APPENDIX

COMMUNITY CONNECTING PLAN

CITY OF GREEN

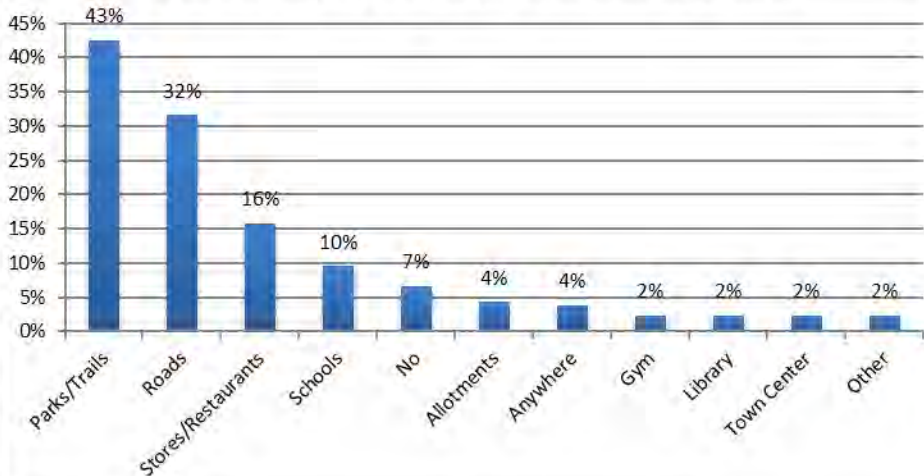
JUNE 2018



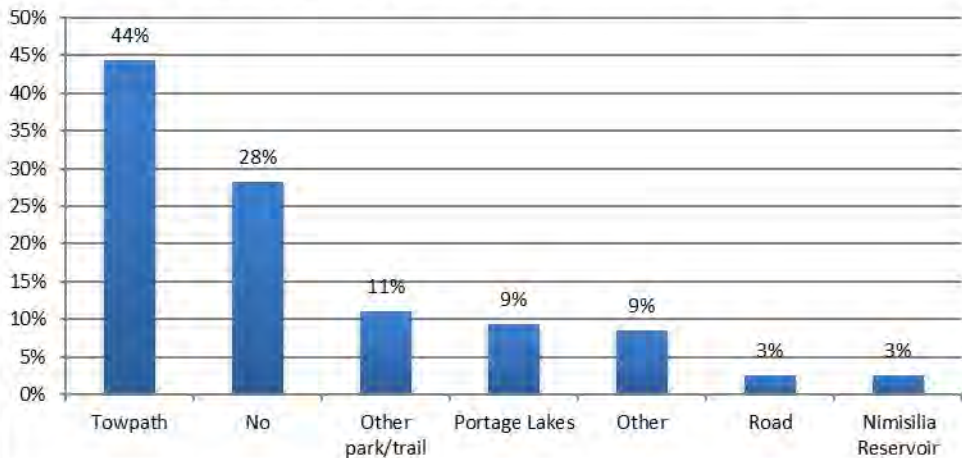
City of Green

PUBLIC SURVEY + RESULTS

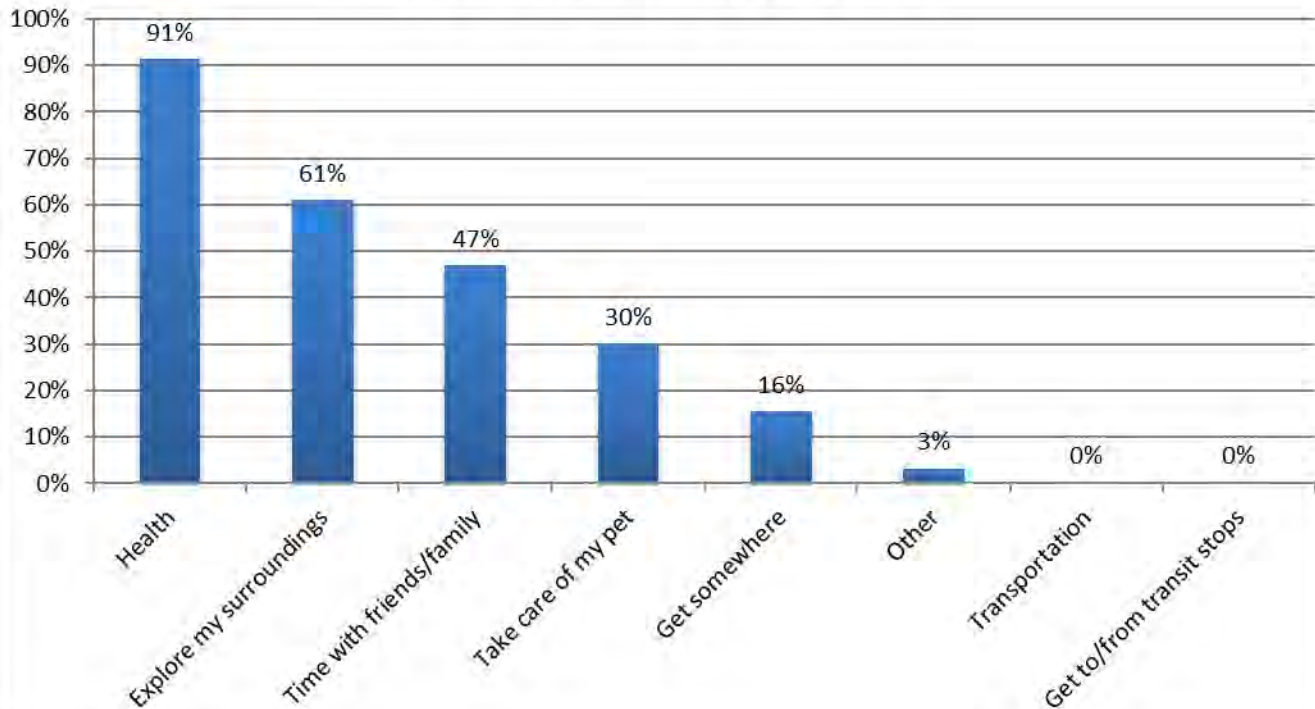
Are there any destinations inside of Green would you like to walk/run/bike to, but can't? (generalized responses)



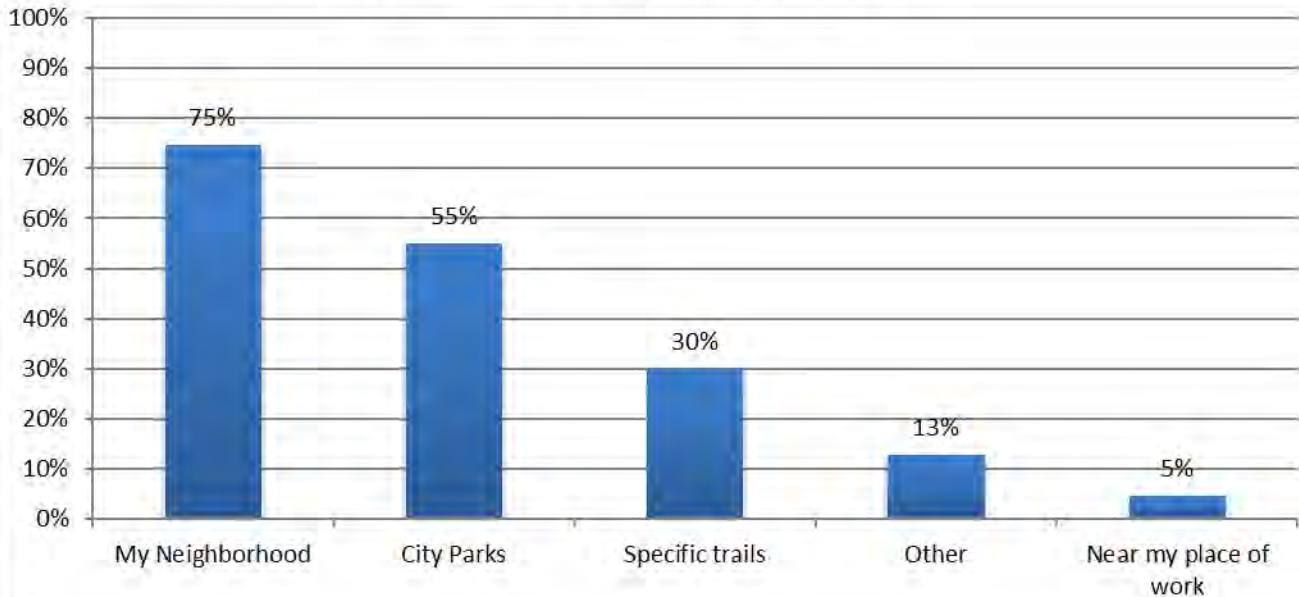
Are there any places outside of Green would you like to walk/run/bike to but can't? (generalized responses)



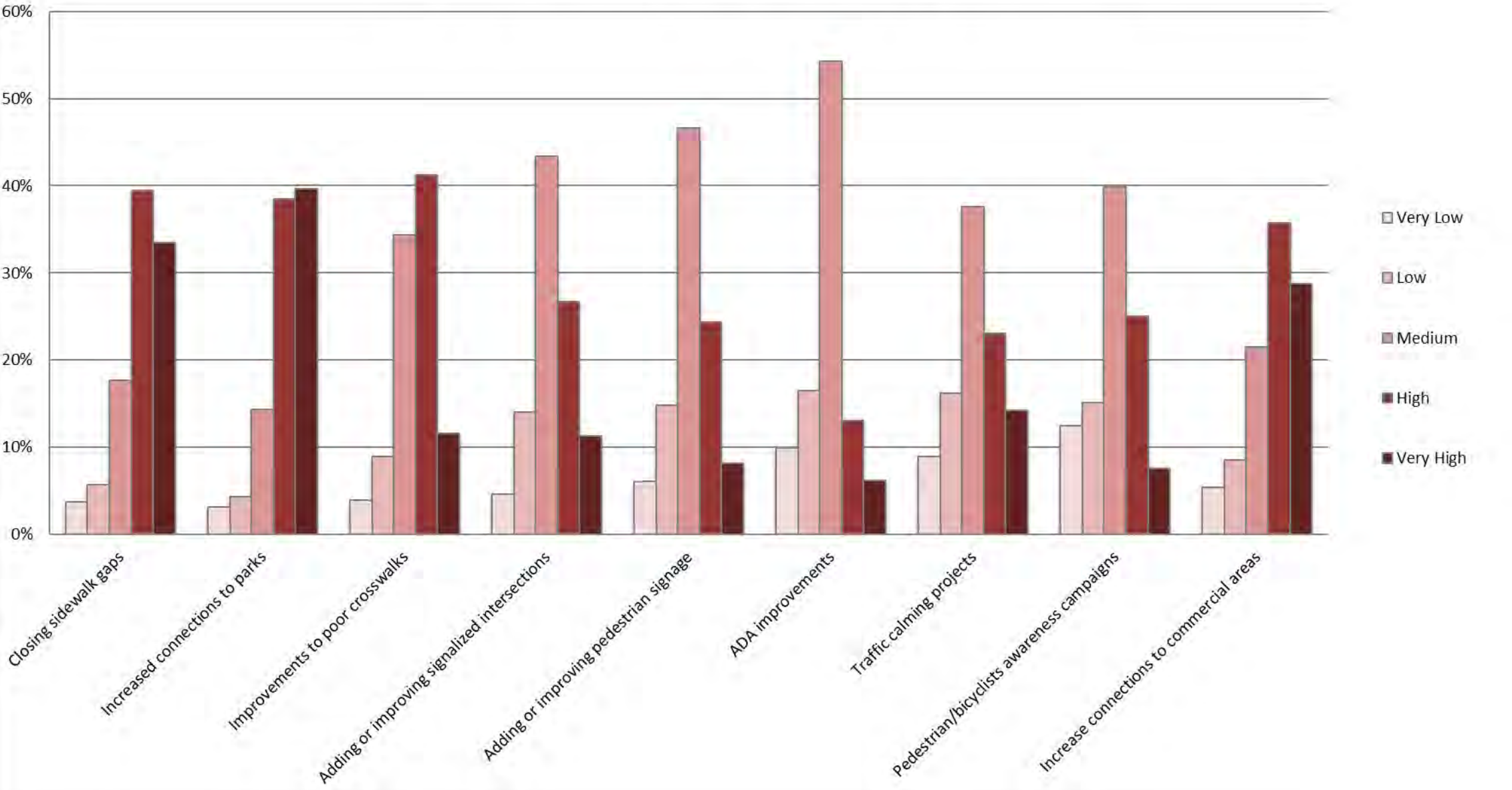
Why do you walk/run/bike?



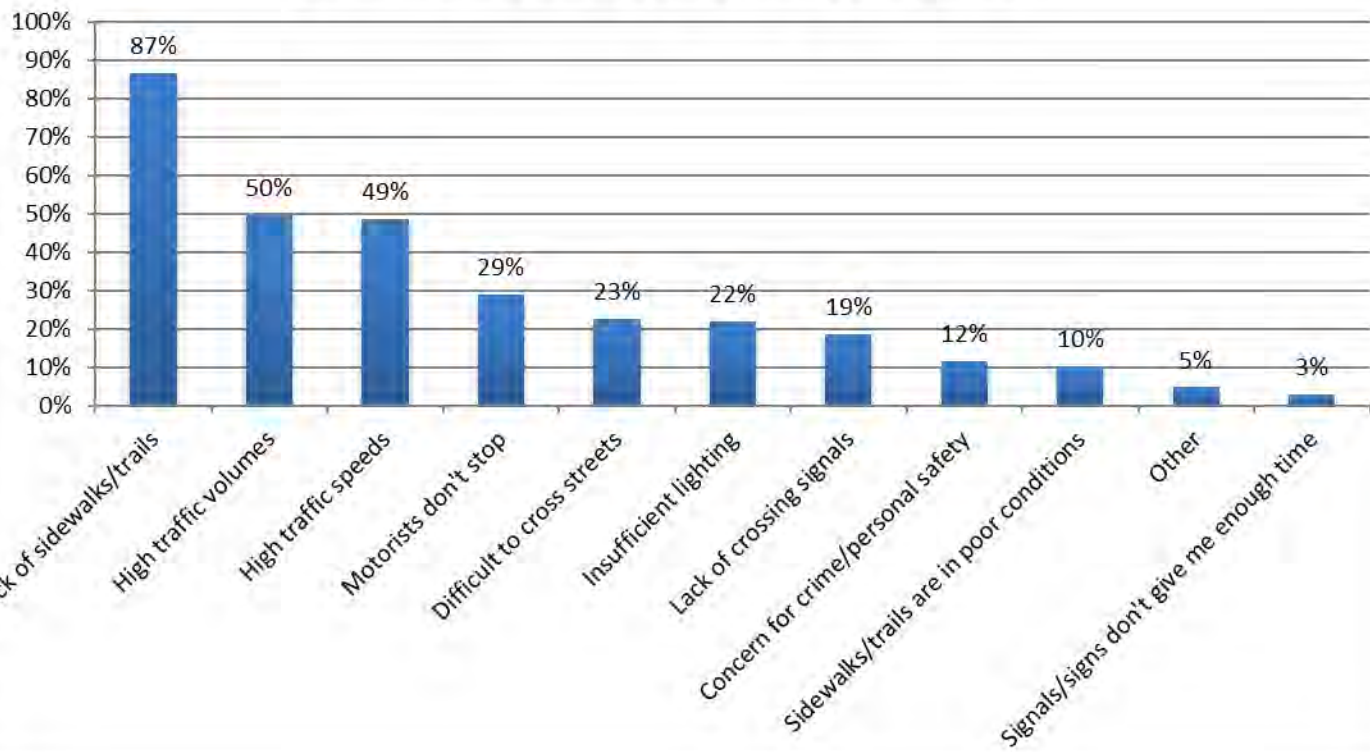
Where do you walk/run/bike?



Priority of the following pedestrian/bicycle improvements?



Problems when you walk/run/bike?



PUBLIC MEETING FLYER



JOIN US!

AT THE OPEN HOUSE FOR FUTURE TRAILS AND CONNECTIVITY PLAN

JANUARY 11, 2018 | 5:30-7:30PM

formal presentation at 6:30pm
at CENTRAL PARK COMMUNITY HALL
1755 TOWN PARK BLVD

Help provide a vision and framework for making decisions about where and how to provide pedestrian and bicycle connections for residents to access parks, neighborhoods and other public areas. The plan will help the city identify and prioritize where and how connections should be made, positioning the City to make appropriate decisions as development occurs and as transportation projects are planned.

For more information, please contact Sarah Haring, Community Development Administrator at 330-896-6614 or sharing@cityofgreen.org. We hope to see you there!



PUBLIC MEETING PRESENTATION



city of green

connecting communities plan

PUBLIC MEETING 1
1.11.2018

Environmental
Design Group
The community impact people.



Environmental
Design Group
The community impact people.

- Project Introduction + Goals
- Users and Facility Types
- Survey Results
- Mapping and Analysis
- Connectivity Recommendations
- Feedback

Where are we now?

- basemapping
 - existing conditions
 - destination analysis
 - connectivity gaps
- community survey
- identify potential facility types
- connectivity recommendations
- public meeting

Where are we going?

- incorporate feedback + update recommendations
- determine connection facility types
- construction cost estimate
- route phasing + funding strategies
- final recommendations



HEALTH IMPACTS

- 32% of adults are obese
- Only 15% of adults engage in sufficient moderate physical activity
- 16% of children ages 2 - 19 are obese
- Inactivity can = diabetes, heart disease, stroke

Do incomplete streets contribute to this?



MENTAL HEALTH IMPACTS

- People heal quicker/ more effectively/ more happily when they have access to the outdoors and recreation
- Children with ADD can concentrate better after being in outdoor green settings.
 - The greener the setting, the less severe the symptoms.
- Beneficial to mood, day-to-day effectiveness & cognitive functioning



MENTAL HEALTH IMPACTS

- Outdoor and trail therapy (out-patient and in-patient) being used to treat:

PTSD

Depression

Substance abuse &
rehabilitation,
Psychological
Illnesses



Pedestrian Movement

Why Did the Pedestrian Cross the Road?



Pedestrian Movement

.....To Get To the Other Side



Pedestrian Movement

.....To Get To the Other Side



People walk where they want to walk, cross where they want to cross

The general public understands:

- How pedestrians travel
- What sidewalk are
- How to use a sidewalk



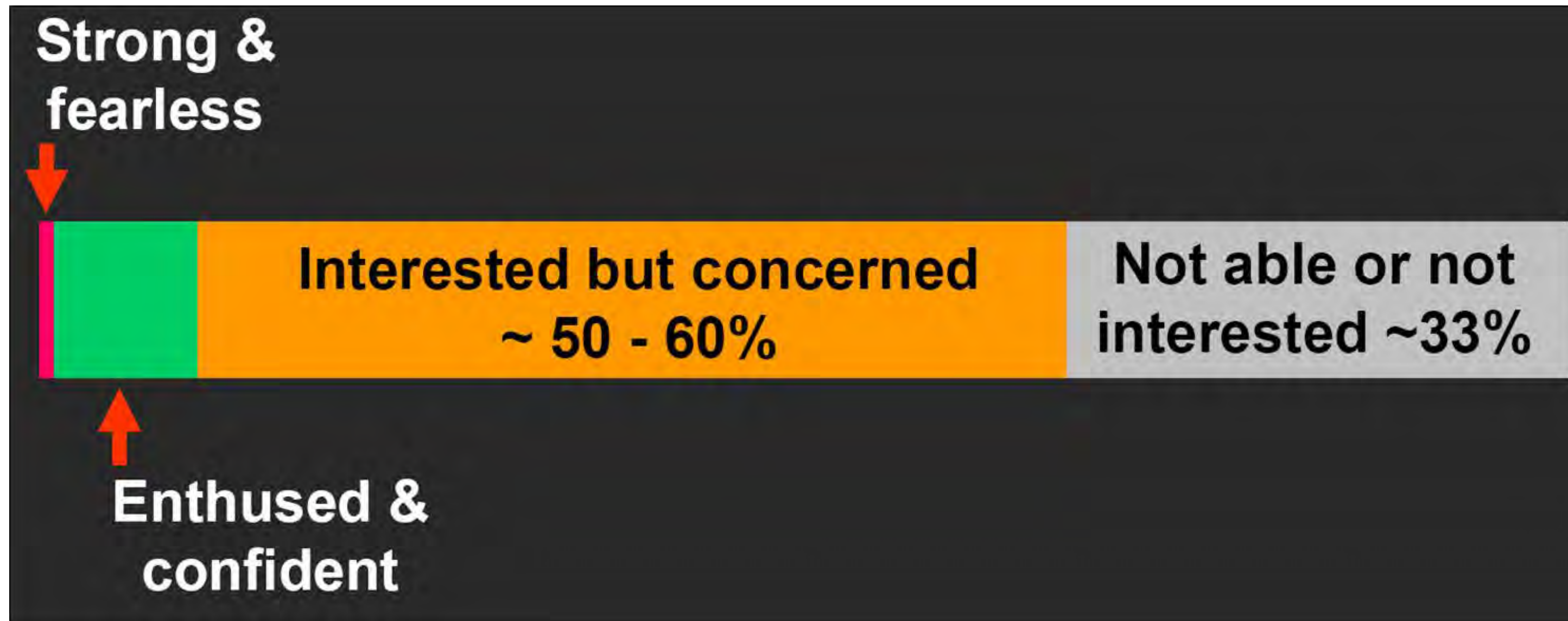
FACILITY TYPE

Sidewalks

- 5' width (new construction per ADAAG)
- 4' width if repairing existing
- Less than ¼" vertical change (new construction per ADAAG)
- Less than ½" vertical change for existing
- Typically concrete w/ joints (can be decorative, pavers, stamped, etc.)



BICYCLE USER GROUPS



BICYCLE USER GROUPS



BICYCLE USER GROUPS

Class A Cyclists

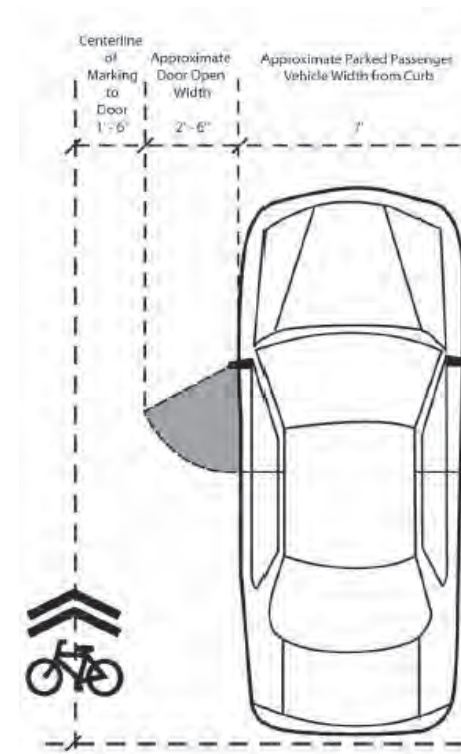
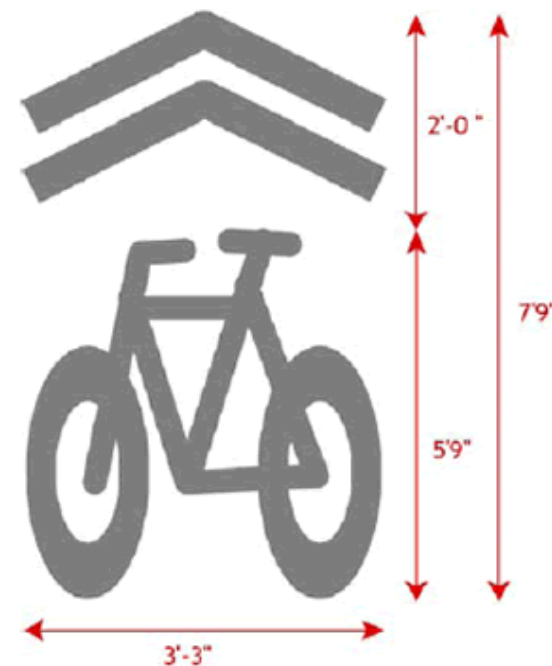
- Represent ~2% of people that own a bicycle
- “Strong and Fearless”
- Will ride their bicycle as a vehicle in any situation



FACILITY TYPE

Sharrows

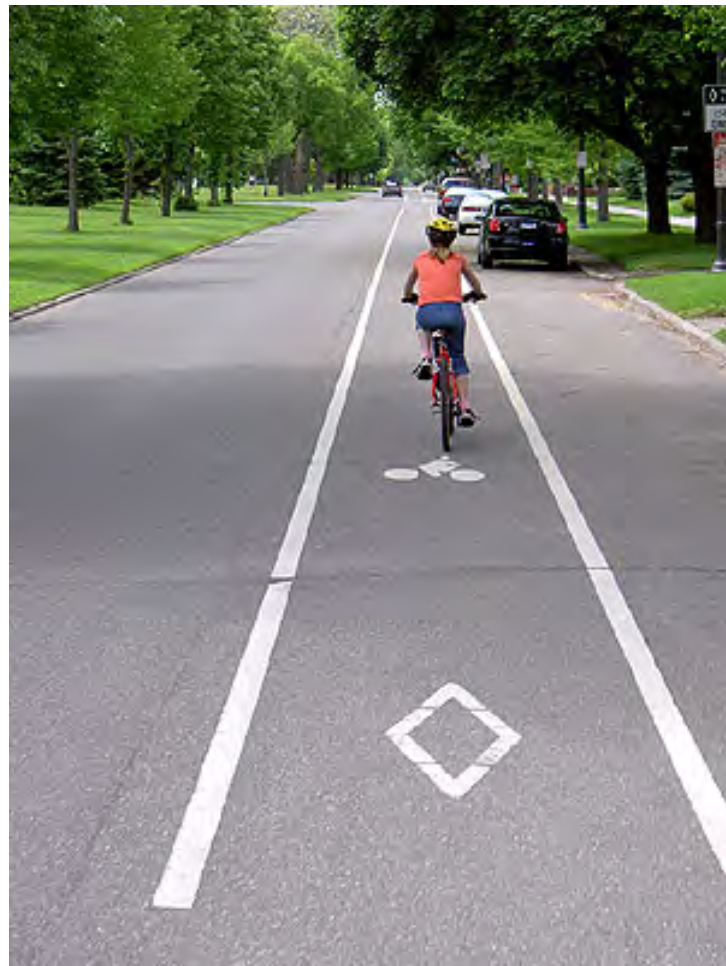
- Good sight distance
- Low volumes
- Preferred 14 foot lanes
- Signage Important
- Sharrow markings not appropriate for over 35 mph



BICYCLE USER GROUPS

Class B Cyclists

- Represent ~5% of people that own a bicycle
- “Enthusiased and Confident”
- Prefer dedicated bike facilities (bike lanes, protected bike lanes)



FACILITY TYPE

Bike Lanes

- Paved shoulders may be designated as a bike lane
- Smooth riding surface
- 4' wide w/o curb
- 5' wide w/ curb
- 5'+ on roadways w/ speeds greater than 45 mph
- See MUTCD for markings
- Not legal for pedestrians



FACILITY TYPE

Protected Bike Lanes

- Paved shoulders may be designated as a bike lane
- Smooth riding surface
- 4' wide w/o curb
- 5' wide w/ curb
- 5'+ on roadways w/ speeds greater than 45 mph
- See MUTCD for markings
- Not legal for pedestrians



BICYCLE USER GROUPS

Class C Cyclists

- Represent ~93% of people that own a bicycle
- “Interested but Concerned”
- Will only ride on completely separated bicycle facilities (side paths, shared use paths)



FACILITY TYPE

Trail/Shared Use Path

- Same specifications as sidepath
- 10' paved ADA compliant trail
- 5' buffer when adjacent to a roadway
- 2' buffer on side that is not adjacent to a roadway
- Legal for pedestrians & bicyclists



FACILITY TYPE

Side Path

- Same specifications as a shared use path (i.e. a trail)
- 10' paved ADA compliant trail
- 5' buffer when adjacent to a roadway
- 2' buffer on side that is not adjacent to a roadway
- Legal for pedestrians & bicyclists



BICYCLE USER GROUPS

BUT.....

- When Class A Cyclists have children, they often become Class C Cyclists when riding with their kids!!!
(i.e. the Fearless become Concerned.....)



BICYCLE USER GROUPS

“Targeted” Bicycle User Groups: Ages 8 - 80

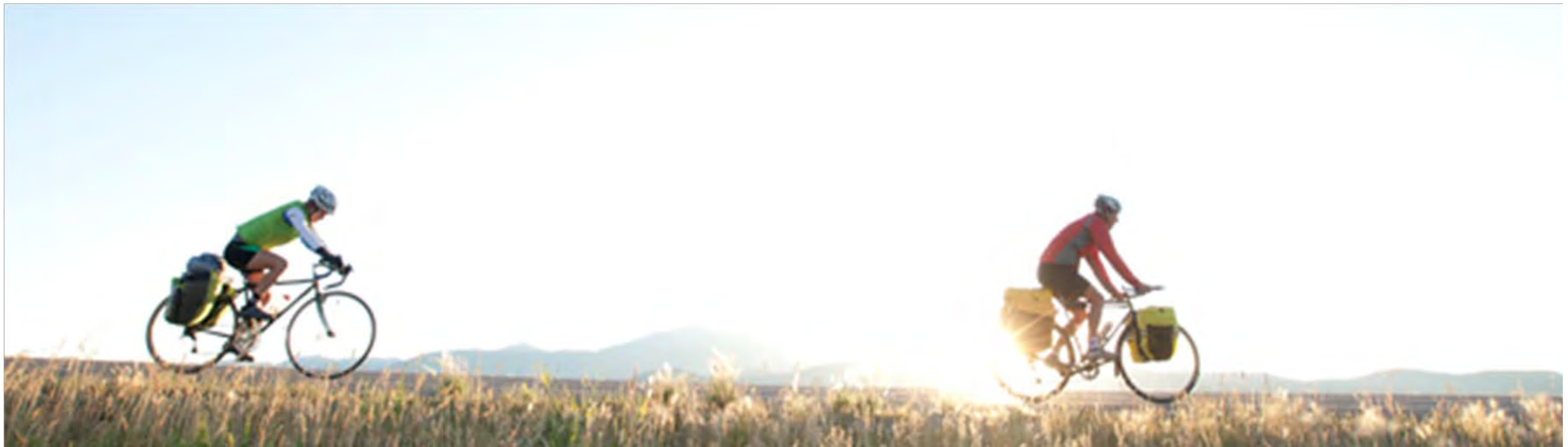
- Often referred to as the “targeted bicycle facility user” (i.e. EVERYONE)
- This group is typically associated with Class C Cyclists
- Usually prefer off-road trail/shared use path or sidepath
- Trail users typically spend \$13.54 per day (in Ohio)

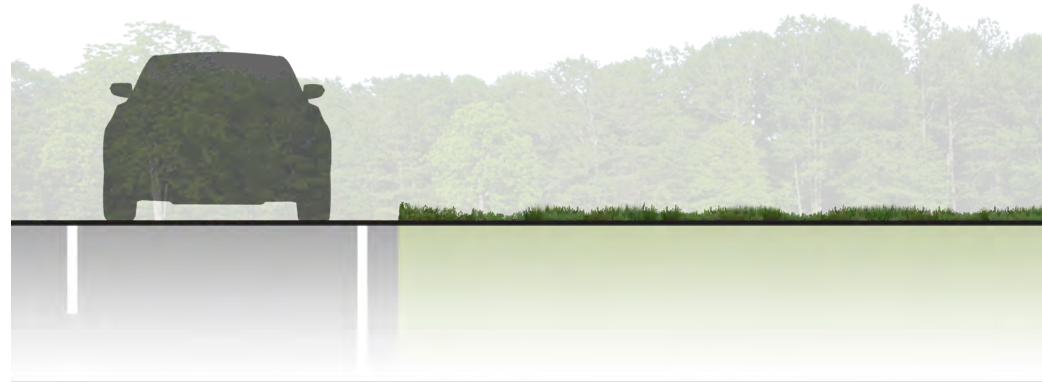


BICYCLE USER GROUPS

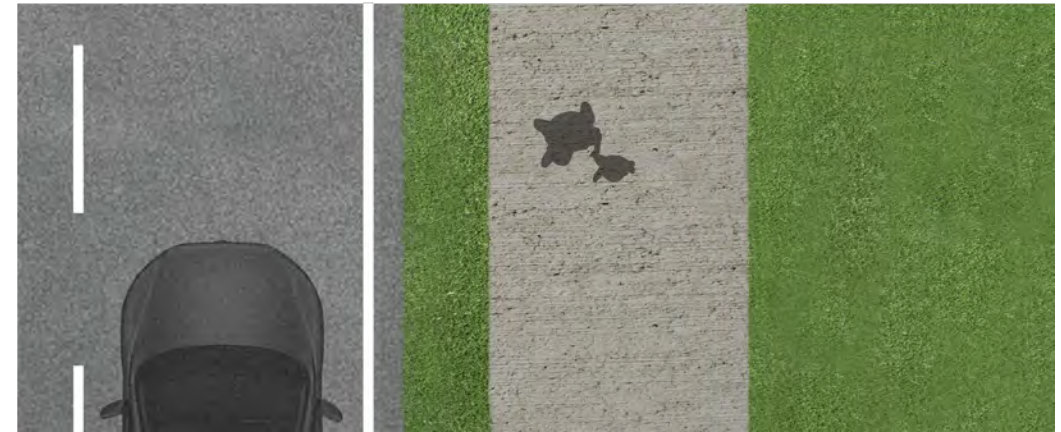
“Targeted” Bicycle User Groups: Long-Distance Riders

- Group lacks diversity
- Predominantly white males who are highly educated between the ages of 50 – 64
- This user group spends the most \$\$\$ while cycling (\$25 - \$75 per day in the U.S. (overnight trips))





EXISTING



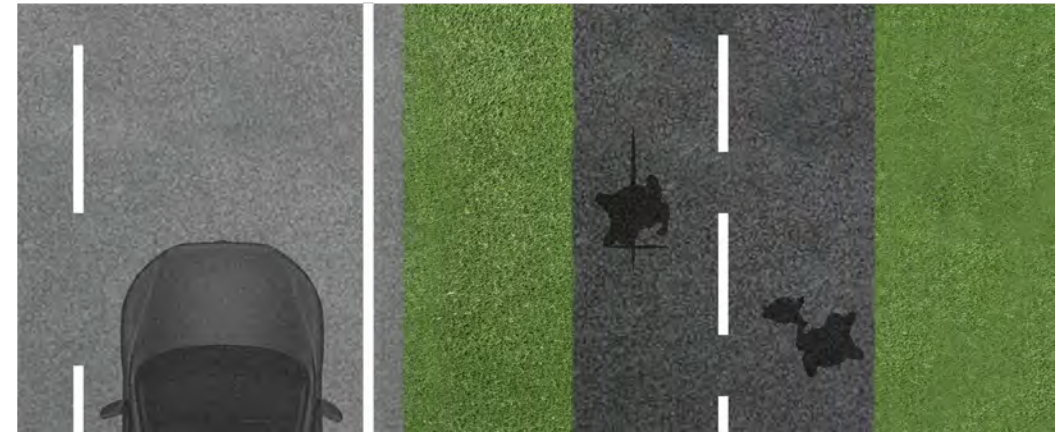
8 FT. WIDENED SIDEWALK



OFF-ROAD TRAIL



10 FT. SHARED-USE PATH

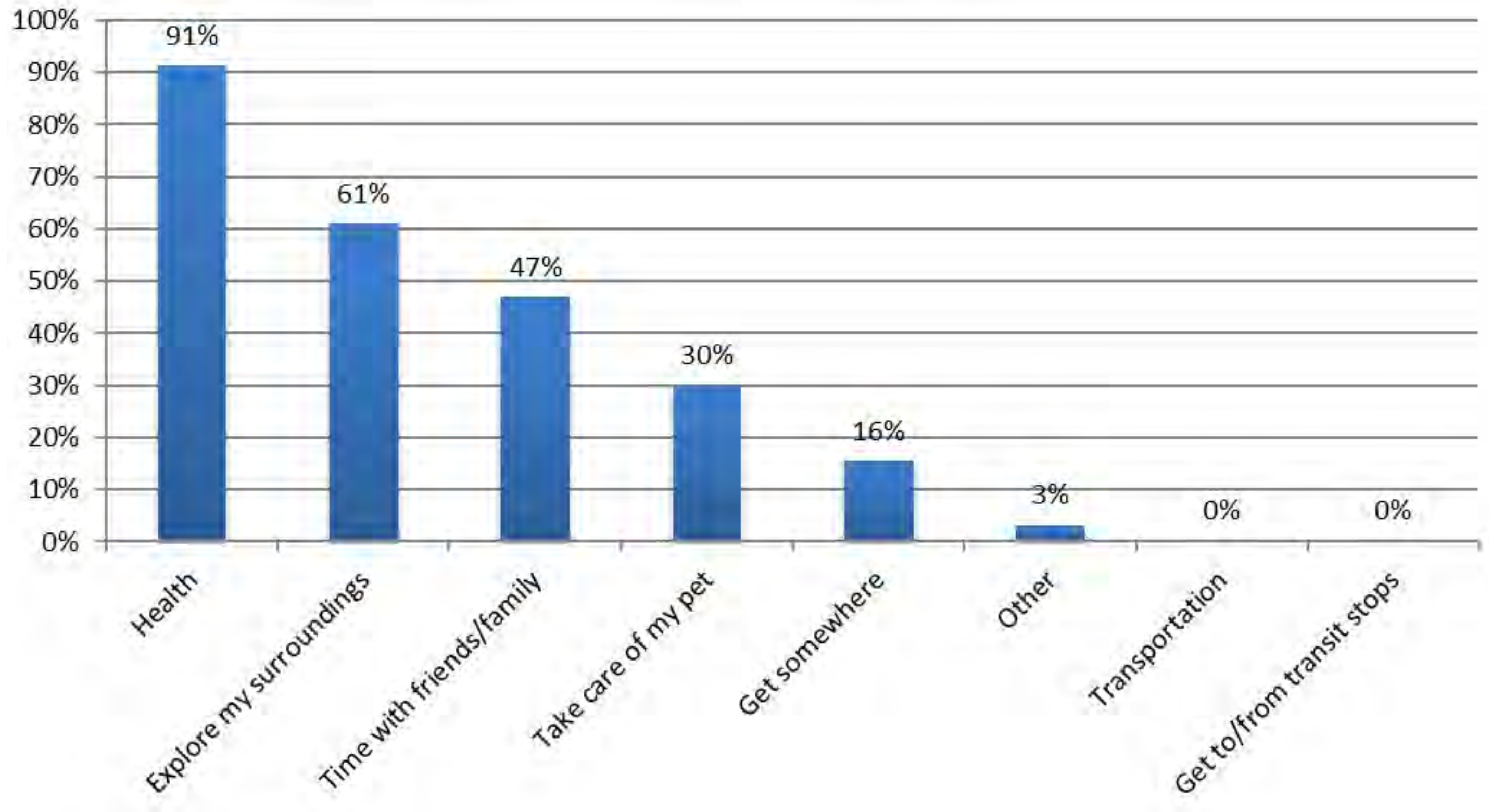




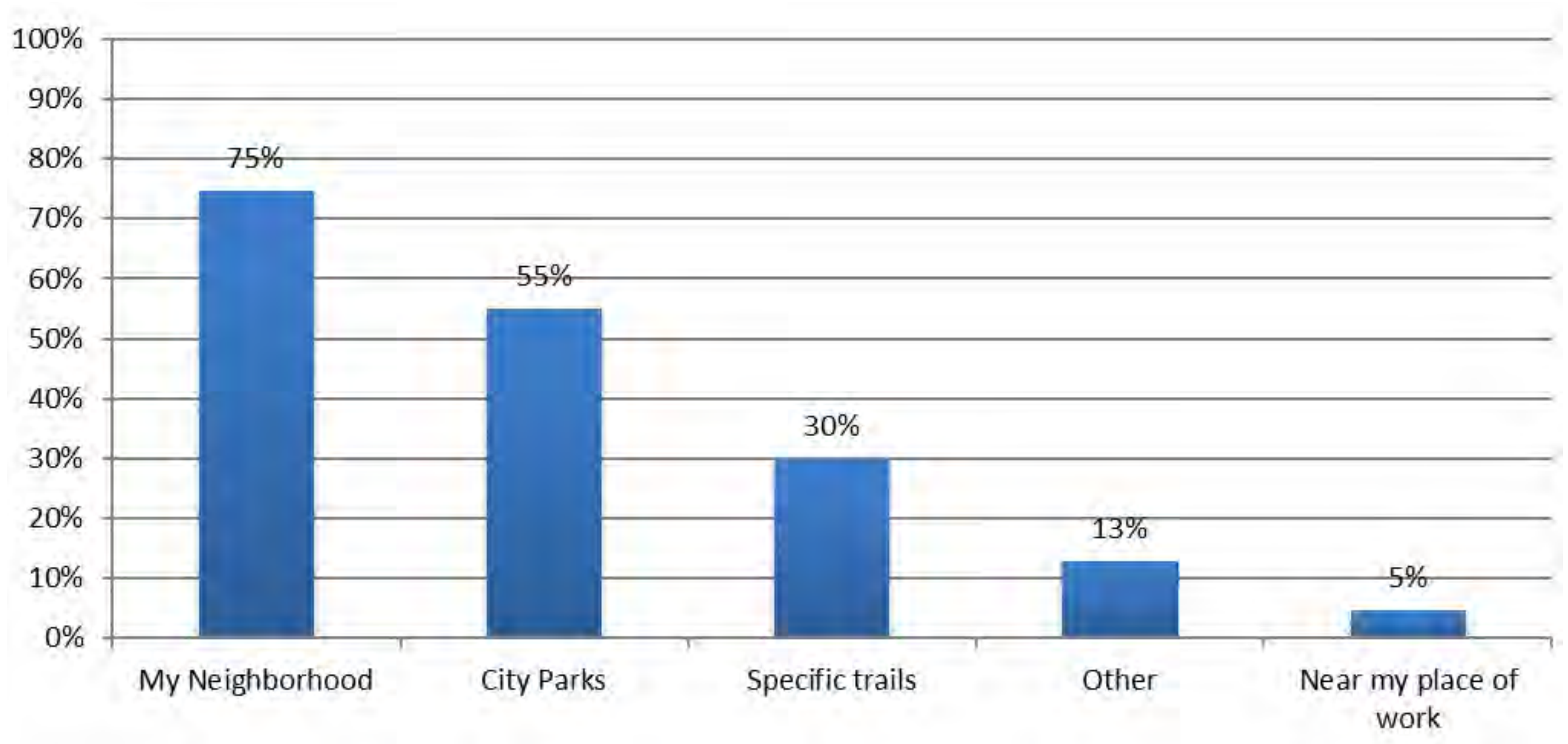
ABOUT THE SURVEY

- ‘Connectivity Plan Community Survey’
- online-based survey
- 349 respondents
- 14 questions
- July 2017

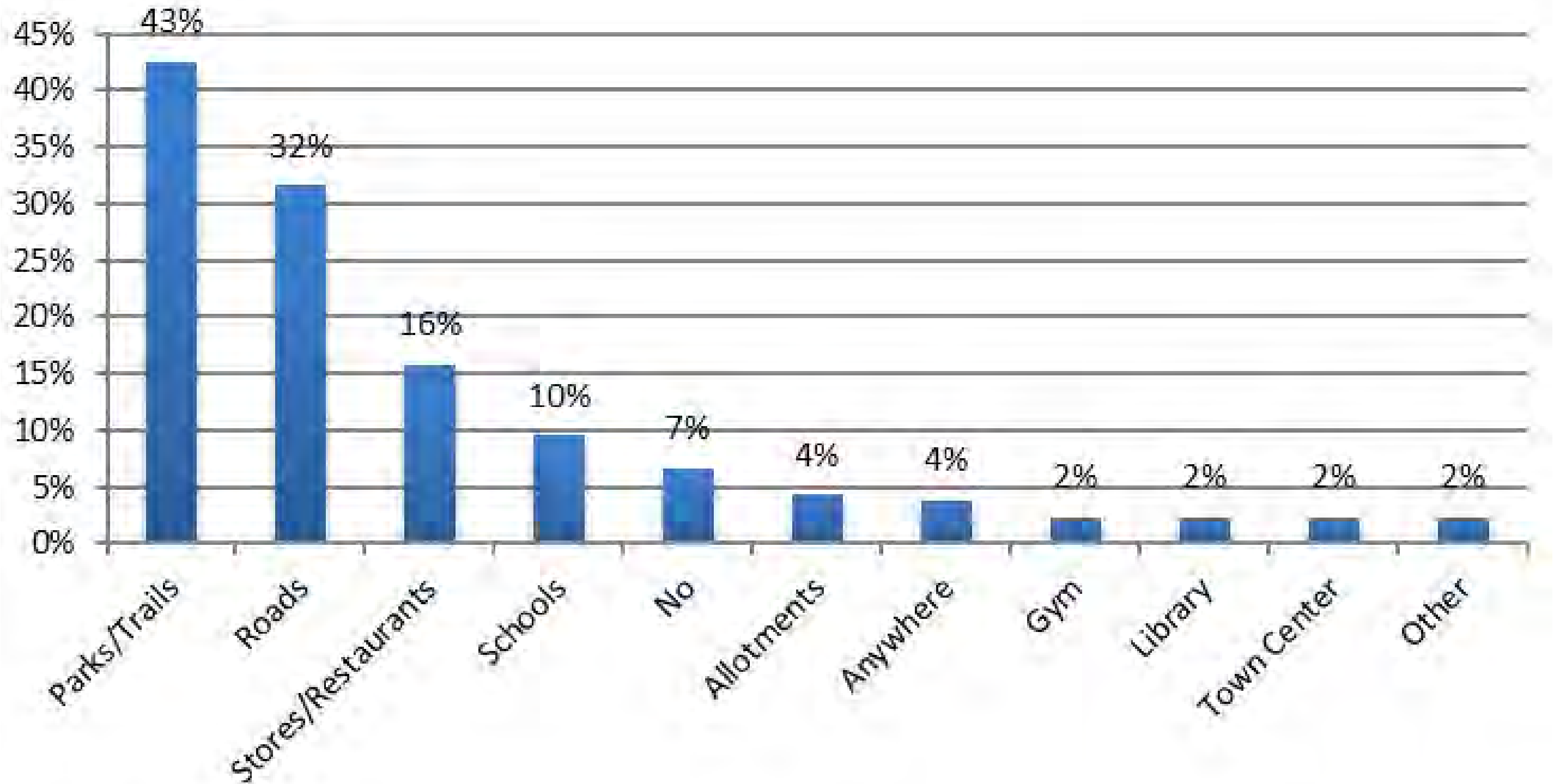
WHY do you walk/run/bike?



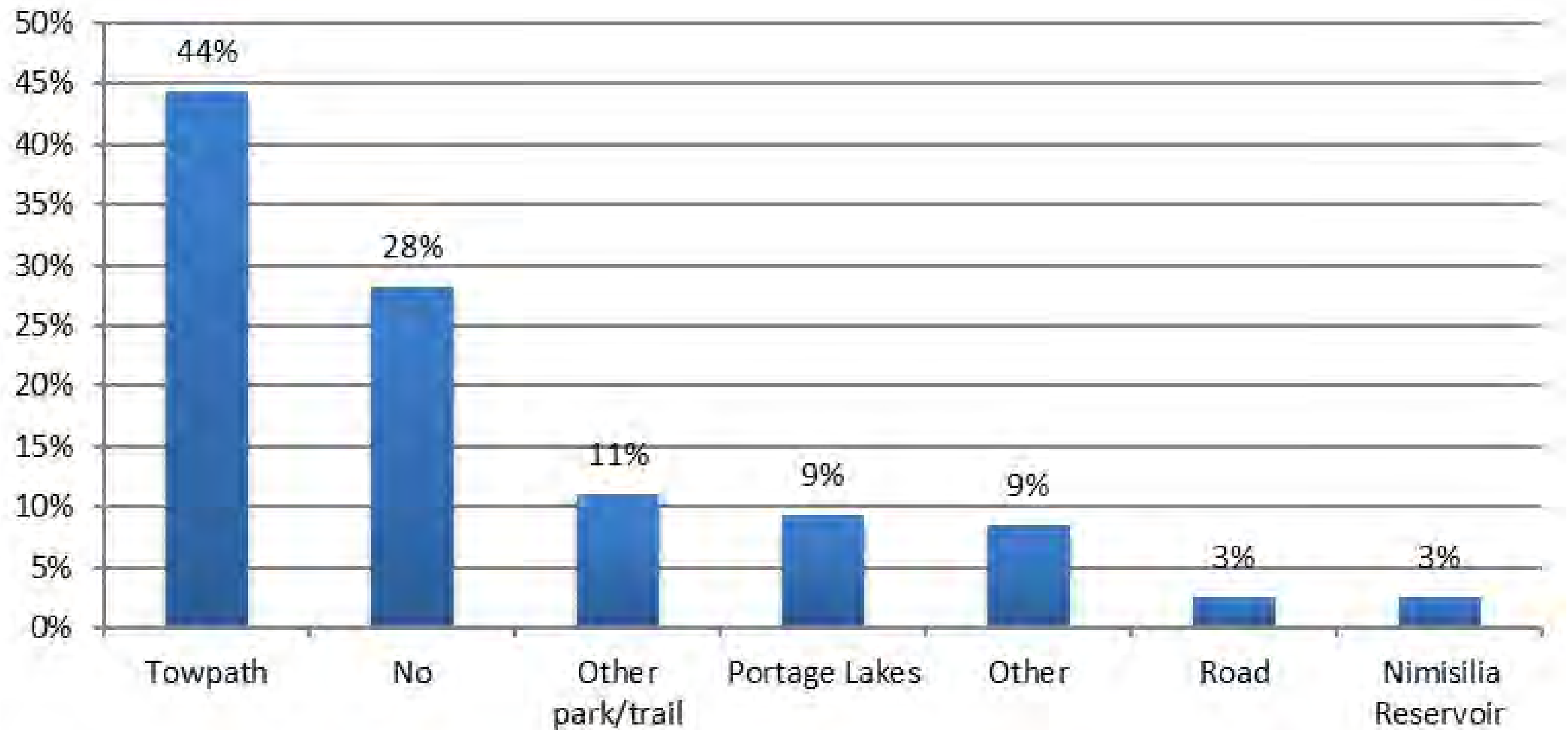
WHERE do you walk/run/bike?



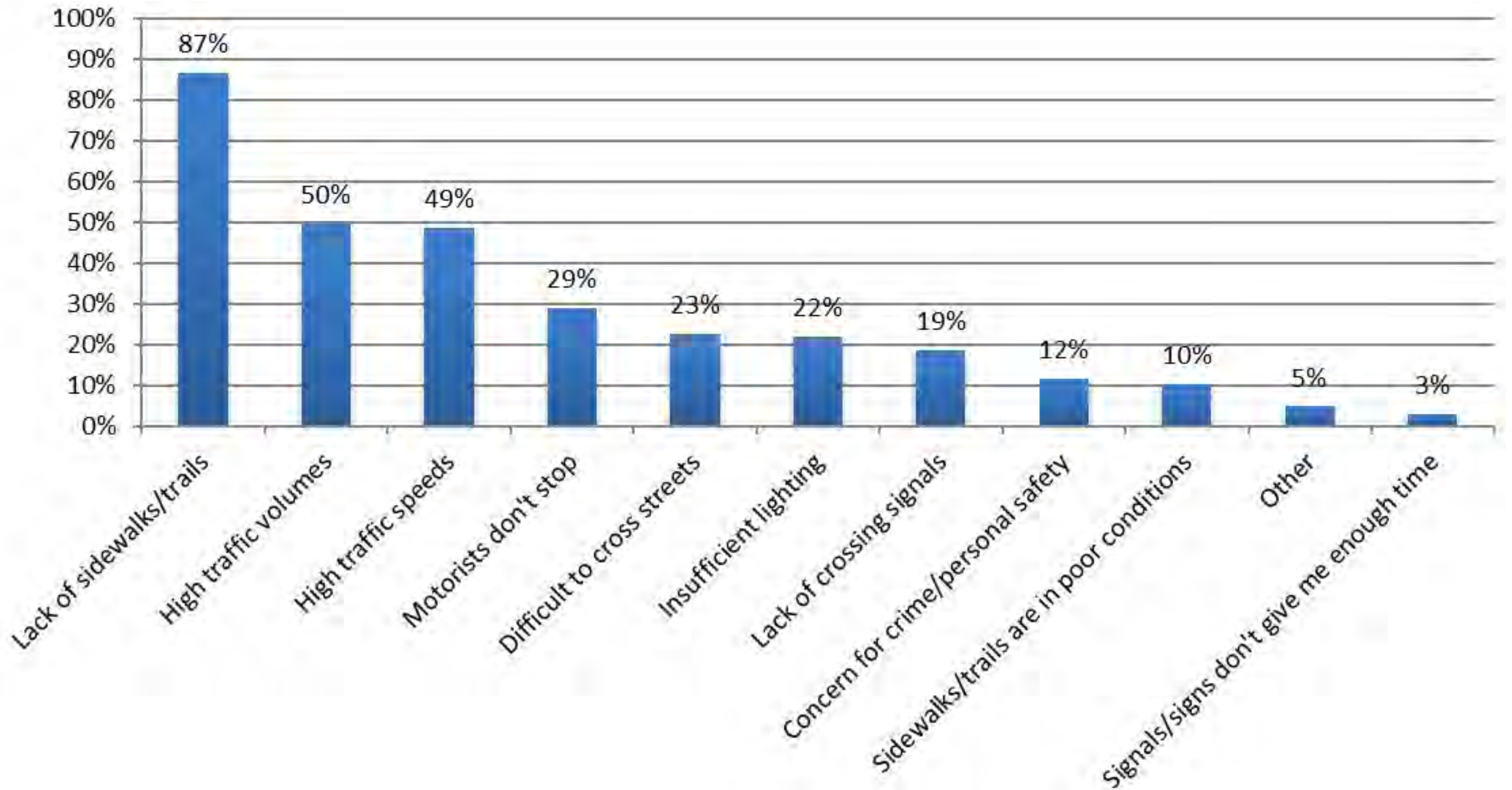
Are there destinations INSIDE the City of Green that you would like to walk/bike/run to, but can't?



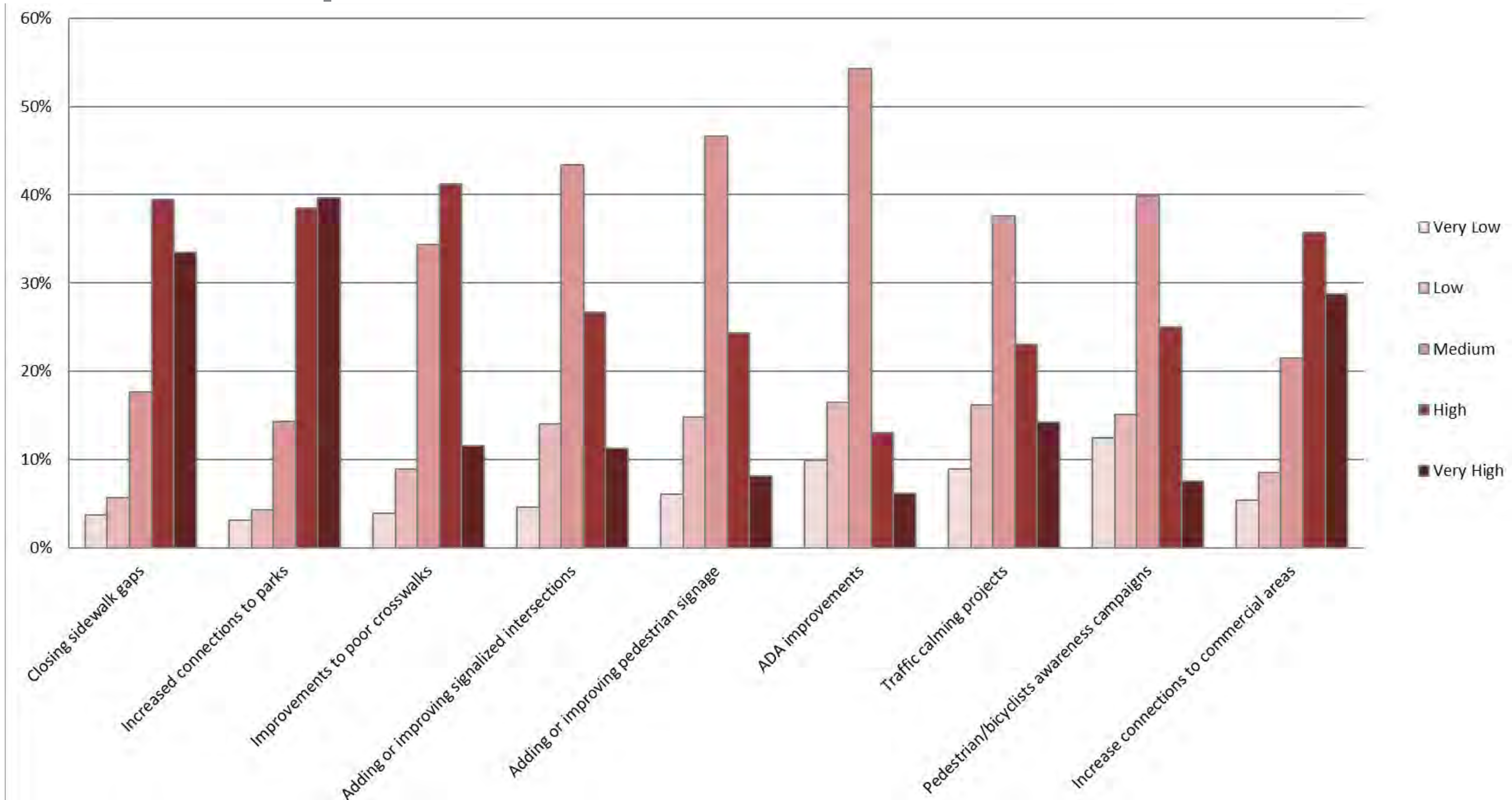
Are there destinations OUTSIDE the City of Green that you would like to walk/bike/run to, but can't?



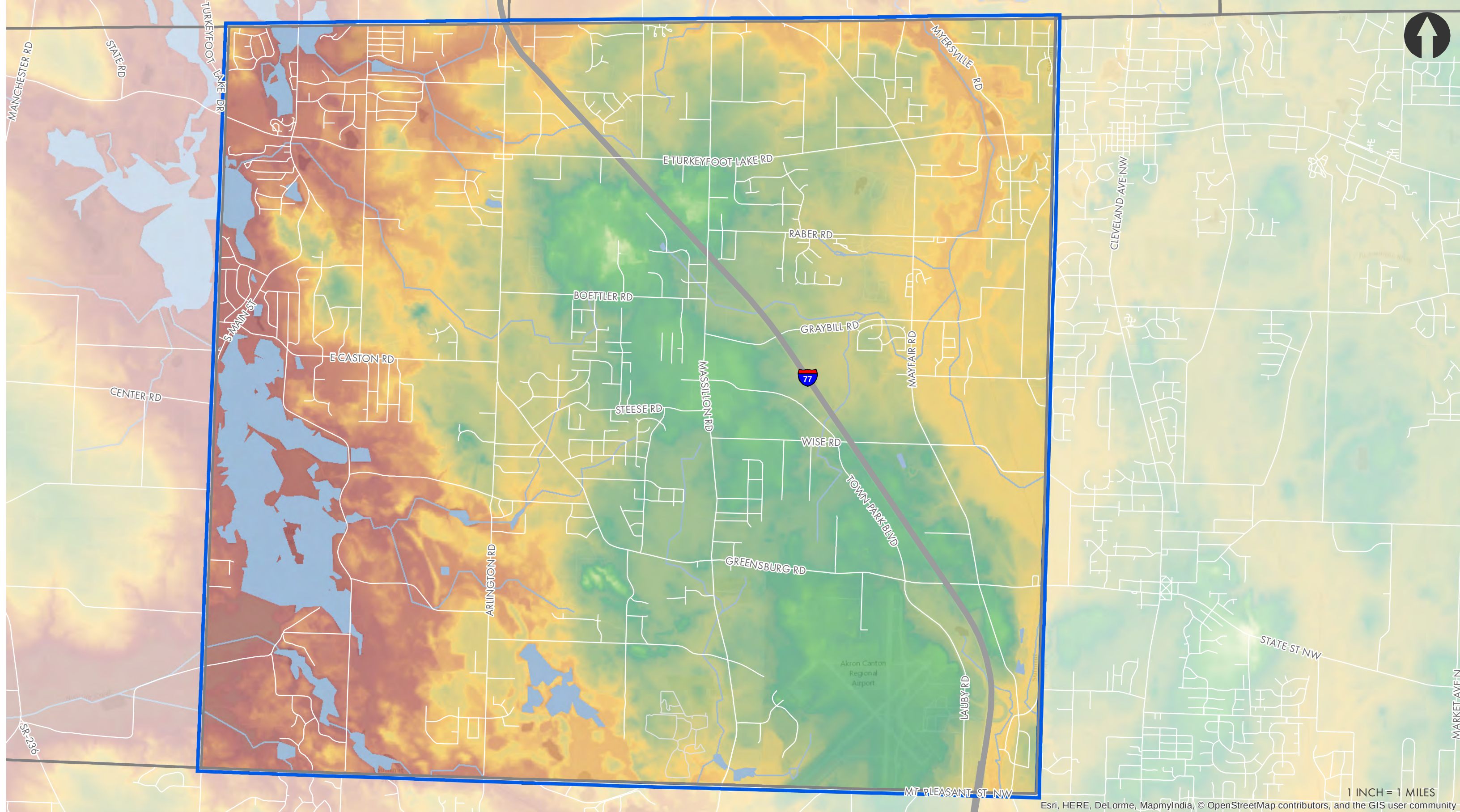
What are problems you encounter when you walk/run/bike?



Improvement Prioritization Preferences







green connecting communities plan

USGS elevation model

MUNICIPAL BOUNDARY

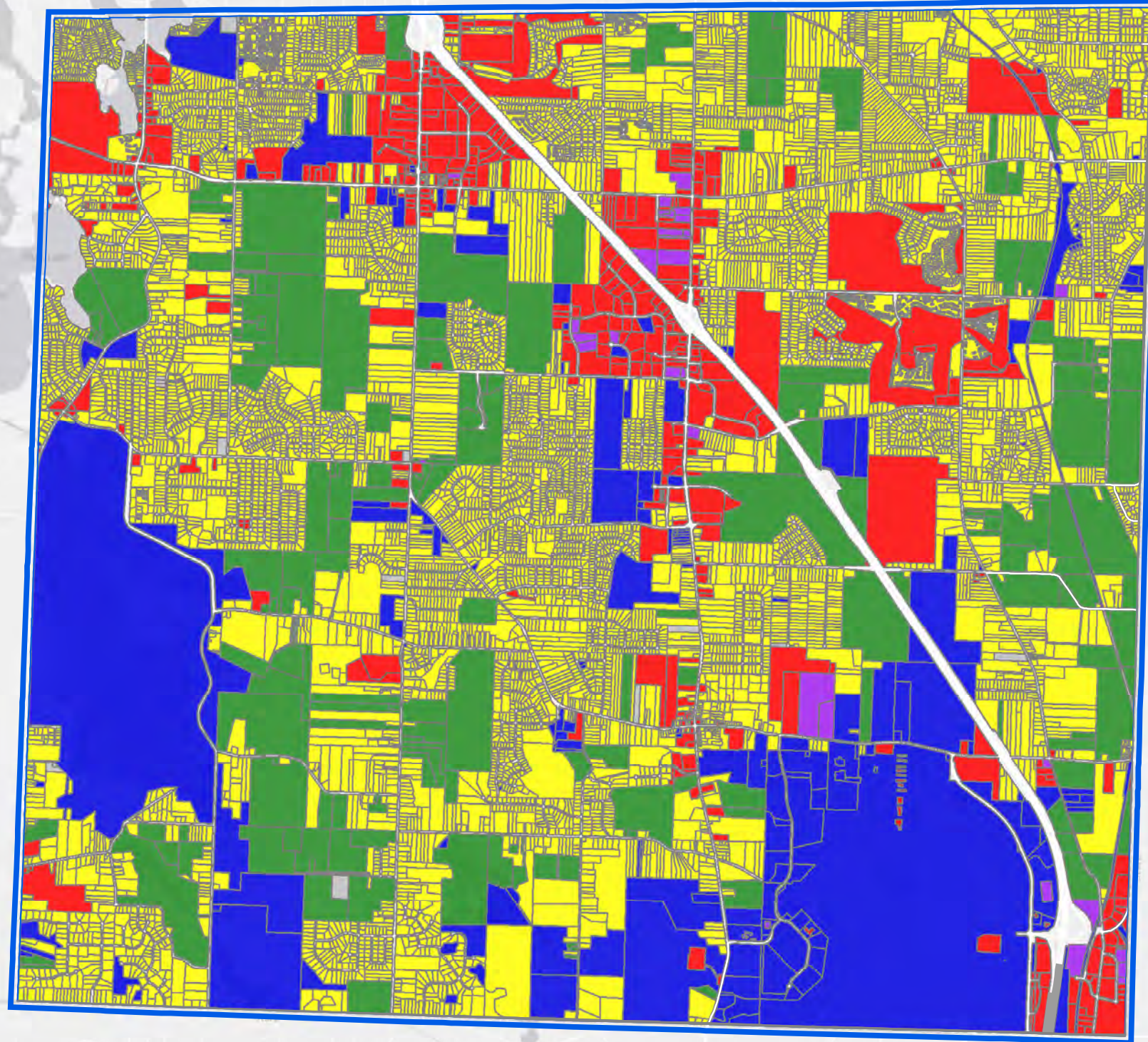
CITY OF GREEN

WATER

HIGH

LOW

Environmental Design Group



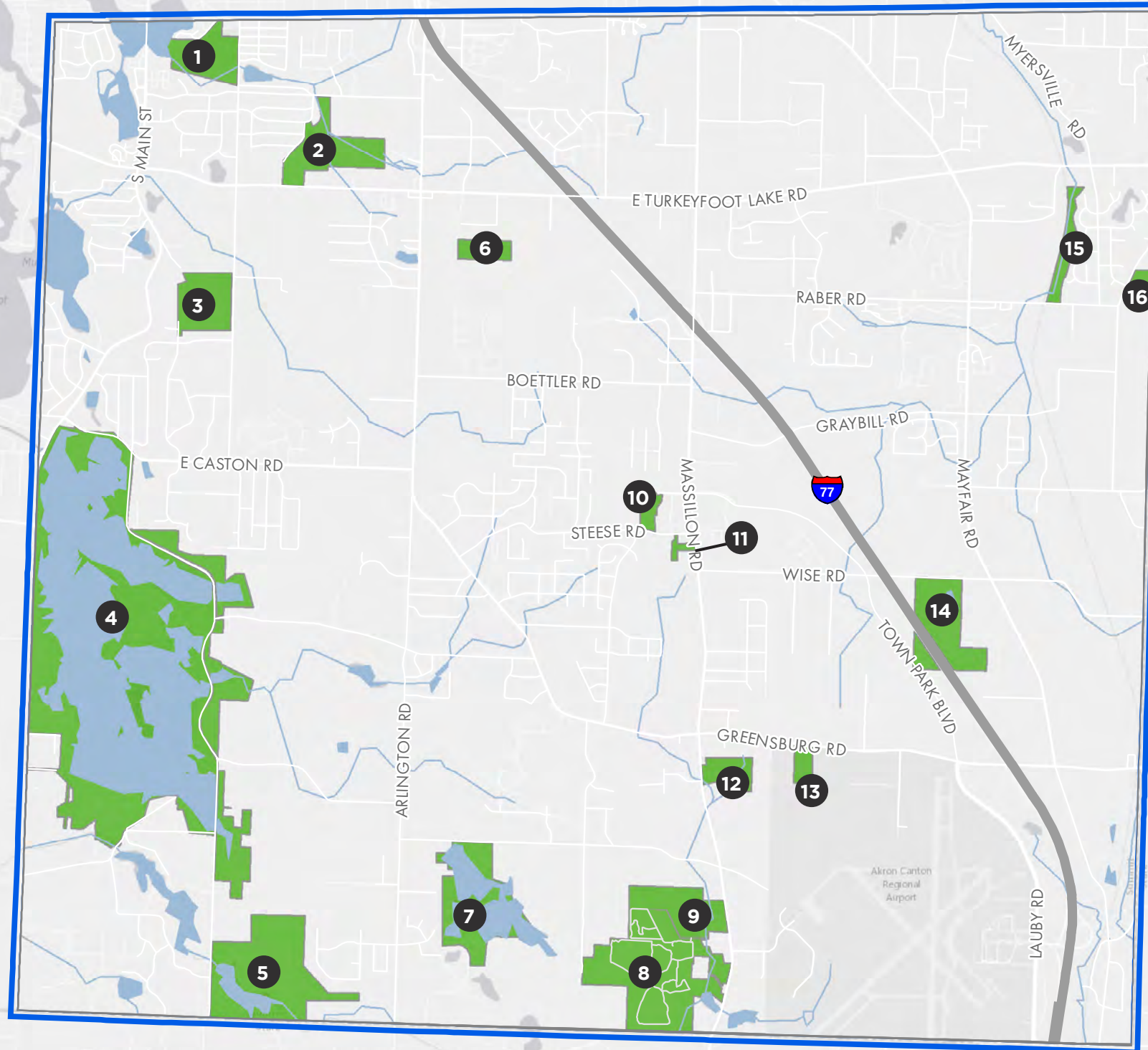
1 INCH = 4,000 FEET

green connecting communities plan

land use

 AGRICULTURE	 RESIDENTIAL	 CITY OF GREEN
 INDUSTRIAL	 PUBLIC / TAX EXEMPT	
 COMMERCIAL	 UTILITIES	





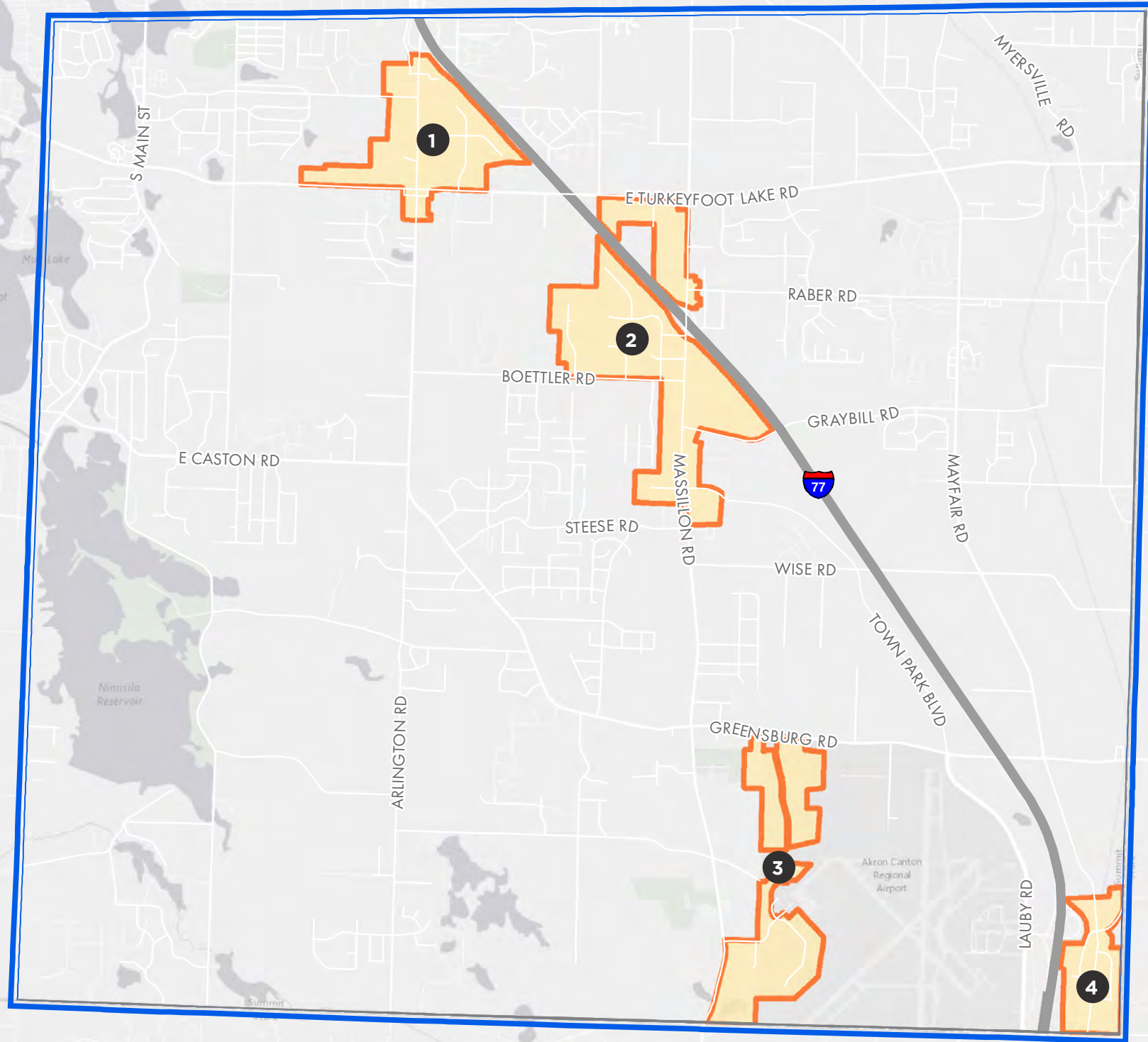
1. KNAPP RECREATION AREA
2. EAST LIBERTY PARK
3. GREENSBURG LIONS CLUB PARK
4. PORTAGE LAKES STATE PARK
5. YMCA CAMP Y-NOAH
6. SPRING HILL SPORTS COMPLEX
7. SINGER LAKE PRESERVE
8. SOUTHGATE PARK
9. BOETTLER PARK
10. CENTRAL PARK
11. GREEN COMMUNITY PARK
12. GREENSBURG PARK
13. GREEN YOUTH COMPLEX
14. ARISS PARK
15. MYERSVILLE FEN
16. KREIGHBAUM PARK

1 INCH = 4,000 FEET

green connecting communities plan

community parks

-  MUNICIPAL BOUNDARY
-  CITY OF GREEN
-  WATER
-  CITY PARKS + METROPARKS



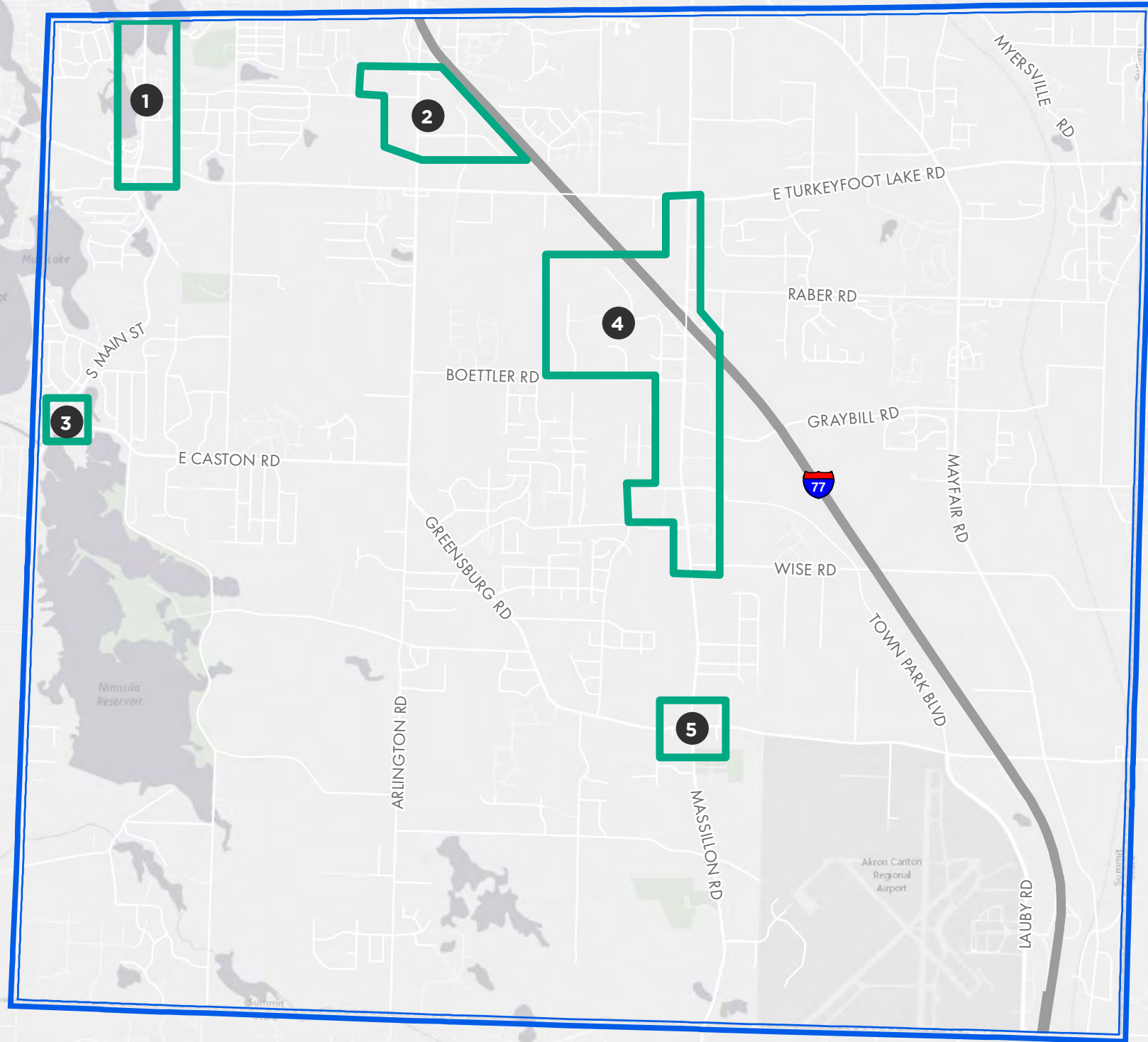
1. ARLINGTON CORRIDOR
2. MASSILLON CORRIDOR
3. CAK INDUSTRIAL PARK
4. AKCAN INDUSTRIAL PARK

1 INCH = 4,000 FEET

green connecting communities plan

major employment centers

-  CITY OF GREEN
-  MAJOR EMPLOYMENT CENTERS



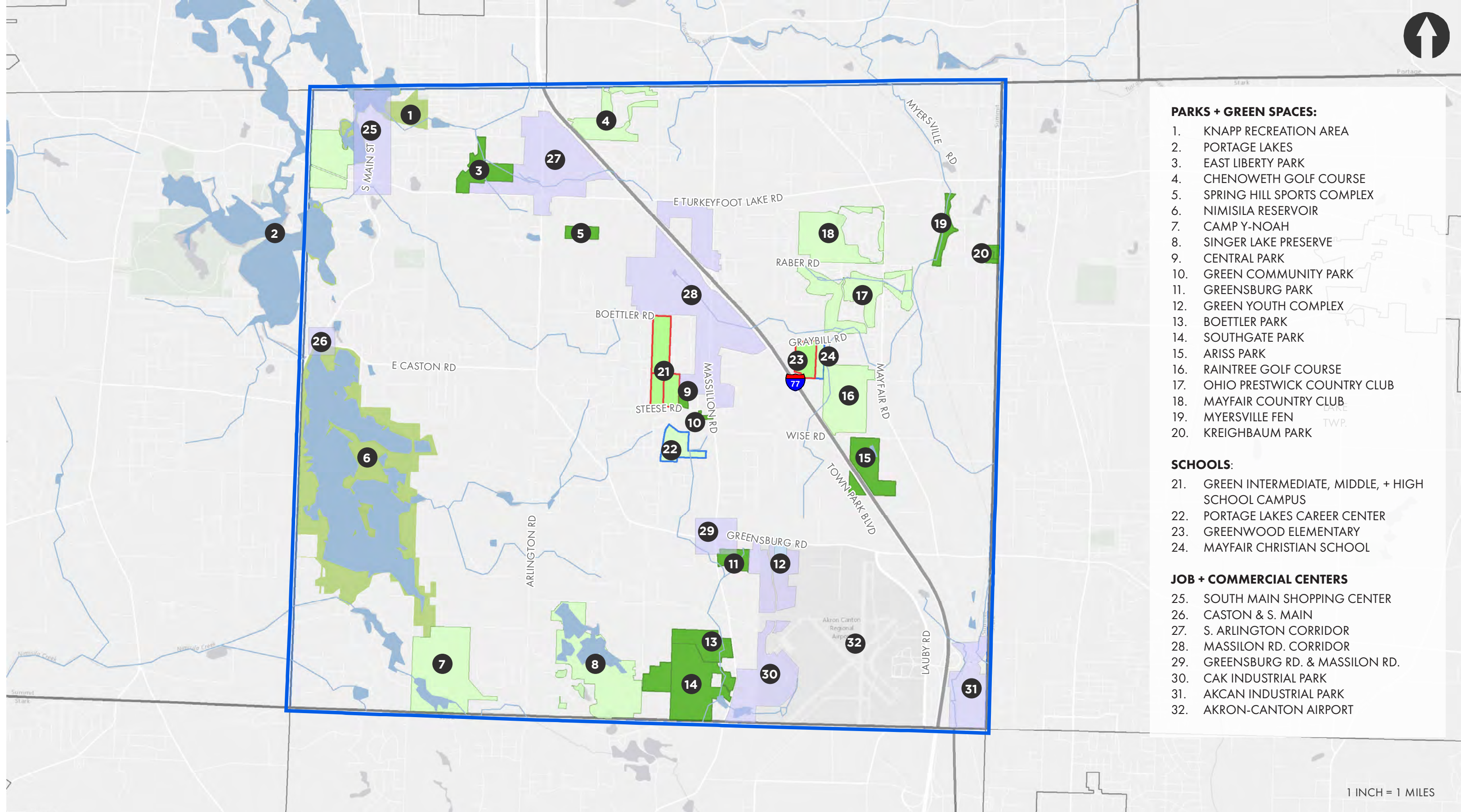
1. SOUTH MAIN SHOPPING CENTER
2. ARLINGTON CORRIDOR
3. S. MAIN & CASTON
4. MASSILLON CORRIDOR
5. MASSILLON RD. & GREENSBURG RD.

1 INCH = 4,000 FEET

green connecting communities plan

major commercial centers

-  CITY OF GREEN
-  COMMERCIAL CENTERS



PARKS + GREEN SPACES:

1. KNAPP RECREATION AREA
2. PORTAGE LAKES
3. EAST LIBERTY PARK
4. CHENOWETH GOLF COURSE
5. SPRING HILL SPORTS COMPLEX
6. NIMISILA RESERVOIR
7. CAMP Y-NOAH
8. SINGER LAKE PRESERVE
9. CENTRAL PARK
10. GREEN COMMUNITY PARK
11. GREENSBURG PARK
12. GREEN YOUTH COMPLEX
13. BOETTTLER PARK
14. SOUTHGATE PARK
15. ARISS PARK
16. RAINTREE GOLF COURSE
17. OHIO PRESTWICK COUNTRY CLUB
18. MAYFAIR COUNTRY CLUB
19. MYERSVILLE FEN
20. KREIGHBAUM PARK

SCHOOLS:

21. GREEN INTERMEDIATE, MIDDLE, + HIGH SCHOOL CAMPUS
22. PORTAGE LAKES CAREER CENTER
23. GREENWOOD ELEMENTARY
24. MAYFAIR CHRISTIAN SCHOOL

JOB + COMMERCIAL CENTERS

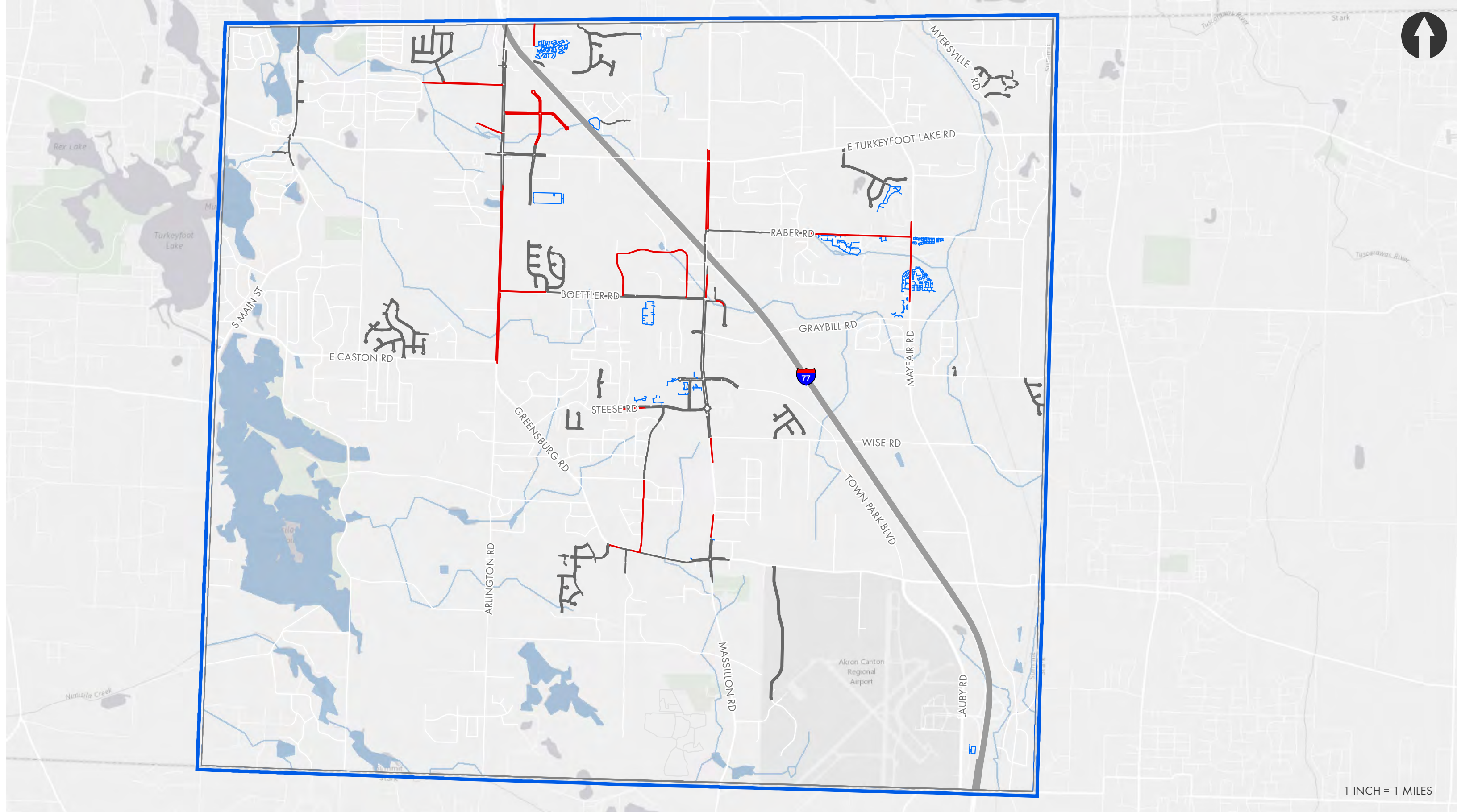
25. SOUTH MAIN SHOPPING CENTER
26. CASTON & S. MAIN
27. S. ARLINGTON CORRIDOR
28. MASSILON RD. CORRIDOR
29. GREENSBURG RD. & MASSILON RD.
30. CAK INDUSTRIAL PARK
31. AKCAN INDUSTRIAL PARK
32. AKRON-CANTON AIRPORT

1 INCH = 1 MILES

green connecting communities plan

local destinations

- | | | |
|-----------------|------------------|--------------------------|
| CITY PARK | PUBLIC SCHOOLS | JOB + COMMERCIAL CENTERS |
| GOLF COURSE | SEMI-PUBLIC PARK | MUNICIPAL BOUNDARY |
| PRIVATE SCHOOLS | STATE PARK | CITY OF GREEN |

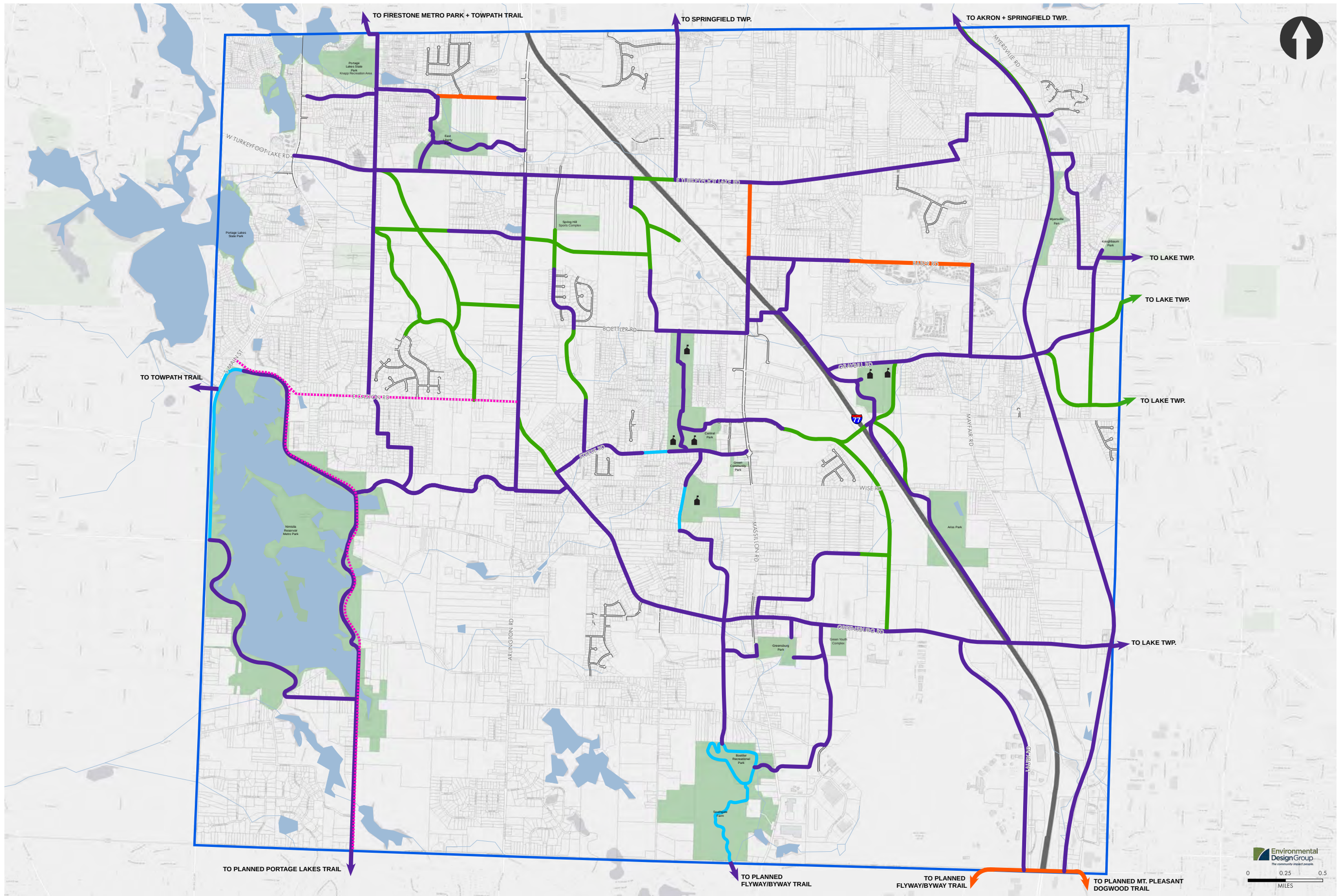


green connecting communities plan

sidewalk network

- PUBLIC SIDEWALK
- RECOMMENDED SIDEWALK
- PRIVATE SIDEWALK
- MUNICIPAL BOUNDARY
- CITY OF GREEN
- WATER





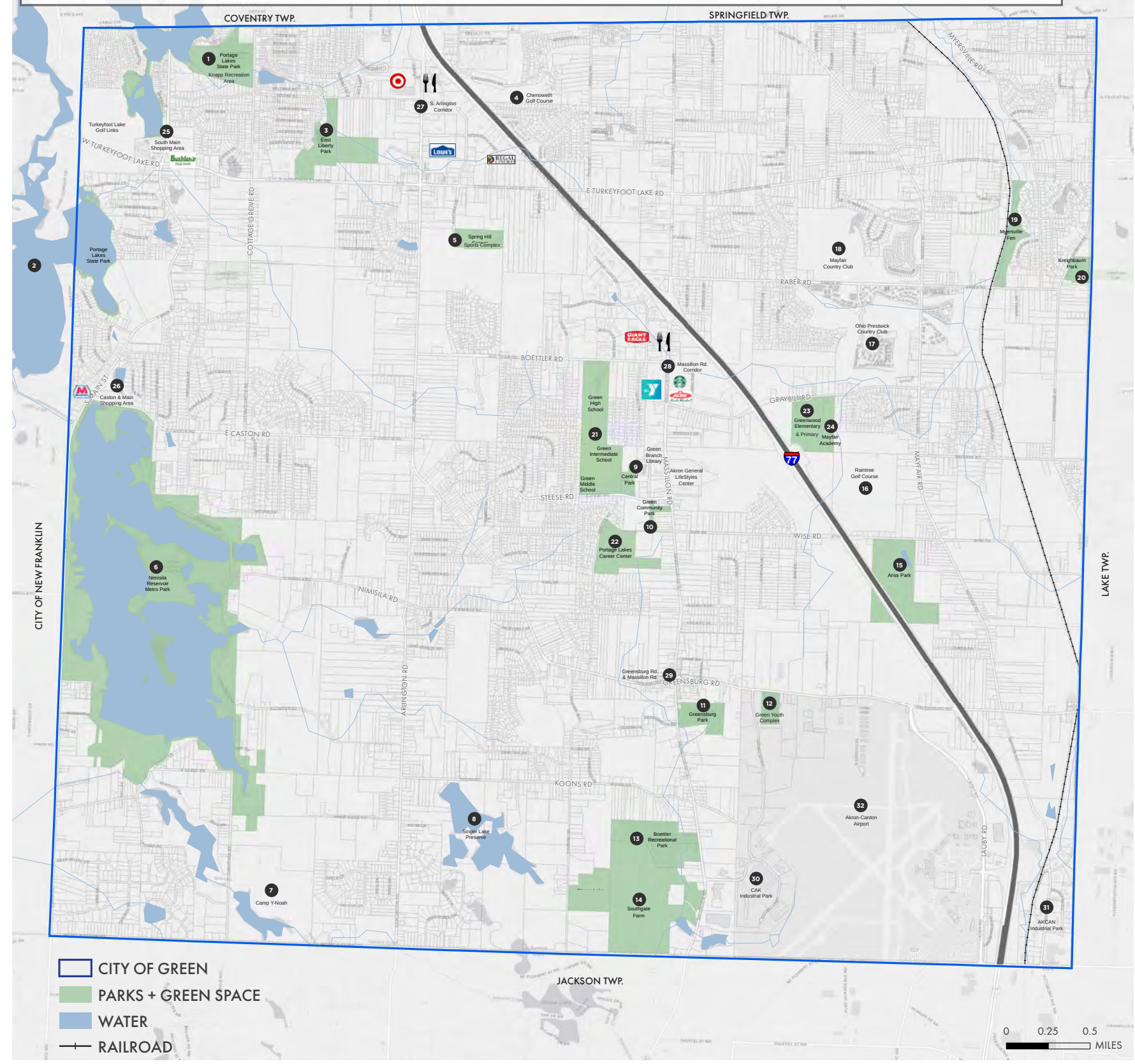
green connecting communities plan potential routes



- PLANNED IMPROVEMENTS
- POTENTIAL ROUTE
- FUTURE ROUTE UPON DEVELOPMENT
- EXISTING TRAIL
- EXISTING BIKE LANE
- EXISTING SIDEWALK
- CREEKS + STREAMS
- PARKS + GREEN SPACE
- CITY OF GREEN
- SCHOOLS

VOTE!

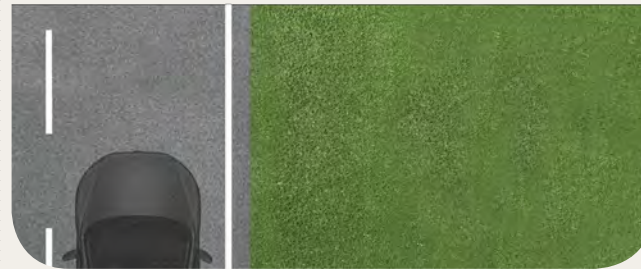
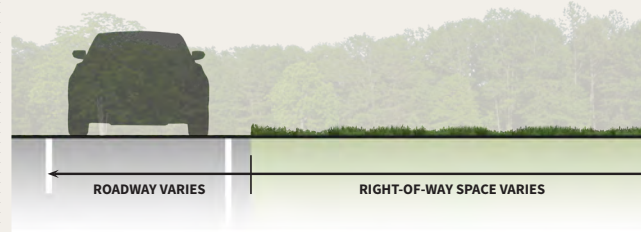
IF IT WAS **SAFE, EASY, AND CONVENIENT**
WHERE WOULD **YOU** BIKE OR WALK TO?



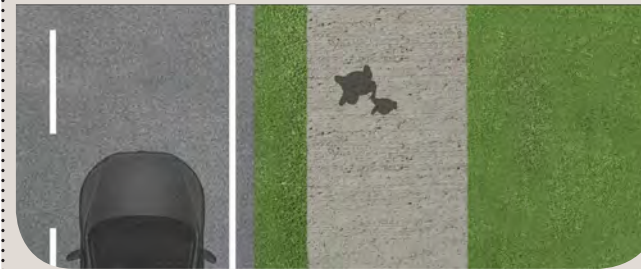
KNAPP RECREATION AREA	PORTAGE LAKES	EAST LIBERTY PARK	CHENOWETH GOLF COURSE
1	2	3	4
SPRING HILL SPORTS COMPLEX	NIMISILA RESERVOIR	CAMP Y-NOAH	SINGER LAKE PRESERVE
5	6	7	8
CENTRAL PARK & TOWNE PARK AREA	GREEN COMMUNITY PARK	GREENSBURG PARK	GREEN YOUTH COMPLEX
9	10	11	12
BOETTTLER PARK	SOUTHGATE PARK	ARISS PARK	RAINTREE GOLF COURSE
13	14	15	16
OHIO PRESTWICK COUNTY CLUB	MAYFAIR COUNTRY CLUB	MYERSVILLE FEN	KREIGHBAUM PARK
17	18	19	20
GREEN SCHOOLS CAMPUS	PORTAGE LAKES CAREER CENTER	GREENWOOD ELEMENTARY & PRIMARY	MAYFAIR CHRISTIAN SCHOOL
21	22	23	24
SOUTH MAIN SHOPPING CENTER	CASTON & MAIN SHOPPING AREA	S. ARLINGTON CORRIDOR	MASSILLON RD. CORRIDOR
25	26	27	28
GREENSBURG SHOPPING AREA	CAK INDUSTRIAL PARK	AKCAN INDUSTRIAL PARK	AKRON-CANTON AIRPORT
29	30	31	32

green connecting communities plan

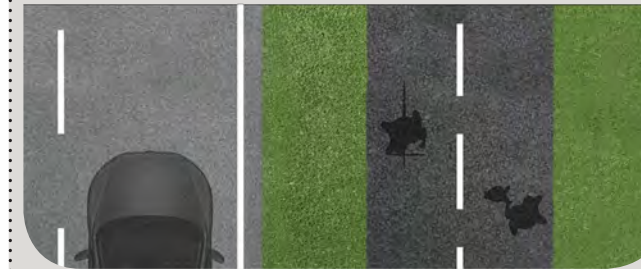
EXISTING CONDITIONS



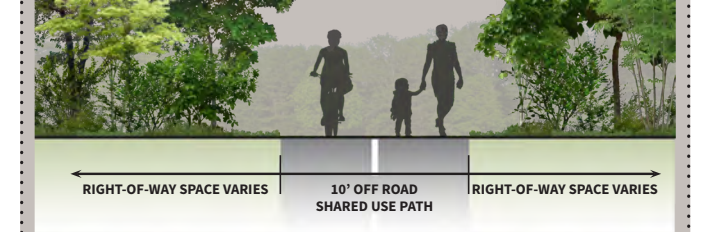
8' WIDENED SIDEWALK



10' SIDEPATH



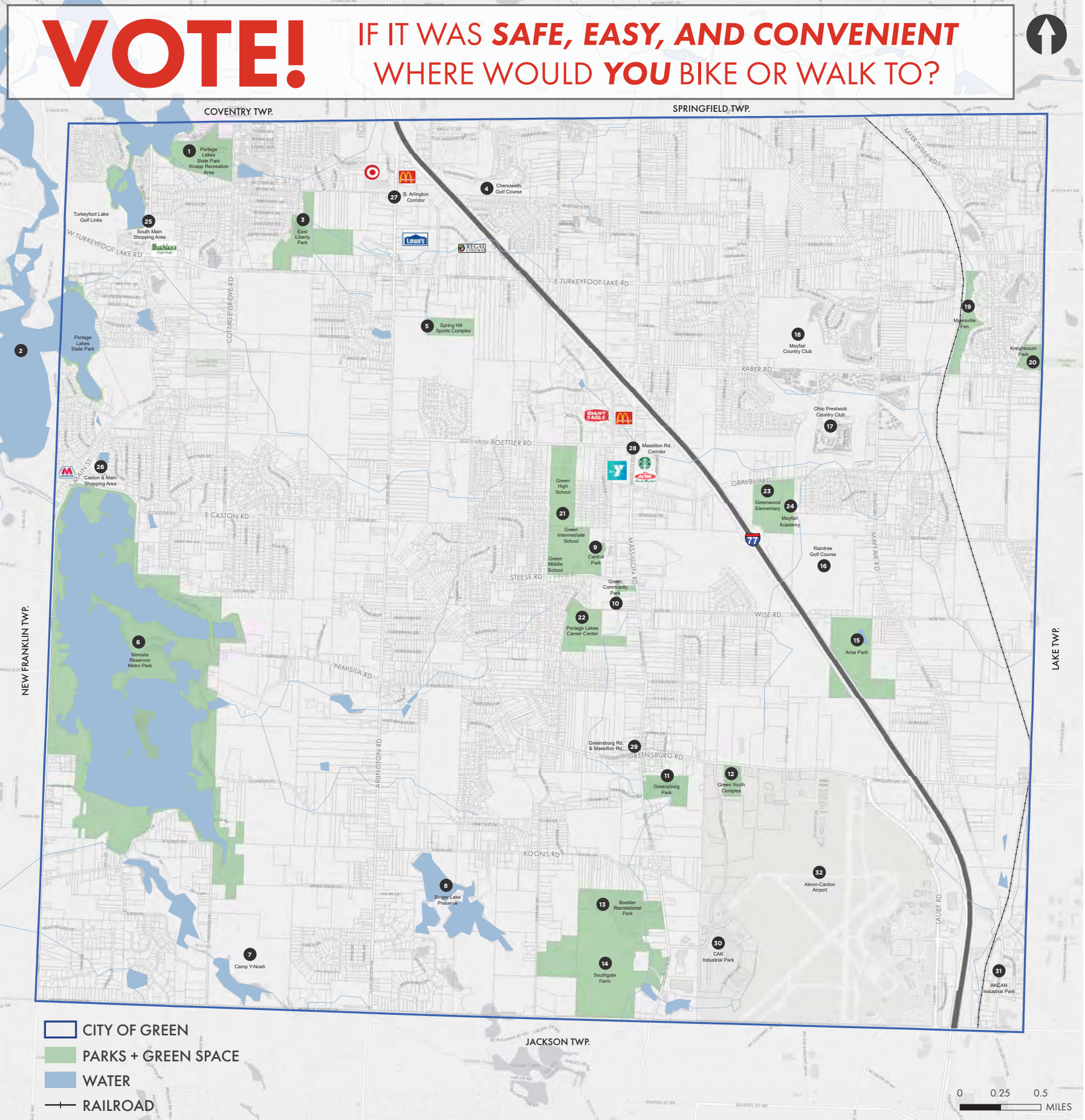
10' OFF ROAD SHARED USE PATH



Let us know what you think!

- Q&A
- potential routes
- destination voting board
- facility type voting board

PUBLIC MEETING BOARDS

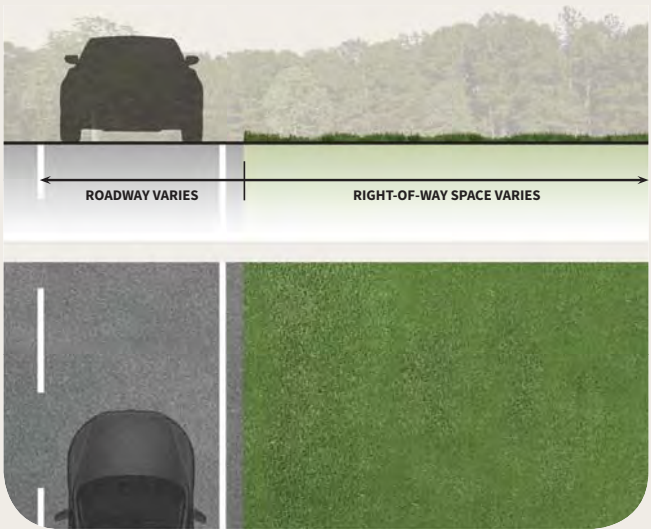


KNAPP RECREATION AREA 1	PORTAGE LAKES 2	EAST LIBERTY PARK 3	CHENOWETH GOLF COURSE 4
SPRING HILL SPORTS COMPLEX 5	NIMISILA RESERVOIR 6	CAMP Y-NOAH 7	SINGER LAKE PRESERVE 8
CENTRAL PARK 9	GREEN COMMUNITY PARK 10	GREENSBURG PARK 11	GREEN YOUTH COMPLEX 12
BOETTLE PARK 13	SOUTHGATE PARK 14	ARISS PARK 15	RAINTREE GOLF COURSE 16
OHIO PRESTWICK COUNTY CLUB 17	MAYFAIR COUNTRY CLUB 18	MYERSVILLE FEN 19	KREIGHBAUM PARK 20
GREEN SCHOOLS CAMPUS 21	PORTAGE LAKES CAREER CENTER 22	GREENWOOD ELEMENTARY 23	MAYFAIR CHRISTIAN SCHOOL 24
SOUTH MAIN SHOPPING CENTER 25	CASTON & MAIN SHOPPING AREA 26	S. ARLINGTON CORRIDOR 27	MASSILLON RD. CORRIDOR 28
GREENSBURG SHOPPING AREA 29	CAK INDUSTRIAL PARK 30	AKCAN INDUSTRIAL PARK 31	AKRON-CANTON AIRPORT 32

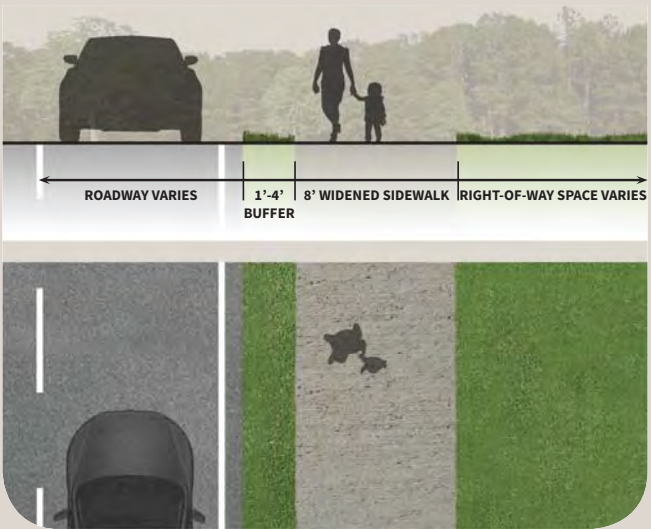


green connecting communities plan

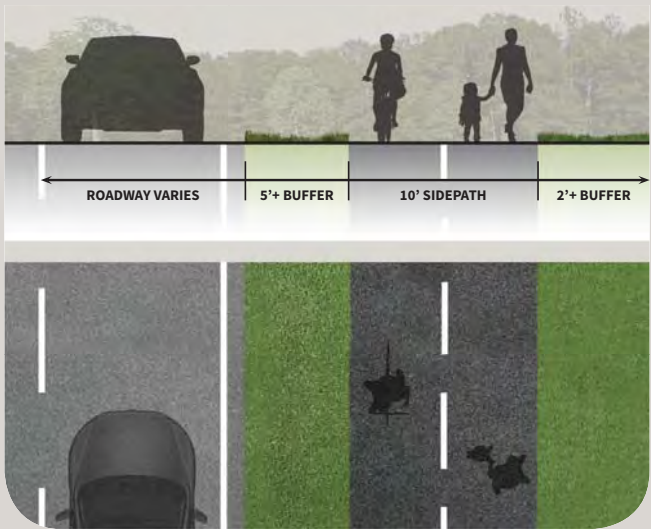
existing conditions



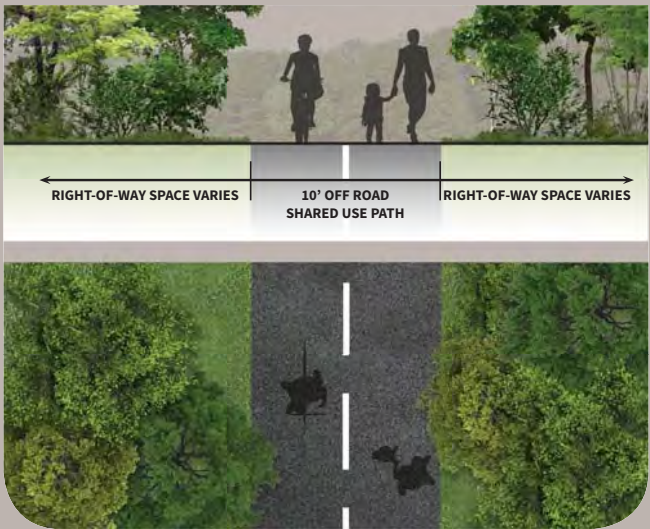
8' widened sidewalk



10' sidepath



10' off road shared use path



PUBLIC MEETING DESTINATION + FACILITY TYPE VOTING RESULTS

CONNECTING COMMUNITIES PLAN	
VOTING RESULTS FROM 3 PUBLIC MEETINGS	
DESTINATION EVALUATION	
Destination	Tally
Boettler Park	49
Green Schools Campus	43
Central Park	41
Nimisila Reservoir	40
Massillon Road Corridor	34
Southgate Park	25
Portage Lakes	17
Green Community Park	15
E. Liberty Park	13
Portage Lakes Career Center	12
S. Arlington Corridor	11
Spring Hill Sports Complex	10
S. Main Shopping Center	10
Ariss Park	9
Prestwick Golf Club	9
Singer Lake	8
Myersville Fen	8
Greensburg Park	7
Mayfair Country Club	7
Kreighbaum Park	7
Knapp Recreation Area	6
Camp Y Noah	6
Caston & Main Shopping Center	5
Greenwood Elementary	4
Greensburg Shopping Area	4
Akron Canton Airport	4
Raintree Country Club	3
Mayfair Christian School	3
Chenoweth Golf Course	1
Green Youth Complex	1
AKCAN Industrial Park	1
CAK Industrial Park	0
ROUTE TYPE EVALUATION	
Destination	Tally
Maintain Existing Conditions	3
8' Widened Sidewalk	22
10' Sidepath	82
10' Off Road Shared Use Path	82

PUBLIC MEETING COMMENTS

COMMENTS

green connecting
communities plan

Disappointed TO see Mayfair Rd not included in Plans
It Runs the entire length of Green. No Ped Traffic
is safe on this Rd.



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact partner

COMMENTS

green connecting
communities plan

Sidewalks needed along Mayfair Road, between Graybill + 619. Lots of pedestrians from the apartment + condominium complexes are forced to walk on the side of the road, w/ many times w/ young children. Even if only ~~between~~ ^{between} Graybill to Raber as there is a bus stop at the corner of Raber + Mayfair to which people walk from the apartments. (However, there are also pedestrians seen between Raber + 619, often teenagers.

Also pedestrians who travel between Mayfair + Massillon Rd on 619 need a sidewalk, particularly due to poor lighting.

These are serious safety concerns.



City of Green

Public Meeting - 1.11.2018

Environmental
DesignGroup
The community makes people

COMMENTS

green connecting
communities plan

CONNECTIVITY IS IMPORTANT -

AS A DISTANCE BIKER I WOULD
LOVE A LONG DISTANCE CIRCUIT (210-15 miles)
WITHIN GREEN - IF THIS CIRCUIT EXISTS
- All of the CONNECTER could tie into
this Loop (circuit)

- CIRCUIT SUGGESTION

NORTH SOUTH ON EAST SIDE OF
CITY IS THE RR ELEMENT

- From North Center to South East
IS USING the INTERSTATE 77
CORRIDOR -

- MISSING IS DEDICATED SPACE FROM
NORTH RAILROAD to INTERSTATE

Bob Mueck



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact people

COMMENTS

green connecting
communities plan

-I really like the proposed connections around HS, MS, and Intermediate schools. Please look at connecting surrounding neighborhoods. What I would really like to see is sidewalks in all allotments. I will never buy a house again in an ~~allotment~~ allotment without sidewalks.



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact group

COMMENTS

green connecting
communities plan

* explore curbing along Caston

* Prioritize connecting existing projects

* complete Steese Rd

* Steese to Arlington to Caston

Create bike destinations - parking/gathering spots at terminus

- parking area @ S Main / Caston - Giuseppe's + Ice Cream
- Boettler Park
- Kreighbaum
- Massillon shopping hub
- S Arlington shopping hub



City of Green

Public Meeting - 1.11.2018



Environmental
Design Group
The community impact network

COMMENTS

green connecting
communities plan

— IF connectivity is set within 1 mile of the schools, it seems you would eliminate a great deal of the safety problems. 3000 kids attend the various campuses. No one uses the connectivity more than 100 kids.



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
the community trust people

COMMENTS

green connecting
communities plan

→ We would like to see connectivity between the highly populated areas along Raber Road to the Township.

— MEADOWWOOD TO PORTAGE LAKES

- I WOULD BE EXTREMELY EXCITED TO HAVE THE ~~RAIL~~ RAILROAD MADE INTO A RAILS-TO-TRAILS

— Rolling Greens (neighborhood by Arlington/Greensburg split) to GMS/GHS and to the Acme Plaza area (Massillon Rd)

— We would like sidewalk all Raber to Mayfair & Graybill to Acme

- I WOULD LIKE TO SEE A ~~BK~~ BIKE LANE ALL ALONG ARLINGTON + GREENSBURG

- WOULD REALLY LIKE NEIGHBORHOOD SIDEWALKS. COMING FROM CUY. FALLS WHICH HAS SIDEWALKS EVERYWHERE, I REALLY MISS THEM + IN HINDSIGHT I WOULDN'T BUY IN AN AREA WITHOUT THEM. WALKING + WALKING THE DOGS IS DANGEROUS IN THE STREET. OUR STREETS DO NOT DRAIN PROPERLY + THERE IS STANDING WATER THAT TURNS TO ICE IN WINTER, COLLECTS LEAVES WHICH MAKES IT SLIPPERY. PLUS, YOU HAVE TO AVOID CARS.



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact partner

→ I WOULD NOT BUY AGAIN IN A CITY WITHOUT SIDEWALKS.

COMMENTS

green connecting
communities plan

IN ADDITION to destinations trails. Another nice option would be suggested ~~"exercise loop"~~ "exercise loop."

Users could start anywhere, but for instance from Nimigila Reservoir, E Caston, GREENSBURG, Mayfair E Turkey Foot, Cottage Grove.

There are ~~are~~ nice options for "ride challenges" along the way. ~~For instance For instance~~

- For Instance the developments on the south side of E Caston have some nice hills to climb and are away from traffic
- Another ^{route} off of Greensburg. Stony Pointe → Timber creek → Stony Creek → Gray Fox → Thursby → Greensburg would provide extra "challenge" routes which could be suggested which would require little investment beyond signage.

- Note these suggestions are made from the point of view of a cyclist.

- Nick Barnes

- nicholas.barnes@gmail.com



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The Community Involvement People

- I would prefer the 10' ~~road~~^{off road} shared use path but, due to routes I would be ok with 10' sidepath. Something is better than nothing. - Sandy Chinn

#1 off road shared

#2 10' sidepath where necessary

- Doug Weaver

Would like to see paths for kids.
* Kids walking home from after school
Sports pick up parents being off work stop.

Facility types COMMENTS

green connecting
communities plan

E To W Access CENTRAL PARK to Bulldog BLVD.



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact people

COMMENTS

green connecting
communities plan

WASH/wast connection for the Schools campus



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community smart people

COMMENTS

green connecting
communities plan

WOULD LIKE TO HAVE A PATH CONNECTING THE DEAD
END ON JULY THROUGH THE FIELD TO BULLDOG BOULEVARD.
THAT WAY STUDENTS COULD WALK TO THE SCHOOLS AND
BIX BIKERS COULD CONNECT TO BULLDOG BOULEVARD OVER
TO STEESE TO CONTINUE TO NIMISILA



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
the community impact people

COMMENTS

green connecting
communities plan

East Liberty connectivity to Rebin's Trace & Arlington

Connectivity to Nimisi Lake Reservoir



City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community impact people.

COMMENTS

green connecting
communities plan

Glad to have path along Shriver Rd. to
Central + Vet. Parks. The path is well used
all times of day!



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Environmental
DesignGroup
the community impact people

COMMENTS

green connecting
communities plan

CONNECTIVITY to Tow Path -

USE NIMISILLA CREEK - PAST LAKE
LUCERNE INTO TOW PATH ^{START} MILE POST #



City of Green

Public Meeting - 1.11.2018



Environmental
Design Group
the community's most people

COMMENTS

green connecting
communities plan

connect western neighborhoods to commercial
areas, Portage Lakes commercial areas, E. Liberty Park
+ Totopah



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Environmental
DesignGroup
the community shaped people

COMMENTS

green connecting
communities plan

Kyle Lash

East Liberty Park Area

I'm really concerned about bumping in
any type of paths off Moore Rd. Connectivity
should be thru the park ~~entrances~~ exclusively.
existing →

Tom Thorne
564 Moore Rd

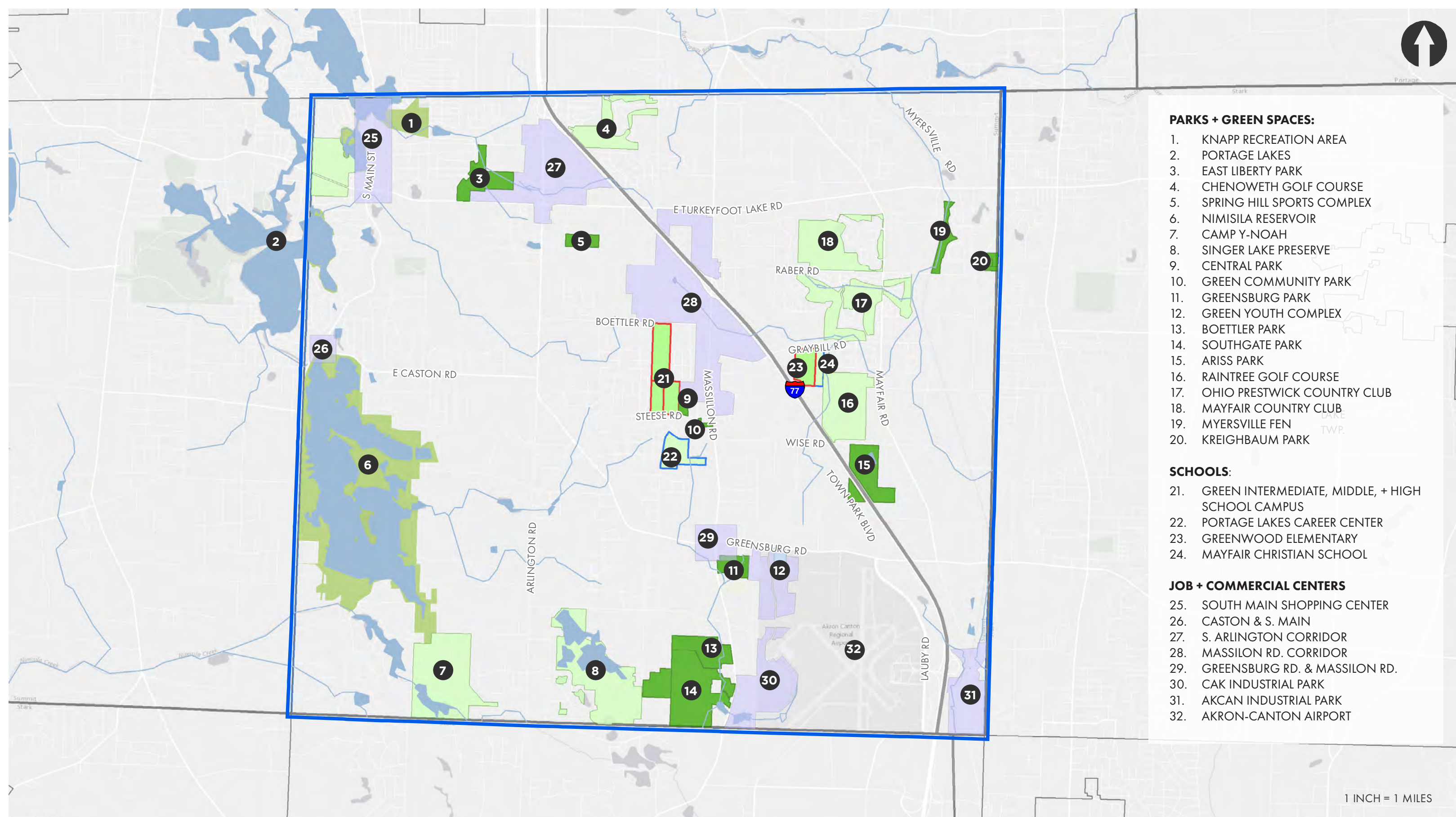


City of Green

Public Meeting - 1.11.2018

Environmental
Design Group
The community shaped people

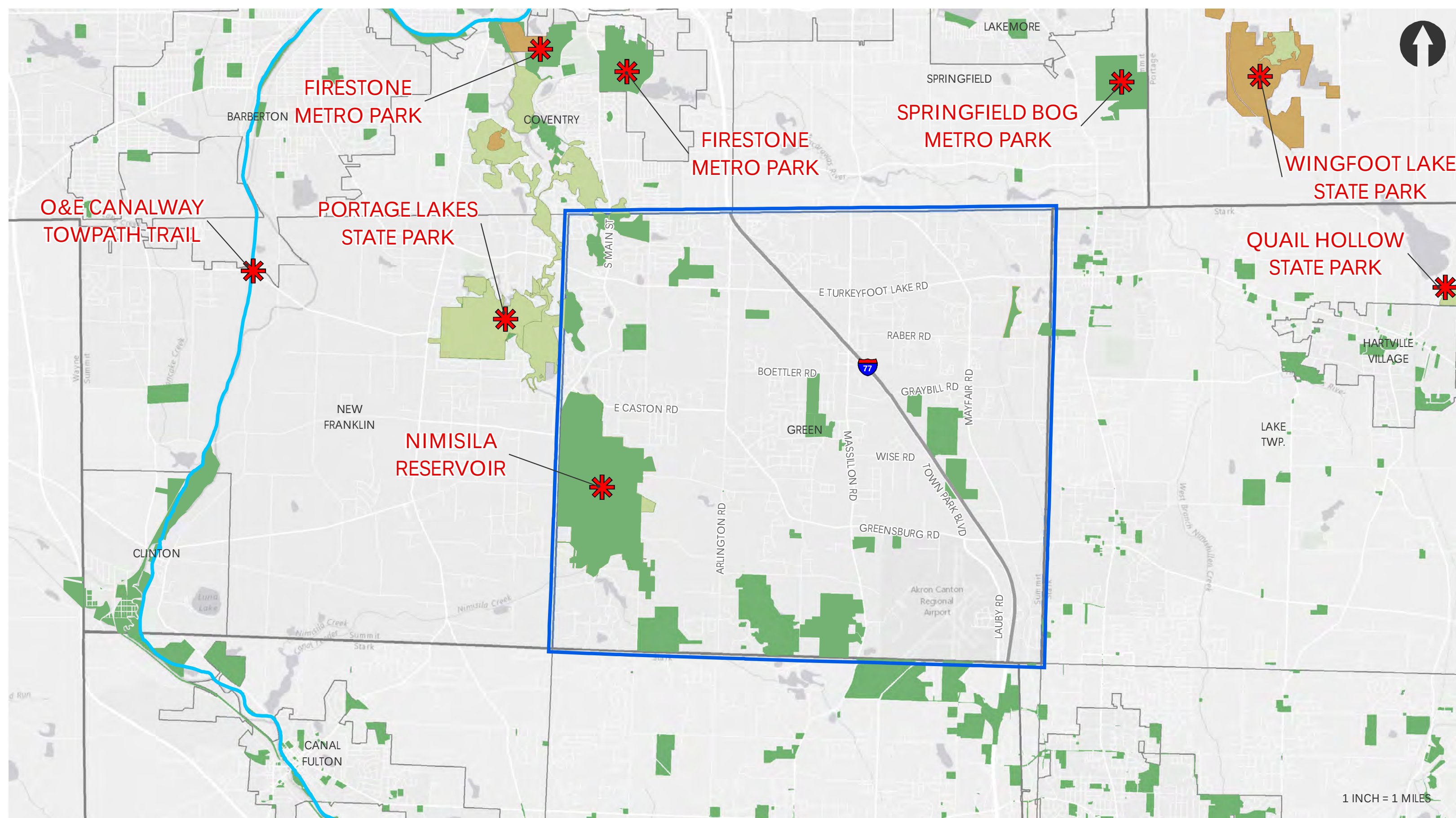
DESTINATIONS PLAN



green connecting communities plan

local destinations

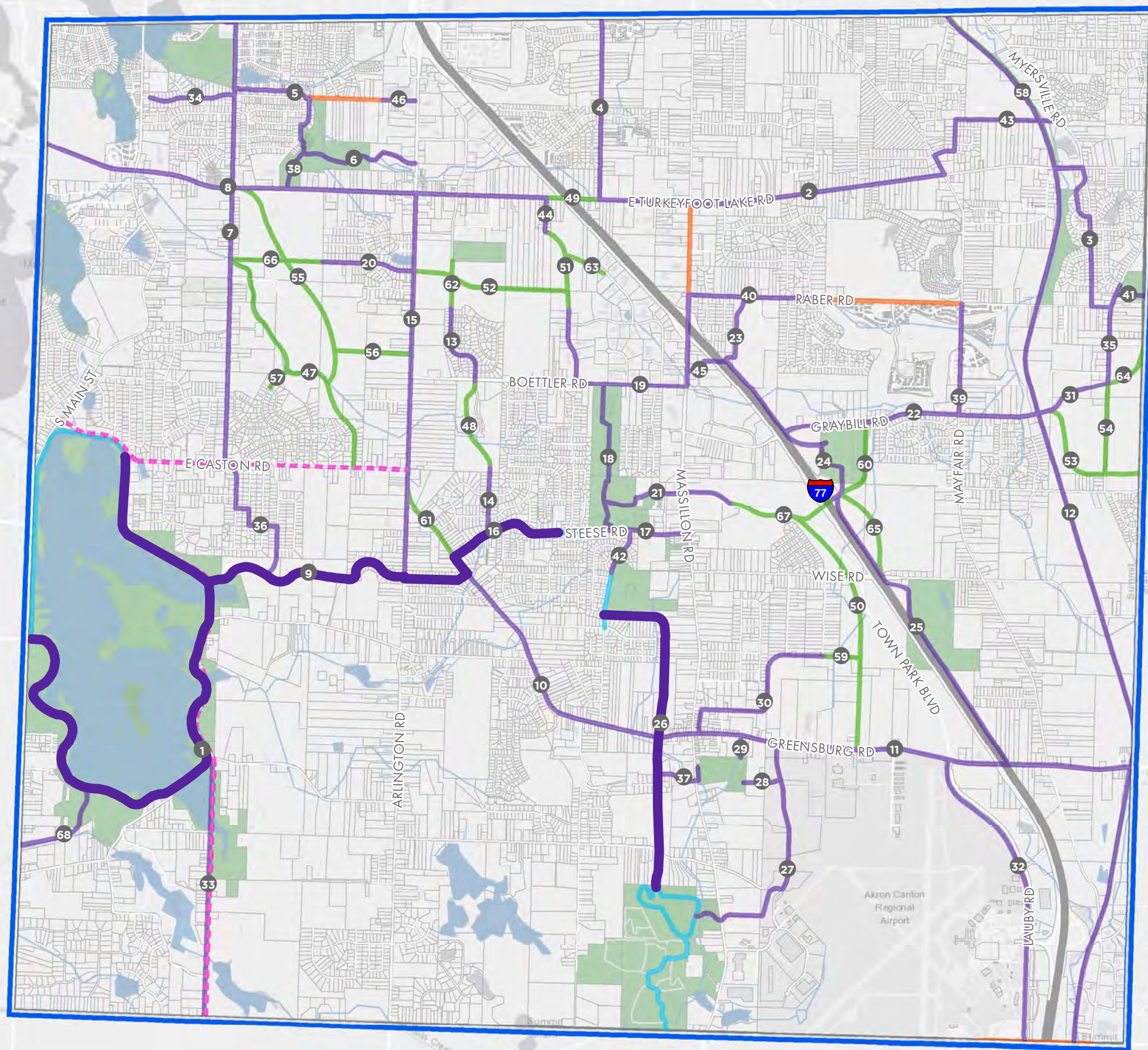
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|-----------------|------------------|--------------------------|
| CITY PARK | PUBLIC SCHOOLS | JOB + COMMERCIAL CENTERS |
| GOLF COURSE | SEMI-PUBLIC PARK | MUNICIPAL BOUNDARY |
| PRIVATE SCHOOLS | STATE PARK | CITY OF GREEN |



green connecting communities plan

regional destinations

CONNECTIVITY PLAN



green connecting communities plan

phase one recommendations

- PHASE ONE RECOMMENDATIONS
- POTENTIAL ROUTE
- PLANNED IMPROVEMENTS
- FUTURE ROUTE UPON DEVELOPMENT
- EXISTING TRAIL
- EXISTING BIKE LANE
- MUNICIPAL BOUNDARY
- CITY OF GREEN

ROUTE MATRIX

AMATS: GREEN CONNECTING COMMUNITIES PLAN

ROUTE MATRIX

Roadway Name	Start	End	Segment ID	Alignment Type	Destination Rank	Population Rank	Segment Length (ft)	Publicly Owned	Regional Connectivity
Nimisila Loop	Caston & Main	Nimisila & Main	1	MAIN ORT	4	3	25,694		YES
Turkeyfoot Lake Rd	TFL & Pickle	Sucrose & Lindale St	2	MAIN ORT	3	4	12,171		YES
Myersville Rd	TFL & Myersville	Raber & Kreighbaum	3	MAIN ORT	3	4	6,393		
Pickle Rd	TFL & Pickle	Pickle & Camden Ridge	4	MAIN ORT	3	4	5,273		YES
East Libery Connector	Cottage Grove & Keltner	Charleston and Cheshire	5	MAIN ORT	2	4	3,582		
East Liberty Park (Internal Trail)			6	MAIN ORT	4	2	3,986		
Cottage Grove Rd	Cottage & Bayview	Cottage & Caston	7	MAIN ORT	3	4	13,342		YES
Turkeyfoot Lake Rd	TFL & Main	TFL & Arlington	8	MAIN ORT	4	3	8,236		YES
Nimisila Resv. to Arlington	Christman Rd	Alpine & Arlington	9	MAIN ORT	4	4	6,479	NO	YES
Greensburg Rd	Steese & Greensburg	Greensburg & Greensburg Ln	10	MAIN ORT	4	4	8,478		YES
Greensburg Rd	Greensburg & Greensburg Ln	Greensburg & Smith St/RR Corridor	11	MAIN ORT	3	3	13,754		YES
RR Corridor	NE Green Boundary	SE Green Boundary	12	MAIN ORT	2	3	31,611	NO	YES
Boettler Residential Connector	Boetler Road	Fortuna Drive	13	MAIN ORT	2	4	2,546		
Springdale Dr	Steese & Springdale	End of Springdale	14	MAIN ORT	2	4	1,885		
Arlington Rd	TFL & Arlington	Newcomb & Greensburg	15	MAIN ORT	4	4	16,812		
Steese Rd	Greensburg & Steese	Steese & Greenwood	16	MAIN ORT	4	4	3,396		
Steese Rd	Steese & Belleau Woods	Steese & Massilon	17	MAIN ORT	4	2	2,790		YES
School Connector	Boettler	Steese	18	MAIN ORT	4	2	4,607		YES
Tabs - Boettler - Massillon	Tabs & Tamy	Massillon & Raber	19	MAIN ORT	4	4	8,038		YES
Knollwood Dr	Knollwood & Arlington	End of Knollwood	20	MAIN ORT	2	4	2,674		
Park - Town Park	End of Park	End of Town Park	21	MAIN ORT	4	2	3,939		
Graybill Rd	Graybill & I-77	Graybill & Mayfair	22	MAIN ORT	3	4	5,075		
Raber to Graybill (I-77 Adjacent)	Raber	Graybill at I-77	23	MAIN ORT	2	4	4,806	NO	
Greenwood Elementary Connector	Graybill	Greenwood Primary Campus	24	MAIN ORT	2	2	3,435	NO	
Greenwood Elementary to Greensburg (I-77 Adjacent)		Greensburg at I-77	25	MAIN ORT	2	2	9,519	NO	
Off-Road to Boettler Park	Shriver & Wildflower	Across Koons into Boettler Park	26	MAIN ORT	4	4	8,755	NO	YES
Global Gateway	Global Gateway & Greensburg	Boettler Park	27	MAIN ORT	3	2	7,527		
Greensburg Park Connector (East)	Global Gateway	Greensburg Park	28	MAIN ORT	2	2	1,084	NO	
Greensburg Park Connector (North)	Greensburg Rd	Greensburg Park	29	MAIN ORT	2	2	657	NO	
Off-Road Residential Connector	Stake & Etter	End of Max Dr	30	MAIN ORT	2	4	5,557	NO	
Off-Road Connector	Graybill at RR Corridor	Kreighbaum	31	MAIN ORT	3	3	2,268	NO	YES
Lauby Rd	Greensburg & Lauby	Lauby & Mt. Pleasant	32	MAIN ORT	2	2	8,980		YES
Christman Rd	Christman & Comet	Christman & Green South Corp	33	MAIN ORT	3	3	5,335		YES
Moore Rd	Moore & Main	Moore & Cottage Grove	34	MAIN ORT	2	4	2,674		
Kreighbaum Rd	Graybill & Kreighbaum	Raber & Kreighbaum	35	MAIN ORT	2	3	2,205		YES
Caton Residential Connector	Jupiter & Caston	End of Sherylton Hills	36	MAIN ORT	3	4	4,489		YES
Greensburg Park Connector (West)	Greenbrook & Roydean	Greensburg Park	37	MAIN ORT	4	2	1,619		
Liberty Park Connector (South)	TFL Rd at Liberty Park	Liberty Park	38	MAIN ORT	4	2	1,189		
Mayfair Rd & Graybill Rd	Mayfair & Raber	Graybill & RR Corridor	39	MAIN ORT	3	4	5,530		
Raber Rd	Massillon & Raber	Parfoure & Raber	40	MAIN ORT	3	4	3,518		
Kreighbaum Park Connector	Kreighbaum Rd	Kreighbaum Park	41	MAIN ORT	2	2	848		YES
Shriver Dr	Shriver & Steese	Shriver at Existing Trail	42	MAIN ORT	4	4	1,370		YES
Off-Road Connector	Lindale St	Myersville Rd	43	MAIN ORT	2	2	3,006	NO	
Molly Dr	TFL Rd & Molly	End of Molly	44	MAIN ORT	2	4	1,004		YES
Under I-77 Tunnel (West)	Massillon Rd	I-77	45	MAIN ORT	2	4	1,414	NO	
Moore Rd	Planned Moore Improvement	Arlingotn Rd	46	MAIN ORT	2	2	932		
Off-Road Connector	King Arthur & Caston	Knollwood & Cottage Grove	47	FUTR/ALT	1	1	7,866	NO	
Off-Road Connector	End of Sprigndale Dr	Boettler Rd	48	FUTR/ALT	1	1	2,834	NO	
Turketfoot Lake I-77 Underpass	Molly & TFL	Pickle & TFL	49	FUTR/ALT	1	1	1,553		YES
Off-Road Connector	End of Towne Park Blvd	Joan & Greensburg	50	FUTR/ALT	1	1	7,451	NO	
Off-Road Connector	Molly Dr	Tabs Dr	51	FUTR/ALT	1	1	2,534	NO	YES
Off-Road Connector	Arlington & Knollwood	Tabs Dr	52	FUTR/ALT	1	1	4,512	NO	
Off-Road Connector	Graybill	Lake Twp Border	53	FUTR/ALT	1	1	3,908	NO	
Kreighbaum Rd	Graybill & Kreighbaum	Kreighbaum & N of Heckman	54	FUTR/ALT	1	1	2,634		
Off-Road Connector	Cottage Grove & TFL	NW of King Arthur & Harring	55	FUTR/ALT	1	1	6,825	NO	
Off-Road Connector	Arlington	Connects to 55	56	FUTR/ALT	1	1	2,218	NO	
Off-Road Connector	End of Paper Street	Connects to 47	57	FUTR/ALT	1	1	751	NO	
RR Corridor	Pressler & RR Corridor	TFL Rd & RR Corridor	58	FUTR/ALT	1	1	5,520		YES
Off-Road Connector	End of Max Dr	End of Joan Dr	59	FUTR/ALT	1	1	1,082		
I-77 Tunnel Connector From Graybill	Graybill Rd	I-77	60	FUTR/ALT	1	1	2,522	NO	
Greensburg Rd	Steese & Greensburg	Greensburg & Arlington	61	FUTR/ALT	1	1	2,395		
Off-Road Connector	End of 13 / Paper Street	N of 52 to Paper Street	62	FUTR/ALT	1	1	1,383	NO	
Off-Road Connector	Forest Lake Dr	Connects to 51	63	FUTR/ALT	1	1	1,234	NO	
Off-Road Connector	Graybill & Kreighbaum	Lake Twp Border	64	FUTR/ALT	1	1	1,535	NO	
Off-Road Connector	E of I-77 Proposed Tunnel	Wise Rd at I-77	65	FUTR/ALT	1	1	3,019	NO	
Off-Road Connector	Cottage Grove	Knollwood Dr	66	FUTR/ALT	1	1	2,671	NO	
Towne Park to I-77 Tunnel	Towne Park Blvd	S of Greenwood Primary Campus	67	FUTR/ALT	1	1	3,256	NO	YES

COST ESTIMATES - PRIORITY ROUTES

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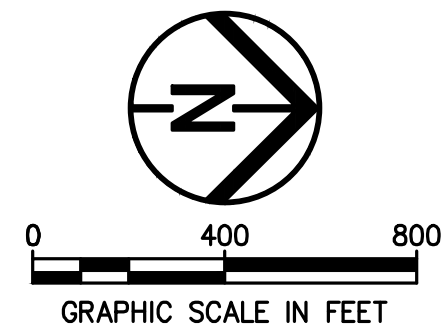
LEGEND

- ASPHALT PATH

BOARDWALK

PREFABRICATED TRUSS BRIDGE

5'-0" SIDEWALK
- NOTE: TRAIL THICKNESS NOT TO SCALE
- NIMISILA WEST
- NIMISILA EAST
- NIMISILA TO ARLINGTON ROAD
- ARLINGTON ROAD TO GREENSBURG ROAD
- GREENSBURG ROAD TO STEESE ROAD
- BOETTTLER CONNECTION
- RETAINING WALL
- ADDITIONAL GRADING REQUIRED
- EASEMENT OR LAND ACQUISITION
- TRACTOR CROSSING
- PUBLIC PARKS AND SCHOOLS



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Know what's below.
Call before you dig.

GREEN CONNECTION COMMUNITIES
PRELIMINARY ALIGNMENT
AKRON METROPOLITAN AREA
TRANSPORTATION STUDY

#####

DATE: _____

REVISIONS		
Δ	DATE	DESCRIPTION
####	###	###
####	###	###
####	###	###
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PROJECT NO.: 17-00183-010

DRAWN BY: ###

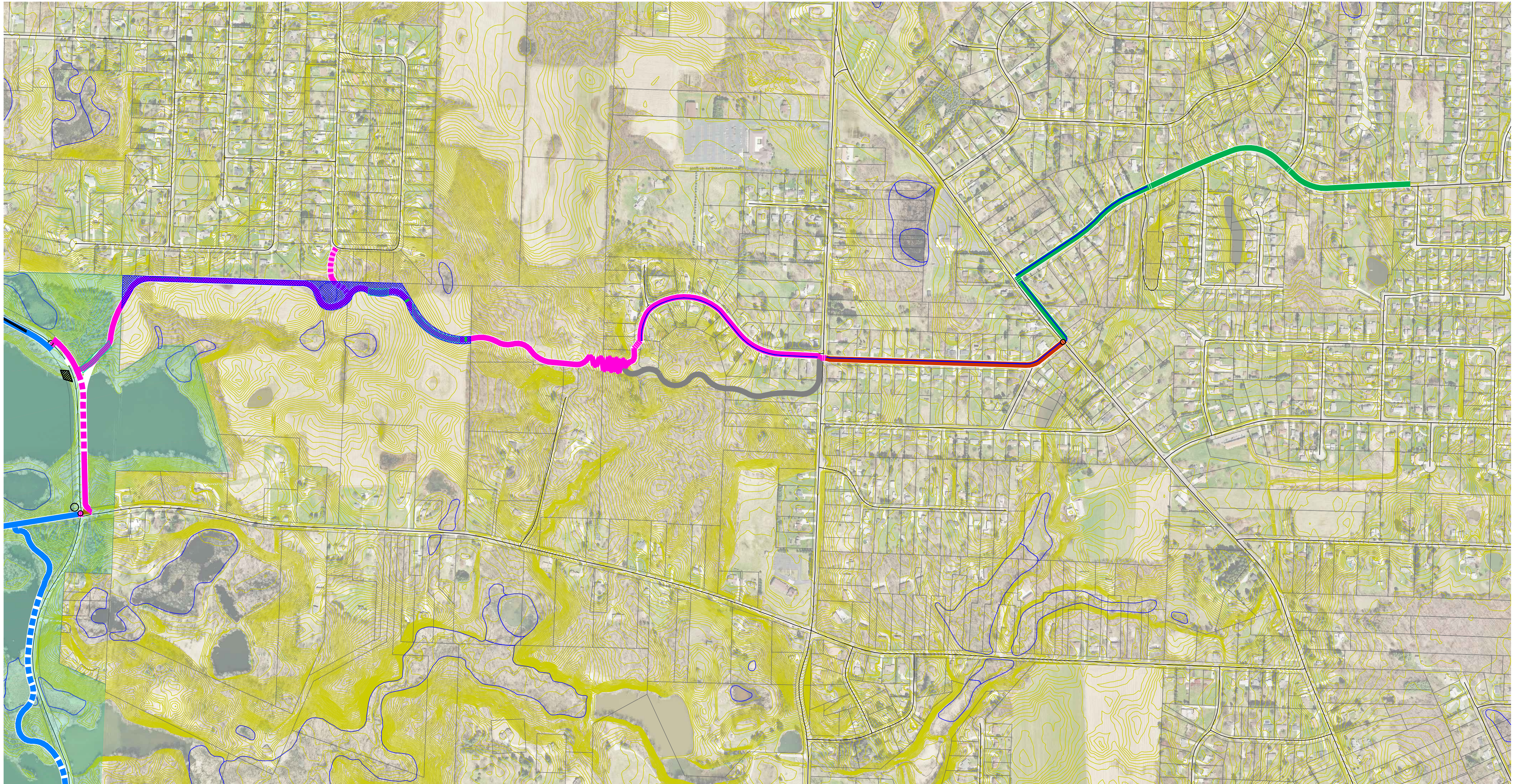
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DATE ISSUED: MAY 2018

NIMISILA WEST AND EAST

1 OF 3

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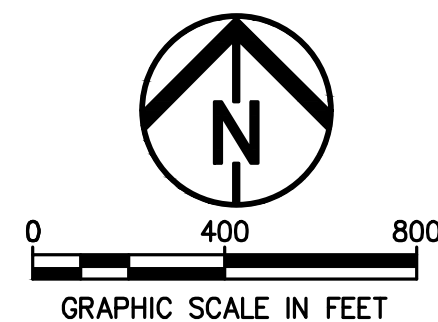
LEGEND

- ASPHALT PATH
- BOARDWALK
- PREFABRICATED TRUSS BRIDGE
- 5'-0" SIDEWALK

NOTE: TRAIL THICKNESS NOT TO SCALE

- NIMISILA WEST
- NIMISILA EAST
- NIMISILA TO ARLINGTON ROAD
- ARLINGTON ROAD TO GREENSBURG ROAD
- GREENSBURG ROAD TO STEESE ROAD
- BOETTTLER CONNECTION

- RETAINING WALL
- ADDITIONAL GRADING REQUIRED
- EASEMENT OR LAND ACQUISITION
- TRACTOR CROSSING
- PUBLIC PARKS AND SCHOOLS



NOT FOR CONSTRUCTION

GREEN CONNECTION COMMUNITIES PRELIMINARY ALIGNMENT AKRON METROPOLITAN AREA TRANSPORTATION STUDY

#####

DATE: _____

REVISIONS		
Δ	DATE	DESCRIPTION
####	###	###
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PROJECT NO.:	17-00183-010
DRAWN BY:	###
CHECKED BY:	###
DATE ISSUED:	MAY 2018

NIMISILA TO STEESE
ROAD

GREEN CONNECTION COMMUNITIES PRELIMINARY ALIGNMENT

AKRON METROPOLITAN AREA TRANSPORTATION STUDY

#####

DATE:

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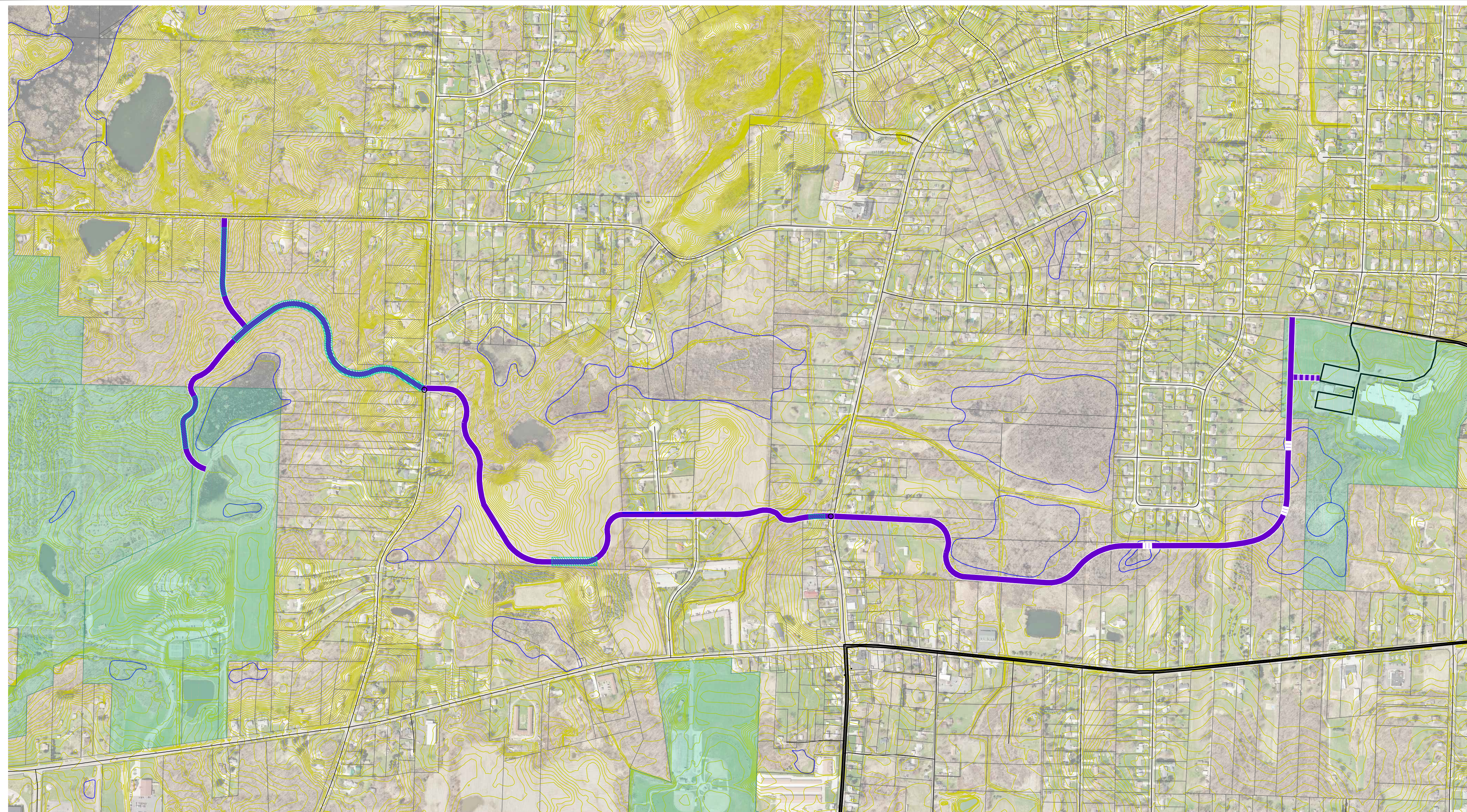
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BOETTLER
CONNECTION

3 OF 3

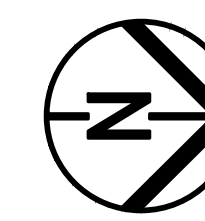


LEGEND

-
- ASPHALT PATH
- BOARDWALK
- PREFABRICATED TRUSS BRIDGE
- 5'-0" SIDEWALK

NOTE: TRAIL THICKNESS NOT TO SCALE

- | | | | |
|---|-----------------------------------|---|------------------------------|
|  | NIMISILA WEST |  | RETAINING WALL |
|  | NIMISILA EAST |  | ADDITIONAL GRADING REQUIRED |
|  | NIMISILA TO ARLINGTON ROAD |  | EASEMENT OR LAND ACQUISITION |
|  | ARLINGTON ROAD TO GREENSBURG ROAD |  | TRACTOR CROSSING |
|  | GREENSBURG ROAD TO STEESE ROAD |  | PUBLIC PARKS AND SCHOOLS |
|  | BOETTLER CONNECTION | | |



0 400 800
GRAPHIC SCALE IN FEET

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CITY OF GREEN
CONCEPTUAL OPINION OF PROBABLE COSTS
MAY 2018
PHASE ONE RECOMMENDATIONS
GREEN CONNECTING COMMUNITIES PLAN

Summary

\$	1,819,771.02	2.57 MILES	SOUTHGATE CONNECTION
\$	565,229.32	0.75 MILES	STEESE ROAD TO GREENSBURG ROAD
\$	371,328.91	0.35 MILES	GREENSBURG ROAD TO ARLINGTON ROAD
\$	2,009,650.66	1.8 MILES	ARLINGTON ROAD TO NIMISILA RESERVOIR
\$	2,999,585.10	1.96 MILES	NIMISILA RESERVOIR WEST LOOP
\$	3,955,040.05	2.38 MILES	NIMISILA RESERVOIR EAST LOOP
\$	6,954,625.15	Today's Cost Total	

Assumptions

- 1 Cost estimates and ranges are developed to the Association for the Advancement of Cost Consulting International (AACE) Class 5 estimate level.
- 2 2018 - 2022 ODOT Inflators based on the most recent Forecast Overview from the ODOT Office of Estimating. 2023 and 2024 were estimated at 3.5%.
- 3 Some land acquisition and/or easements are required. Costs are based on expected costs per acre and land needed.
- 4 A general attempt was made to anticipate potential impacts of known and visible utilities. Basic costs assumed.
- 5 Existing storm sewers and storm ditches were assumed to be adequate.
- 6 This cost opinion is based on 2017 construction costs.
- 7 All work is assumed to be publicly bid.
- 8 An ecological and environmental study was not performed and any issues are unknown.
- 9 Wetland areas are from 2011 Summit County GIS and an attempt was made to avoid or minimize impacts.
- 10 No geotechnical studies were performed. Foundation estimates are based on probable subsurface conditions.
- 11 No traffic studies or survey were performed. All data is based on existing plans, records, and mapping done by others.
- 12 The scope of work is for conceptual connections and networks. In-depth engineering design was not performed.
- 13 Non-AASHTO rated boardwalks are assumed to support only pedestrian traffic and the occasional small all terrain vehicle.

Environmental Design Group community impact pays CITY OF GREEN CONCEPTUAL OPINION OF PROBABLE COSTS MAY 2018 PHASE ONE RECOMMENDATIONS GREEN CONNECTING COMMUNITIES PLAN \$11,720,605.06			NIMISILA RESERVOIR WEST LOOP 1.96 MILES			
	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$0.00	\$0.00
	201	Clearing and Grubbing	1	LS	\$10,000.00	\$10,000.00
	202	Pavement Removed	0	SY	\$12.00	\$0.00
	252	Saw Cut Existing Asphalt/Concrete	0	FT	\$7.00	\$0.00
Subtotal						\$10,000.00
2	Earthwork					
	204	Excavation/Embankment	5270	CY	\$30.00	\$158,100.00
	209	Linear Grading, As Per Plan	9000	FT	\$5.00	\$45,000.00
Subtotal						\$203,100.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$40,000.00	\$40,000.00
Subtotal						\$40,000.00
4	Trail Pavement					
	204	Subgrade Preparation	12000	SY	\$2.00	\$24,000.00
	204	Geotextile Fabric	3960	SY	\$3.00	\$11,880.00
	304	Aggregate Base (T=6")	2000	CY	\$60.00	\$120,000.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	440	GAL	\$2.00	\$880.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	540	CY	\$175.00	\$94,500.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	350	CY	\$175.00	\$61,250.00
861	Geogrid for Subgrade Stabilization	3960	SY	\$6.00	\$23,760.00	
Subtotal						\$336,270.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	928	FT	\$900.00	\$835,290.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	0	FT	\$600.00	\$0.00
	608	Retaining Wall	0	FT	\$200.00	\$0.00
	530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$360,000.00	\$360,000.00
Subtotal						\$1,195,290.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	250	SY	\$2.00	\$500.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	50	CY	\$350.00	\$17,500.00
	641	Curb, Type 6	0	FT	\$20.00	\$0.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	0	SY	\$50.00	\$0.00
	608	Concrete Curb Ramp, ADA Accessible	2	EA	\$1,200.00	\$2,400.00
Subtotal						\$20,400.00
7	Utilities					
	202	Yard Drain	19	EA	\$800.00	\$14,898.04
	611	Catch Basin (ODOT 2-2B)	9	EA	\$1,300.00	\$12,104.66
	611	3" Underdrain	840	FT	\$8.00	\$6,720.00
	611	12" Storm Sewer (HDPE)	940	FT	\$75.00	\$70,500.00
	625	Utility Adjustments	1	LS	\$5,000.00	\$5,000.00
Subtotal						\$109,222.70
8	Amenities					
	517	Fence	1070	FT	\$50.00	\$53,500.00
	SPECIAL	Park Signs	1	EA	\$3,000.00	\$3,000.00
	SPECIAL	Kiosk	1	EA	\$5,000.00	\$5,000.00
	SPECIAL	Farmer Crossing	0	EA	\$12,000.00	\$0.00
Subtotal						\$61,500.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	0	FT	\$15.00	\$0.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	0	EA	\$200.00	\$0.00
Subtotal						\$0.00
10	Landscaping					
	659	Seeding and Fine Grading	8000	SY	\$2.00	\$16,000.00
	661	Buffer Plantings	1	LS	\$5,000.00	\$5,000.00
Subtotal						\$21,000.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$8,000.00	\$8,000.00
	614	Traffic Control & Maintenance	1	LS	\$0.00	\$0.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$6,000.00	\$6,000.00
Subtotal						\$14,000.00
TOTAL						\$2,010,782.70
	Contingency (17%)					\$341,833.06
	General Conditions (5%)					\$117,630.79
	Bonds & Insurances (3%)					\$70,578.47
	Mobilization/Demobilization (1.5%)					\$35,289.24
	Design, Permitting, and Documents (18%)					\$423,470.84
GRAND TOTAL						\$2,999,585.10
	With ODOT Cost Inflator 2018 (2.20%)					\$3,065,575.97
	With ODOT Cost Inflator 2019 (4.00%)					\$3,188,199.01
	With ODOT Cost Inflator 2020 (3.70%)					\$3,306,162.37
	With ODOT Cost Inflator 2021 (3.50%)					\$3,421,878.05
	With ODOT Cost Inflator 2022 (3.30%)					\$3,534,800.03
	With ODOT Cost Inflator 2023 (3.50%)					\$3,658,518.03
	With ODOT Cost Inflator 2024 (3.50%)					\$3,786,566.16
TOTAL 2024 COST						\$3,786,566.16

		CITY OF GREEN CONCEPTUAL OPINION OF PROBABLE COSTS MAY 2018 PHASE ONE RECOMMENDATIONS GREEN CONNECTING COMMUNITIES PLAN \$11,720,605.06			NIMISILA RESERVOIR EAST LOOP 2.38 MILES	
	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$0.00	\$0.00
	201	Clearing and Grubbing	1	LS	\$15,000.00	\$15,000.00
	202	Pavement Removed	0	SY	\$12.00	\$0.00
	252	Saw Cut Existing Asphalt/Concrete	0	FT	\$7.00	\$0.00
Subtotal						\$15,000.00
2	Earthwork					
	204	Excavation/Embankment	5700	CY	\$30.00	\$171,000.00
	209	Linear Grading, As Per Plan	9740	FT	\$5.00	\$48,700.00
Subtotal						\$219,700.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$37,000.00	\$37,000.00
Subtotal						\$37,000.00
4	Trail Pavement					
	204	Subgrade Preparation	12980	SY	\$2.00	\$25,960.00
	204	Geotextile Fabric	2600	SY	\$3.00	\$7,800.00
	304	Aggregate Base (T=6")	2170	CY	\$60.00	\$130,200.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	480	GAL	\$2.00	\$960.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	580	CY	\$175.00	\$101,500.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	380	CY	\$175.00	\$66,500.00
	861	Geogrid for Subgrade Stabilization	2600	SY	\$6.00	\$15,600.00
Subtotal						\$348,520.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	0	FT	\$900.00	\$0.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	2794	FT	\$600.00	\$1,676,520.00
	608	Retaining Wall	586	FT	\$200.00	\$117,100.00
	530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$0.00	\$0.00
Subtotal						\$1,793,620.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	0	SY	\$2.00	\$0.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	0	CY	\$350.00	\$0.00
	641	Curb, Type 6	160	FT	\$20.00	\$3,200.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	0	SY	\$50.00	\$0.00
	608	Concrete Curb Ramp, ADA Accessible	1	EA	\$1,200.00	\$1,200.00
Subtotal						\$4,400.00
7	Utilities					
	202	Yard Drain	19	EA	\$800.00	\$15,572.62
	611	Catch Basin (ODOT 2-2B)	10	EA	\$1,300.00	\$12,652.76
	611	3" Underdrain	880	FT	\$8.00	\$7,040.00
	611	12" Storm Sewer (HDPE)	980	FT	\$75.00	\$73,500.00
	625	Utility Adjustments	1	LS	\$5,000.00	\$5,000.00
Subtotal						\$113,765.38
8	Amenities					
	517	Fence	1280	FT	\$50.00	\$64,000.00
	SPECIAL	Park Signs	1	EA	\$3,000.00	\$3,000.00
	SPECIAL	Kiosk	1	EA	\$5,000.00	\$5,000.00
	SPECIAL	Farmer Crossing	0	EA	\$12,000.00	\$0.00
Subtotal						\$72,000.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	50	FT	\$15.00	\$750.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	1	EA	\$200.00	\$200.00
Subtotal						\$950.00
10	Landscaping					
	659	Seeding and Fine Grading	8660	SY	\$2.00	\$17,320.00
	661	Buffer Plantings	1	LS	\$5,000.00	\$5,000.00
Subtotal						\$22,320.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$10,000.00	\$10,000.00
	614	Traffic Control & Maintenance	1	LS	\$4,000.00	\$4,000.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$10,000.00	\$10,000.00
Subtotal						\$24,000.00
TOTAL						\$2,651,275.38
		Contingency (17%)				\$450,716.81
		General Conditions (5%)				\$155,099.61
		Bonds & Insurances (3%)				\$93,059.77
		Mobilization/Demobilization (1.5%)				\$46,529.88
		Design, Permitting, and Documents (18%)				\$558,358.60
GRAND TOTAL						\$3,955,040.05
		With ODOT Cost Inflator 2018 (2.20%)				\$4,042,050.93
		With ODOT Cost Inflator 2019 (4.00%)				\$4,203,732.97
		With ODOT Cost Inflator 2020 (3.70%)				\$4,359,271.09
		With ODOT Cost Inflator 2021 (3.50%)				\$4,511,845.57
		With ODOT Cost Inflator 2022 (3.30%)				\$4,660,736.48
		With ODOT Cost Inflator 2023 (3.50%)				\$4,823,862.26
		With ODOT Cost Inflator 2024 (3.50%)				\$4,992,697.43
TOTAL 2024 COST						\$4,992,697.43

Environmental Design Group community impact people		CITY OF GREEN CONCEPTUAL OPINION OF PROBABLE COSTS MAY 2018 PHASE ONE RECOMMENDATIONS GREEN CONNECTING COMMUNITIES PLAN \$11,720,605.06			ARLINGTON ROAD TO NIMISILA RESERVOIR 1.80 MILES	
	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$4,000.00	\$4,000.00
	201	Clearing and Grubbing	1	LS	\$20,000.00	\$20,000.00
	202	Pavement Removed	380	SY	\$12.00	\$4,560.00
	252	Saw Cut Existing Asphalt/Concrete	480	FT	\$7.00	\$3,360.00
Subtotal						\$31,920.00
2	Earthwork					
	204	Excavation/Embankment	4510	CY	\$30.00	\$135,300.00
	209	Linear Grading, As Per Plan	6170	FT	\$5.00	\$30,850.00
Subtotal						\$166,150.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$39,000.00	\$39,000.00
Subtotal						\$39,000.00
4	Trail Pavement					
	204	Subgrade Preparation	10970	SY	\$2.00	\$21,940.00
	204	Geotextile Fabric	3290	SY	\$3.00	\$9,870.00
	304	Aggregate Base (T=6")	1830	CY	\$60.00	\$109,800.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	410	GAL	\$2.00	\$820.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	490	CY	\$175.00	\$85,750.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	320	CY	\$175.00	\$56,000.00
	861	Geogrid for Subgrade Stabilization	3290	SY	\$6.00	\$19,740.00
Subtotal						\$303,920.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	0	FT	\$900.00	\$0.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	702	FT	\$600.00	\$421,080.00
	608	Retaining Wall	397	FT	\$200.00	\$79,460.00
	530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$0.00	\$0.00
Subtotal						\$500,540.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	570	SY	\$2.00	\$1,140.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	60	CY	\$350.00	\$21,000.00
	641	Curb, Type 6	0	FT	\$20.00	\$0.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	270	SY	\$50.00	\$13,500.00
	608	Concrete Curb Ramp, ADA Accessible	2	EA	\$1,200.00	\$2,400.00
Subtotal						\$38,040.00
7	Utilities					
	202	Yard Drain	17	EA	\$800.00	\$13,780.18
	611	Catch Basin (ODOT 2-2B)	9	EA	\$1,300.00	\$11,196.40
	611	3" Underdrain	780	FT	\$8.00	\$6,240.00
	611	12" Storm Sewer (HDPE)	1730	FT	\$75.00	\$129,750.00
	625	Utility Adjustments	1	LS	\$15,000.00	\$15,000.00
Subtotal						\$175,966.58
8	Amenities					
	517	Fence	400	FT	\$50.00	\$20,000.00
	SPECIAL	Park Signs	0	EA	\$3,000.00	\$0.00
	SPECIAL	Kiosk	0	EA	\$5,000.00	\$0.00
	SPECIAL	Farmer Crossing	2	EA	\$12,000.00	\$24,000.00
Subtotal						\$44,000.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	200	FT	\$15.00	\$3,000.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	0	EA	\$200.00	\$0.00
Subtotal						\$3,000.00
10	Landscaping					
	659	Seeding and Fine Grading	7320	SY	\$2.00	\$14,640.00
	661	Buffer Plantings	1	LS	\$16,000.00	\$16,000.00
Subtotal						\$30,640.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$8,000.00	\$8,000.00
	614	Traffic Control & Maintenance	1	LS	\$0.00	\$0.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$6,000.00	\$6,000.00
Subtotal						\$14,000.00
TOTAL						\$1,347,176.58
			Contingency (17%)			\$229,020.02
			General Conditions (5%)			\$78,809.83
			Bonds & Insurances (3%)			\$47,285.90
			Mobilization/Demobilization (1.5%)			\$23,642.95
			Design, Permitting, and Documents (18%)			\$283,715.39
GRAND TOTAL						\$2,009,650.66
			With ODOT Cost Inflator 2018 (2.20%)			\$2,053,862.98
			With ODOT Cost Inflator 2019 (4.00%)			\$2,136,017.50
			With ODOT Cost Inflator 2020 (3.70%)			\$2,215,050.15
			With ODOT Cost Inflator 2021 (3.50%)			\$2,292,576.90
			With ODOT Cost Inflator 2022 (3.30%)			\$2,368,231.94
			With ODOT Cost Inflator 2023 (3.50%)			\$2,451,120.06
			With ODOT Cost Inflator 2024 (3.50%)			\$2,536,909.26
TOTAL 2024 COST						\$2,536,909.26

		CITY OF GREEN CONCEPTUAL OPINION OF PROBABLE COSTS MAY 2018 PHASE ONE RECOMMENDATIONS GREEN CONNECTING COMMUNITIES PLAN \$11,720,605.06			GREENSBURG ROAD TO ARLINGTON ROAD 0.35 MILES	
	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$8,000.00	\$8,000.00
	201	Clearing and Grubbing	1	LS	\$5,000.00	\$5,000.00
	202	Pavement Removed	500	SY	\$12.00	\$6,000.00
	252	Saw Cut Existing Asphalt/Concrete	640	FT	\$7.00	\$4,480.00
Subtotal						\$23,480.00
2	Earthwork					
	204	Excavation/Embankment	880	CY	\$30.00	\$26,400.00
	209	Linear Grading, As Per Plan	0	FT	\$5.00	\$0.00
Subtotal						\$26,400.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$7,200.00	\$7,200.00
Subtotal						\$7,200.00
4	Trail Pavement					
	204	Subgrade Preparation	2430	SY	\$2.00	\$4,860.00
	204	Geotextile Fabric	250	SY	\$3.00	\$750.00
	304	Aggregate Base (T=6")	410	CY	\$60.00	\$24,600.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	90	GAL	\$2.00	\$180.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	110	CY	\$175.00	\$19,250.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	80	CY	\$175.00	\$14,000.00
	861	Geogrid for Subgrade Stabilization	0	SY	\$6.00	\$0.00
Subtotal						\$63,640.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	0	FT	\$900.00	\$0.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	0	FT	\$600.00	\$0.00
	608	Retaining Wall	0	FT	\$200.00	\$0.00
	530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$0.00	\$0.00
Subtotal						\$0.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	360	SY	\$2.00	\$720.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	0	CY	\$350.00	\$0.00
	641	Curb, Type 6	0	FT	\$20.00	\$0.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	360	SY	\$50.00	\$18,000.00
	608	Concrete Curb Ramp, ADA Accessible	0	EA	\$1,200.00	\$0.00
Subtotal						\$18,720.00
7	Utilities					
	202	Yard Drain	4	EA	\$800.00	\$2,914.03
	611	Catch Basin (ODOT 2-2B)	2	EA	\$1,300.00	\$2,367.65
	611	3" Underdrain	170	FT	\$8.00	\$1,360.00
	611	12" Storm Sewer (HDPE)	920	FT	\$75.00	\$69,000.00
	625	Utility Adjustments	1	LS	\$15,000.00	\$15,000.00
Subtotal						\$90,641.67
8	Amenities					
	517	Fence	0	FT	\$50.00	\$0.00
	SPECIAL	Park Signs	0	EA	\$3,000.00	\$0.00
	SPECIAL	Kiosk	0	EA	\$5,000.00	\$0.00
	SPECIAL	Farmer Crossing	0	EA	\$12,000.00	\$0.00
Subtotal						\$0.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	40	FT	\$15.00	\$600.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	0	EA	\$200.00	\$0.00
Subtotal						\$600.00
10	Landscaping					
	659	Seeding and Fine Grading	1620	SY	\$2.00	\$3,240.00
	661	Buffer Plantings	1	LS	\$10,000.00	\$10,000.00
Subtotal						\$13,240.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$2,000.00	\$2,000.00
	614	Traffic Control & Maintenance	1	LS	\$0.00	\$0.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$3,000.00	\$3,000.00
Subtotal						\$5,000.00
TOTAL						\$248,921.67
			Contingency (17%)			\$42,316.68
			General Conditions (5%)			\$14,561.92
			Bonds & Insurances (3%)			\$8,737.15
			Mobilization/Demobilization (1.5%)			\$4,368.58
			Design, Permitting, and Documents (18%)			\$52,422.90
GRAND TOTAL						\$371,328.91
			With ODOT Cost Inflator 2018 (2.20%)			\$379,498.14
			With ODOT Cost Inflator 2019 (4.00%)			\$394,678.07
			With ODOT Cost Inflator 2020 (3.70%)			\$409,281.16
			With ODOT Cost Inflator 2021 (3.50%)			\$423,606.00
			With ODOT Cost Inflator 2022 (3.30%)			\$437,584.99
			With ODOT Cost Inflator 2023 (3.50%)			\$452,900.47
			With ODOT Cost Inflator 2024 (3.50%)			\$468,751.99
TOTAL 2024 COST						\$468,751.99

		CITY OF GREEN CONCEPTUAL OPINION OF PROBABLE COSTS MAY 2018 PHASE ONE RECOMMENDATIONS GREEN CONNECTING COMMUNITIES PLAN \$11,720,605.06			STEESE ROAD TO GREENSBURG ROAD 0.75 MILES	
	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$9,000.00	\$9,000.00
	201	Clearing and Grubbing	1	LS	\$5,000.00	\$5,000.00
	202	Pavement Removed	600	SY	\$12.00	\$7,200.00
	252	Saw Cut Existing Asphalt/Concrete	760	FT	\$7.00	\$5,320.00
Subtotal						\$26,520.00
2	Earthwork					
	204	Excavation/Embankment	1840	CY	\$30.00	\$55,200.00
	209	Linear Grading, As Per Plan	0	FT	\$5.00	\$0.00
Subtotal						\$55,200.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$22,000.00	\$22,000.00
Subtotal						\$22,000.00
4	Trail Pavement					
	204	Subgrade Preparation	5090	SY	\$2.00	\$10,180.00
	204	Geotextile Fabric	510	SY	\$3.00	\$1,530.00
	304	Aggregate Base (T=6")	640	CY	\$60.00	\$38,400.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	190	GAL	\$2.00	\$380.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	230	CY	\$175.00	\$40,250.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	150	CY	\$175.00	\$26,250.00
	861	Geogrid for Subgrade Stabilization	0	SY	\$6.00	\$0.00
Subtotal						\$116,990.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	0	FT	\$900.00	\$0.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	0	FT	\$600.00	\$0.00
	608	Retaining Wall	0	FT	\$200.00	\$0.00
	530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$0.00	\$0.00
Subtotal						\$0.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	430	SY	\$2.00	\$860.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	0	CY	\$350.00	\$0.00
	641	Curb, Type 6	0	FT	\$20.00	\$0.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	430	SY	\$50.00	\$21,500.00
	608	Concrete Curb Ramp, ADA Accessible	0	EA	\$1,200.00	\$0.00
Subtotal						\$22,360.00
7	Utilities					
	202	Yard Drain	8	EA	\$800.00	\$6,098.49
	611	Catch Basin (ODOT 2-2B)	4	EA	\$1,300.00	\$4,955.03
	611	3" Underdrain	350	FT	\$8.00	\$2,800.00
	611	12" Storm Sewer (HDPE)	1150	FT	\$75.00	\$86,250.00
	625	Utility Adjustments	1	LS	\$10,000.00	\$10,000.00
Subtotal						\$110,103.52
8	Amenities					
	517	Fence	0	FT	\$50.00	\$0.00
	SPECIAL	Park Signs	0	EA	\$3,000.00	\$0.00
	SPECIAL	Kiosk	0	EA	\$5,000.00	\$0.00
	SPECIAL	Farmer Crossing	0	EA	\$12,000.00	\$0.00
Subtotal						\$0.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	130	FT	\$15.00	\$1,950.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	0	EA	\$200.00	\$0.00
Subtotal						\$1,950.00
10	Landscaping					
	659	Seeding and Fine Grading	3390	SY	\$2.00	\$6,780.00
	661	Buffer Plantings	1	LS	\$10,000.00	\$10,000.00
Subtotal						\$16,780.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$3,000.00	\$3,000.00
	614	Traffic Control & Maintenance	1	LS	\$0.00	\$0.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$4,000.00	\$4,000.00
Subtotal						\$7,000.00
TOTAL						\$378,903.52
			Contingency (17%)			\$64,413.60
			General Conditions (5%)			\$22,165.86
			Bonds & Insurances (3%)			\$13,299.51
			Mobilization/Demobilization (1.5%)			\$6,649.76
			Design, Permitting, and Documents (18%)			\$79,797.08
GRAND TOTAL						\$565,229.32
			With ODOT Cost Inflator 2018 (2.20%)			\$577,664.37
			With ODOT Cost Inflator 2019 (4.00%)			\$600,770.94
			With ODOT Cost Inflator 2020 (3.70%)			\$622,999.47
			With ODOT Cost Inflator 2021 (3.50%)			\$644,804.45
			With ODOT Cost Inflator 2022 (3.30%)			\$666,083.00
			With ODOT Cost Inflator 2023 (3.50%)			\$689,395.90
			With ODOT Cost Inflator 2024 (3.50%)			\$713,524.76
TOTAL 2024 COST						\$713,524.76



Align Group
align. impact. people.

**CITY OF GREEN
CONCEPTUAL OPINION OF PROBABLE COSTS
MAY 2018
PHASE ONE RECOMMENDATIONS**

GREEN CONNECTING COMMUNITIES PLAN

\$11,720,605.06

SOUTHGATE CONNECTION

2.57 MILES

	ITEM	DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL COST
1	Site Preparation and Demolition					
	SPECIAL	Land Acquisition/Easement	1	LS	\$2,000.00	\$2,000.00
	201	Clearing and Grubbing	1	LS	\$20,000.00	\$20,000.00
	202	Pavement Removed	0	SY	\$12.00	\$0.00
	252	Saw Cut Existing Asphalt/Concrete	0	FT	\$7.00	\$0.00
Subtotal						\$22,000.00
2	Earthwork					
	204	Excavation/Embankment	11270	CY	\$30.00	\$338,100.00
	209	Linear Grading, As Per Plan	13220	FT	\$5.00	\$66,100.00
Subtotal						\$404,200.00
3	Erosion & Sediment Control					
	832	Erosion and Sediment Control	1	LS	\$25,000.00	\$25,000.00
Subtotal						\$25,000.00
4	Trail Pavement					
	204	Subgrade Preparation	17630	SY	\$2.00	\$35,260.00
	204	Geotextile Fabric	10580	SY	\$3.00	\$31,740.00
	304	Aggregate Base (T=6")	2940	CY	\$60.00	\$176,400.00
	304	Open Graded Aggregate Base, ODOT 1 and ODOT 2 Classification (T=18")	0	CY	\$55.00	\$0.00
	407	Tack Coat - 0.04 GAL/SY	650	GAL	\$2.00	\$1,300.00
	301	Asphalt Concrete Base Course (T=3")	0	CY	\$175.00	\$0.00
	441	Asphalt Concrete Intermediate Course, Type 2 (448), PG 64-22 (T=1.75")	790	CY	\$175.00	\$138,250.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=1.25")	520	CY	\$175.00	\$91,000.00
861	Geogrid for Subgrade Stabilization	5290	SY	\$6.00	\$31,740.00	
Subtotal						\$505,690.00
5	Structures					
	608	AASHTO/ODOT Compliant H15 Rated Prefabricated Boardwalk, 14' clear horizontal width	0	FT	\$900.00	\$0.00
	608	Pedestrian Rated Prefabricated Timber Decking and Fiberglass Beam Boardwalk, 14' clear horizontal width	60	FT	\$600.00	\$35,760.00
	608	Retaining Wall	0	FT	\$200.00	\$0.00
530	AASHTO/ODOT Bridge, H15 Rated, 110' long, including abutments	1	LS	\$0.00	\$0.00	
Subtotal						\$35,760.00
6	Sidewalk and Paving					
	204	Subgrade Preparation (Sidewalk)	190	SY	\$2.00	\$380.00
	441	Asphalt Concrete Surface Course, Type 1 (448), PG 64-22 (T=3") (Parking)	0	CY	\$175.00	\$0.00
	511	Class QC2 Concrete, Sidewalk As Per Plan, Includes Nodes (Decorative, T=6")	40	CY	\$350.00	\$14,000.00
	641	Curb, Type 6	0	FT	\$20.00	\$0.00
	451	6" Reinforced Concrete Pavement, Class QC1, (Driveways and Patio Areas)	0	SY	\$50.00	\$0.00
608	Concrete Curb Ramp, ADA Accessible	2	EA	\$1,200.00	\$2,400.00	
Subtotal						\$16,780.00
7	Utilities					
	202	Yard Drain	27	EA	\$800.00	\$21,533.83
	611	Catch Basin (ODOT 2-2B)	13	EA	\$1,300.00	\$17,496.24
	611	3" Underdrain	1220	FT	\$8.00	\$9,760.00
	611	12" Storm Sewer (HDPE)	1350	FT	\$75.00	\$101,250.00
625	Utility Adjustments	1	LS	\$5,000.00	\$5,000.00	
Subtotal						\$155,040.08
8	Amenities					
	517	Fence	0	FT	\$50.00	\$0.00
	SPECIAL	Park Signs	0	EA	\$3,000.00	\$0.00
	SPECIAL	Kiosk	1	EA	\$5,000.00	\$5,000.00
	SPECIAL	Farmer Crossing	0	EA	\$12,000.00	\$0.00
Subtotal						\$5,000.00
9	Traffic Control					
	642	Painted Crosswalk Line, Type 1	60	FT	\$15.00	\$900.00
	630	Sign, Flat Sheet	0	SF	\$25.00	\$0.00
	630	Ground Mounted Support, No. 3 Post	0	FT	\$10.00	\$0.00
	630	Removal of Ground Mounted Sign and Reerection	0	EA	\$200.00	\$0.00
Subtotal						\$900.00
10	Landscaping					
	659	Seeding and Fine Grading	11760	SY	\$2.00	\$23,520.00
	661	Buffer Plantings	1	LS	\$5,000.00	\$5,000.00
Subtotal						\$28,520.00
12	Construction and Inspection					
	623	Survey & Layout	1	LS	\$11,000.00	\$11,000.00
	614	Traffic Control & Maintenance	1	LS	\$0.00	\$0.00
	SPECIAL	Material Testing & Inspection (Allowance)	1	LS	\$10,000.00	\$10,000.00
Subtotal						\$21,000.00
TOTAL						\$1,219,890.08
	Contingency (17%)					\$207,381.31
	General Conditions (5%)					\$71,363.57
	Bonds & Insurances (3%)					\$42,818.14
	Mobilization/Demobilization (1.5%)					\$21,409.07
	Design, Permitting, and Documents (18%)					\$256,908.85
GRAND TOTAL						\$1,819,771.02
	With ODOT Cost Inflator 2018 (2.20%)					\$1,859,805.98
	With ODOT Cost Inflator 2019 (4.00%)					\$1,934,198.22
	With ODOT Cost Inflator 2020 (3.70%)					\$2,005,763.56
	With ODOT Cost Inflator 2021 (3.50%)					\$2,075,965.28
	With ODOT Cost Inflator 2022 (3.30%)					\$2,144,472.13
	With ODOT Cost Inflator 2023 (3.50%)					\$2,219,528.66
	With ODOT Cost Inflator 2024 (3.50%)					\$2,297,212.16
TOTAL 2024 COST						\$2,297,212.16

COST ESTIMATES - ALL ROUTES



GREENSBURG AND COLUMBIAS TIER 1																
SEGMENT			LENGTH (MILES)	TYPE OF FACILITY	COST/MILE ESTIMATE	ESTIMATED SEGMENT COST	IN ROW?	Electric	Gas	water	Other	GRADIN G OR	WETLAN DS	DRAINAGE	OWNER	DEMO- LITION
No.	Nearest Roadway	Logical Termini														
31	Off-Road Connector	Graybill at RR Corridor to Kreighbaum	0.43	Off-Road Trail	\$ 1,078,000.00	\$ 463,111.79	NO									X
32	Lauby Rd	Greensburg & Lauby to Lauby & Mt. Pleasant	1.70	Sidepath	\$ 1,078,000.00	\$ 1,833,515.17						X				X
33	Christman Rd	Christman & Comet to Christman & Green South Corp	1.01	Sidepath	\$ 1,176,000.00	\$ 1,188,165.19		X				X		X		
34	Moore Rd	Moore & Main to Moore & Cottage Grove	0.51	Sidepath	\$ 1,176,000.00	\$ 595,545.14		X								X
35	Kreighbaum Rd	Graybill & Kreighbaum to Raber & Kreighbaum	0.42	Sidepath	\$ 1,274,000.00	\$ 532,010.81		XX								
36	Caton Residential Connector	Jupiter & Caston to End of Sherylton Hills	0.85	Off-Road Trail	\$ 1,078,000.00	\$ 916,553.30										
37	Greensburg Park Connector (West)	Greenbrook & Roydean to Greensburg Park	0.31	Sidepath	\$ 1,176,000.00	\$ 360,584.60		X						X	X	
38	Liberty Park Connector (South)	TFL Rd at Liberty Park to Liberty Park	0.23	Sidepath	\$ 1,176,000.00	\$ 264,798.48		X					X			
39	Mayfair Rd & Graybill Rd	Mayfair & Raber to Graybill & RR Corridor	1.05	Sidepath	\$ 1,176,000.00	\$ 1,231,661.01		X				X				
40	Raber Rd	Massillon & Raber to Parfoure & Raber	0.67	Sidepath	\$ 1,176,000.00	\$ 783,635.69		X								X
41	Kreighbaum Park Connector	Kreighbaum Rd to Kreighbaum Park	0.16	Off-Road Trail	\$ 1,078,000.00	\$ 173,202.06										
42	Shriver Dr	Shriver & Steese to Shriver at Existing Trail	0.26	Sidepath	\$ 1,078,000.00	\$ 279,779.54						X				
43	Off-Road Connector	Lindale St to Myersville Rd	0.57	Off-Road Trail	\$ 1,078,000.00	\$ 613,775.32	NO					X	X			
44	Molly Dr	TFL Rd & Molly to End of Molly	0.19	Sidepath	\$ 1,078,000.00	\$ 204,965.03						X		X	X	
45	Under I-77 Tunnel (West)	Massillon Rd to I-77	0.27	Off-Road Trail	\$ 1,078,000.00	\$ 4,122,597.33	NO									X
46	Moore Rd	Planned Moore Improvement to Arlingotn Rd	0.18	Sidepath	\$ 1,176,000.00	\$ 207,549.78		X				X				
47	Off-Road Connector	King Arthur & Caston to Knollwood & Cottage Grove	1.49	Off-Road Trail	\$ 1,078,000.00	\$ 1,605,987.38	NO									X
48	Off-Road Connector	End of Sprigndale Dr to Boettler Rd	0.54	Off-Road Trail	\$ 1,078,000.00	\$ 578,635.50	NO									
49	Turketfoot Lake I-77 Underpass	Molly & TFL to Pickle & TFL	0.29	Sidepath	\$ 1,078,000.00	\$ 611,088.11										
50	Off-Road Connector	End of Towne Park Blvd to Joan & Greensburg	1.41	Off-Road Trail	\$ 1,078,000.00	\$ 1,521,188.27	NO					X	X			
51	Off-Road Connector	Molly Dr to Tabs Dr	0.48	Off-Road Trail	\$ 1,078,000.00	\$ 517,433.92	NO					X				
52	Off-Road Connector	Arlington & Knollwood to Tabs Dr	0.85	Off-Road Trail	\$ 1,078,000.00	\$ 921,213.19	NO					X	X			
53	Off-Road Connector	Graybill to Lake Twp Border	0.74	Off-Road Trail	\$ 1,078,000.00	\$ 797,865.59	NO						X			
54	Kreighbaum Rd	Graybill & Kreighbaum to Kreighbaum & N of Heckman	0.50	Sidepath	\$ 1,078,000.00	\$ 537,716.61										
55	Off-Road Connector	Cottage Grove & TFL to NW of King Arthur & Harring	1.29	Off-Road Trail	\$ 1,078,000.00	\$ 1,393,486.87	NO					X				
56	Off-Road Connector	Arlington to Connects to 55	0.42	Off-Road Trail	\$ 1,078,000.00	\$ 452,781.45	NO					X				
57	Off-Road Connector	End of Paper Street to Connects to 47	0.14	Off-Road Trail	\$ 1,078,000.00	\$ 153,344.96	NO					X	X			
58	RR Corridor	Pressler & RR Corridor to TFL Rd & RR Corridor	1.05	Off-Road Trail	\$ 1,078,000.00	\$ 1,126,970.61						X	X			
59	Off-Road Connector	End of Max Dr to End of Joan Dr	0.20	Off-Road Trail	\$ 1,078,000.00	\$ 220,966.45										
60	I-77 Tunnel Connector From Graybill	Graybill Rd to I-77	0.48	Sidepath	\$ 1,078,000.00	\$ 514,924.29	NO						X			
61	Greensburg Rd	Steese & Greensburg to Greensburg & Arlington	0.45	Sidepath	\$ 1,078,000.00	\$ 488,895.57										
62	Off-Road Connector	End of 13 / Paper Street to N of 52 to Paper Street	0.26	Off-Road Trail	\$ 1,078,000.00	\$ 282,317.19	NO						X			
63	Off-Road Connector	Forest Lake Dr to Connects to 51	0.23	Off-Road Trail	\$ 1,078,000.00	\$ 251,860.20	NO					X				
64	Off-Road Connector	Graybill & Kreighbaum to Lake Twp Border	0.29	Off-Road Trail	\$ 1,078,000.00	\$ 313,374.12	NO									



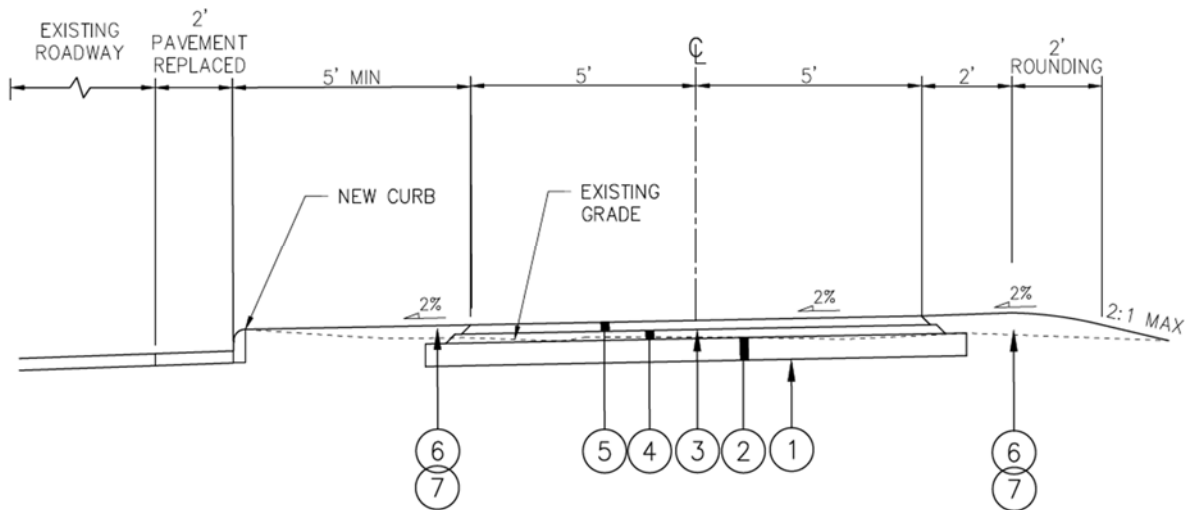
CITY OF GREEN
CONCEPTUAL OPINION OF PROBABLE COSTS
MAY 2018
PHASE ONE RECOMMENDATIONS
GREEN CONNECTING COMMUNITIES PLAN

SEGMENT				LENGTH (MILES)	TYPE OF FACILITY	COST/MILE ESTIMATE	ESTIMATED SEGMENT COST	IN ROW?	Electric	Gas	water	Other	GRADIN	G OR	WETLAN	DS	DRAINAGE	OWNER	S	DEMO- LITION
No.	Nearest Roadway	Logical Termini																		
65	Off-Road Connector	E of I-77 Proposed Tunnel to	Wise Rd at I-77	0.57	Off-Road Trail	\$ 1,078,000.00	\$ 616,404.41	NO								X				
66	Off-Road Connector		Cottage Grove to Knollwood Dr	0.51	Off-Road Trail	\$ 1,078,000.00	\$ 545,250.24	NO						X						
67	Towne Park to I-77 Tunnel	Towne Park Blvd to	S of Greenwood Primary Campus	0.62	Sidepath	\$ 1,078,000.00	\$ 664,845.46	NO						X						
68	Main to Nimisila Connector	Main Street to	Nimisila West Trail	0.58	Off-Road Trail	\$ 1,293,600.00	\$ 1,499,937.29							X	XX		X		X	

FACILITY DETAILS

Typical Shared Path Sections

Off-road Trail

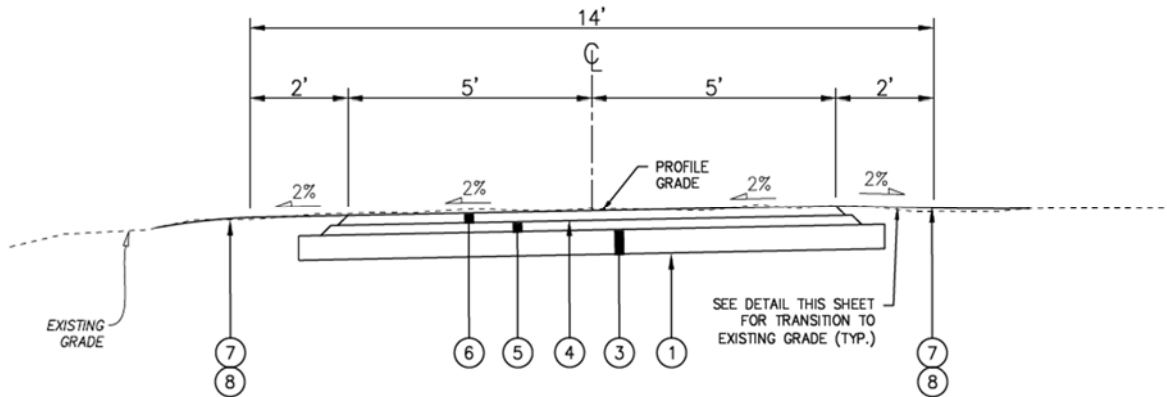


LEGEND

- ① ITEM 204 - SUBGRADE COMPACTION
- ② ITEM 304 - AGGREGATE BASE (T=6"0)
- ③ ITEM 407 - TACK COAT - 0.06 GAL/SY
- ④ ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448), PG 64-22 (T=1.75")
- ⑤ ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG 64-22 (T=1.25")
- ⑥ ITEM 652 - PLACING STOCKPILED TOPSOIL (T=3")
- ⑦ ITEM 659 - SEEDING AND MULCHING - LAWN MIX

Typical Shared Path Sections

Sidepath



LEGEND

- | | | |
|---|----------|---|
| 1 | ITEM 204 | — SUBGRADE COMPACTION |
| 2 | ITEM 204 | — GRANULAR MATERIAL TYPE E, AS PER PLAN |
| 3 | ITEM 304 | — AGGREGATE BASE (T=6") |
| 4 | ITEM 407 | — TACK COAT — 0.06 GAL/SY |
| 5 | ITEM 441 | — ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448) , PG 64-22 (T=1.75") |
| 6 | ITEM 441 | — ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448), PG 64-22 (T=1.25") |
| 7 | ITEM 652 | — PLACING STOCKPILED TOPSOIL (T=3") |
| 8 | ITEM 659 | — SEEDING AND MULCHING — LAWN MIX |