

Appendices

Chapter 2

Parks and Open Space



The Big Splash at Evans Park (3.4 acres)

2831 Southwest Blvd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Recreational trails between Brookpark Middle School and Dennis Lane

Amenities

- 4 Bike Racks
- 1 Drinking Fountain
- 1 Entry Sign
- 7 Lighting Fixtures
- 20 Picnic Tables
- 5 Pieces of Playground Equipment
- Restroom Facilities
- Volleyball Court

The Big Splash at Evans Park (3.4 acres)

2831 Southwest Blvd.

PRELIMINARY SITE RECOMMENDATIONS

- Install a sprayground / baby pool area
- Install a shelter area



Blodwen Park (0.6 acres)

Off Blodwen Cir.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Recreational trail connects to Gantz Park

Amenities

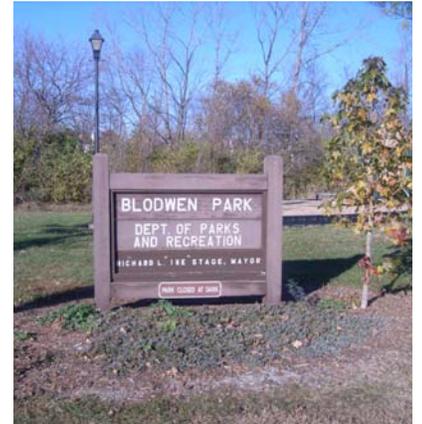
- 5 Benches
- 1 Entry Sign
- 1 Lighting Fixture
- 2 Picnic Tables
- 1 Piece of Playground Equipment
- 1 Shelter
- 1 Trash Receptacle

Blodwen Park (0.6 acres)

Off Blodwen Cir.

PRELIMINARY SITE RECOMMENDATIONS

- Install a charcoal grill
- Install a fence at the northwest corner of the park to delineate the park boundary



Concord Lakes Park (1.9 acres)

Off Carlotta Dr.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Not connected to the bikeway network

Amenities

- 1 Basketball Goal
- 1 Bench
- 2 Picnic Tables
- 3 Pieces of Playground Equipment
- 1 Shelter
- 1 Trash Receptacle

Concord Lakes Park (1.9 acres)

Off Carlotta Dr.

PRELIMINARY SITE RECOMMENDATIONS

- Install entry sign
- Install recycling containers at shelter
- Connect park to trail network (see Chapter 4)



Creed Lawless Park (0.3 acres)

Off Kingston Av.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Located on the Arbutus Avenue Bike Route between Town Center and Windsor Park

Amenities

- 4 Benches
- 1 Charcoal Grill
- 1 Entry Sign
- 1 Piece of Playground Equipment
- 1 Shelter / Gazebo
- 1 Significant Tree
- 1 Trash Receptacle

Creed Lawless Park (0.3 acres)

Off Kingston Av.

PRELIMINARY SITE RECOMMENDATIONS

- Install recycling container near gazebo



Fryer Park (111.5 acres)

3899 Orders Rd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- About 1 mile of recreational trails within Park, around Rotary Lake, Discovery Frontier, and the Grove City YMCA
- Not connected to the bikeway network

Amenities

- 8 Ball Diamonds
- 41 Benches
- 3 Bike Racks
- 1 Blue Light (Safety)
- Corn Hole
- 4 Drinking Fountains
- 2 Entry Signs
- 3 Charcoal Grills
- 3 Informational Kiosks
- 8 Lighting Fixtures
- 21 Picnic Tables
- Discovery Frontier Playground and a Small, Traditional Playground (19 pieces)
- Smaller, traditional playground
- 5 Recycling Containers
- 3 Restroom Facilities
- 2 Shelters
- 27 Significant Trees
- 38 Trash Receptacles

Fryer Park (111.5 acres)

3899 Orders Rd.

PRELIMINARY SITE RECOMMENDATIONS

- Install lights at the softball diamonds
- Install restrooms with running water
- Promote the wooded trails
- Create a scenic natural garden area to between the mud volleyball courts and wooded area
- Install a sprayground at Discovery Frontier
- Install a three season pavilion
- Expand acreage to the south and west
- Continue to develop Century Village
- Install an amphitheater
- Install multi-sport fields



Gantz Park (27.5 acres)

2255 Home Rd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Almost 1 mile of recreational trails within the park
- Connects to the Gantz Road sidepath and the Southpark Trails

Amenities

- 1 Basketball Goal
- 10 Benches
- 1 Bike Rack
- 12 Birdhouses
- 1 Blue Light (Safety)
- 3 Charcoal Grills
- 3 Entry Signs
- 9 Lighting Fixtures
- 2 Informational Kiosks
- 26 Picnic Tables
- 6 Pieces of Playground Equipment
- 1 Rain Garden
- 4 Recycling Containers
- 1 Restroom Facility
- 3 Shelters / Gazebos
- 69 Significant Trees
- 2 Tennis Courts
- 8 Trash Receptacles
- 1 Volleyball Net

Gantz Park (27.5 acres)

2255 Home Rd.

PRELIMINARY SITE RECOMMENDATIONS

- Install entrance sign at Park Ridge Drive entrance
- Repair damaged tree markings in Arboretum
- Implement the adopted Arboretum Plan



Henceroth Park (21.3 acres)

2075 Mallow Ln.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Almost 2 miles of recreational trails within the park, including wooded trails
- Connects to the Mallow Lane sidepath, leading to the Buckeye Parkway Trail

Amenities

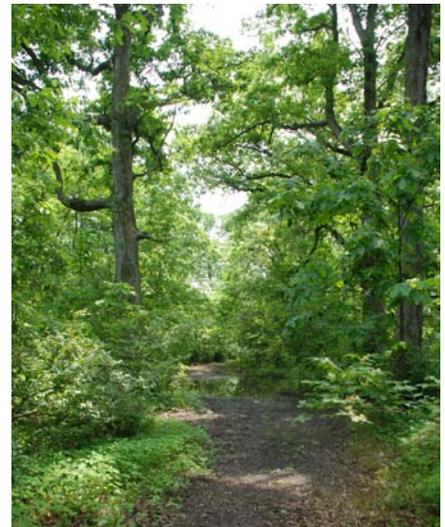
- 5 Benches
- 1 Bike Rack
- 6 Birdhouses
- 1 Butterfly Garden
- 1 Entry Sign
- 8 Pieces of Exercise Equipment
- 7 Lighting Fixtures
- 5 Pieces of Playground Equipment
- 1 Rain Garden

Henceroth Park (21.3 acres)

2075 Mallow Ln.

PRELIMINARY SITE RECOMMENDATIONS

- Promote the “green” features of the park
- Install a shelter with picnic tables and a grill
- Install recycling containers



Hoover Park (6.0 acres)

Off Haughn Rd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Almost 1/2 mile of recreational trails around scenic pond
- Connects to the Haughn Road sidepath

Amenities

- 3 Benches
- 2 Pieces of Playground Equipment
- 2 Trash Receptacles

Hoover Park (6.0 acres)

Off Haughn Rd.

PRELIMINARY SITE RECOMMENDATIONS

- Install entry signs at both the entrance off Haughn Road and Windrow Drive
- Acquire property on Haughn Road to expand the park and improve visibility



Indian Trails Park (3.8 acres)

Off Buckeye Pkwy.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- More than ¼ mile of recreational trails within the park
- Located along the Buckeye Parkway sidepath

Amenities

- 2 Basketball Goals
- 2 Benches
- 1 Entry Sign
- 1 Charcoal Grill
- 1 Picnic Table
- 3 Pieces of Playground Equipment
- 1 Shelter
- 2 Trash Receptacle

Indian Trails Park (3.8 acres)

Off Buckeye Pkwy.

PRELIMINARY SITE RECOMMENDATIONS

- Install a path to Grant Run, with educational signage about the natural area and benches for resting



Keller Farms (5.5 acres)

Off White Road



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Located along the White Road sidepath

Amenities

- 1 Basketball Goal
- 3 Benches
- 1 Entry Sign
- 2 Picnic Tables
- 2 Pieces of Playground Equipment
- 1 Shelter

Keller Farms (5.5 acres)

Off White Road

PRELIMINARY SITE RECOMMENDATIONS

- Install a bridge over Republican Run to access the natural corridor in the park
- Clean the existing informal trails through the natural areas
- Install signage at the Michelle Court entrance



Meadow Grove (9.5 acres)

Off Springhill Dr.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

- 2 Benches
- 1 Entry Sign
- 1 Picnic Table
- 3 Pieces of Playground
- 1 Shelter
- 1 Trash Receptacle

Meadow Grove (9.5 acres)

Off Springhill Dr.

PRELIMINARY SITE RECOMMENDATIONS

- Install a larger shelter with more picnic tables and a grill and recycling containers
- Install a bridge across Grant Run, connecting the southern portion of the park to the northern portion
- Install a trail to and along Grant Run
- Preserve the southern portion of the park as a passive recreation area, with benches and a walking path



Scioto Meadows (1.5 acres)

Off Scioto Meadows Blvd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

- 1 Basketball Goal
- 2 Benches
- 1 Drinking Fountain
- 2 Picnic Tables
- 1 Piece of Playground Equipment
- 1 Shelter
- 1 Trash Receptacle

Scioto Meadows (1.5 acres)

Off Scioto Meadows Blvd.

PRELIMINARY SITE RECOMMENDATIONS

- Install trees along the western park boundary
- Install lighting near the playground area
- Install park signage



Sesquicentennial Park (1.0 ACRES)

Off Park St.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

- 2 Benches
- 1 Entry Sing
- 1 Lighting Fixture

Sesquicentennial Park (1.0 acres)

Off Park St.

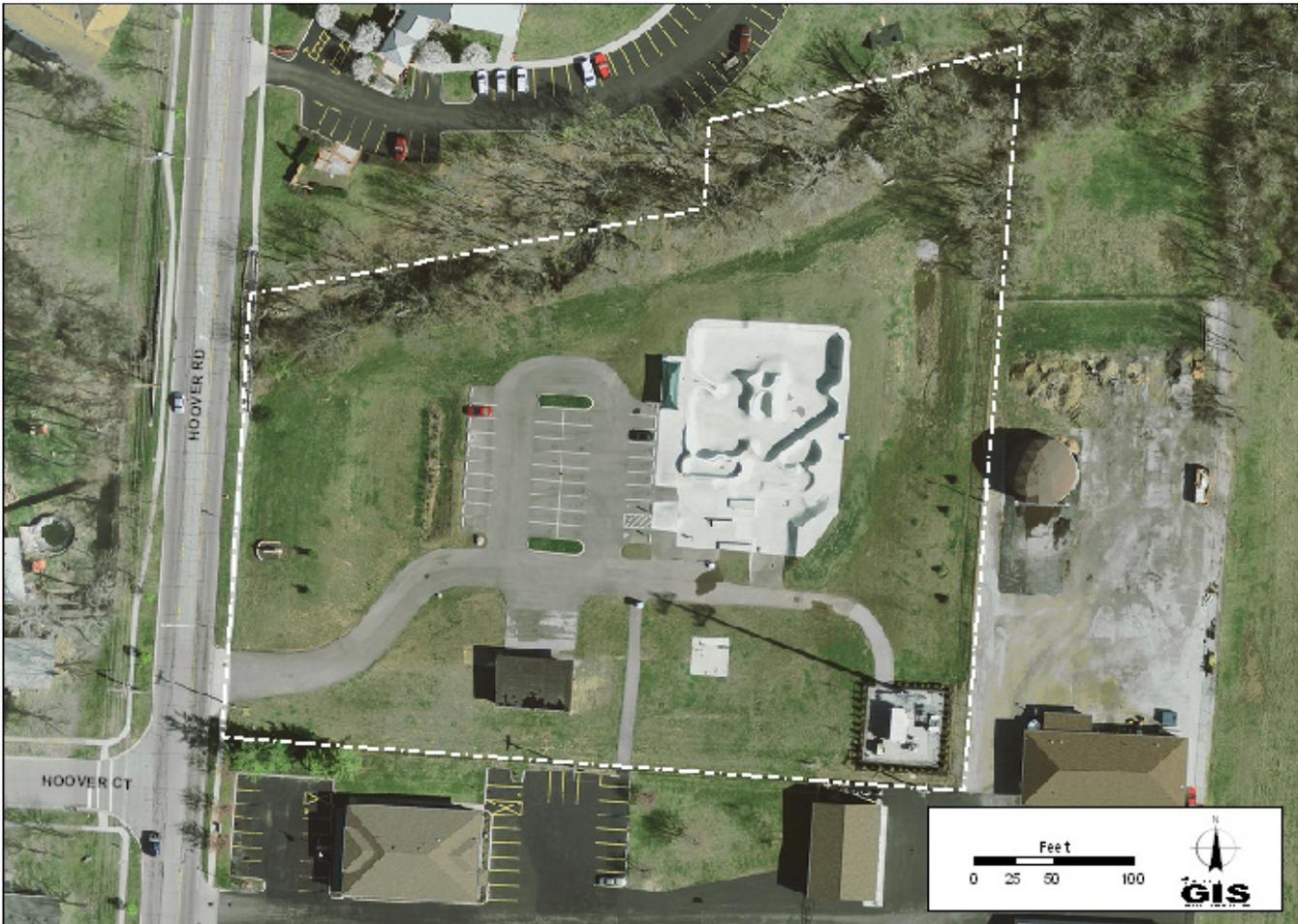
PRELIMINARY SITE RECOMMENDATIONS

- Maintain the existing passive character of the park



The Skate Park (4.0 acres)

3728 Hoover Rd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

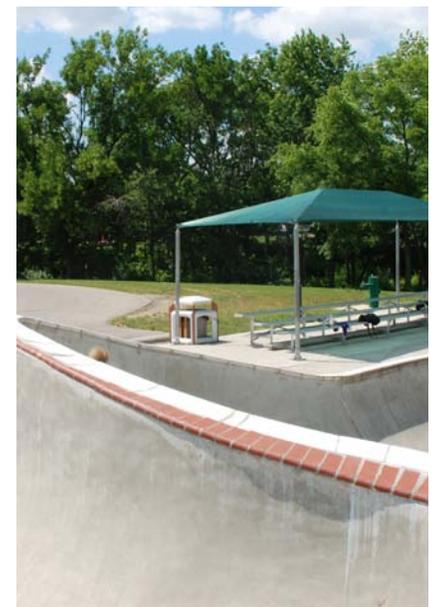
- 1 Bench
- 2 Bike Racks
- 1 Blue Light (Safety)
- 1 Drinking Fountain
- 1 Entry Sign
- 1 Informational Kiosk
- 2 Recycling Containers
- 1 Restroom Facility (Portable)
- 3 Trash Receptacles

The Skate Park (4.0 acres)

3728 Hoover Rd.

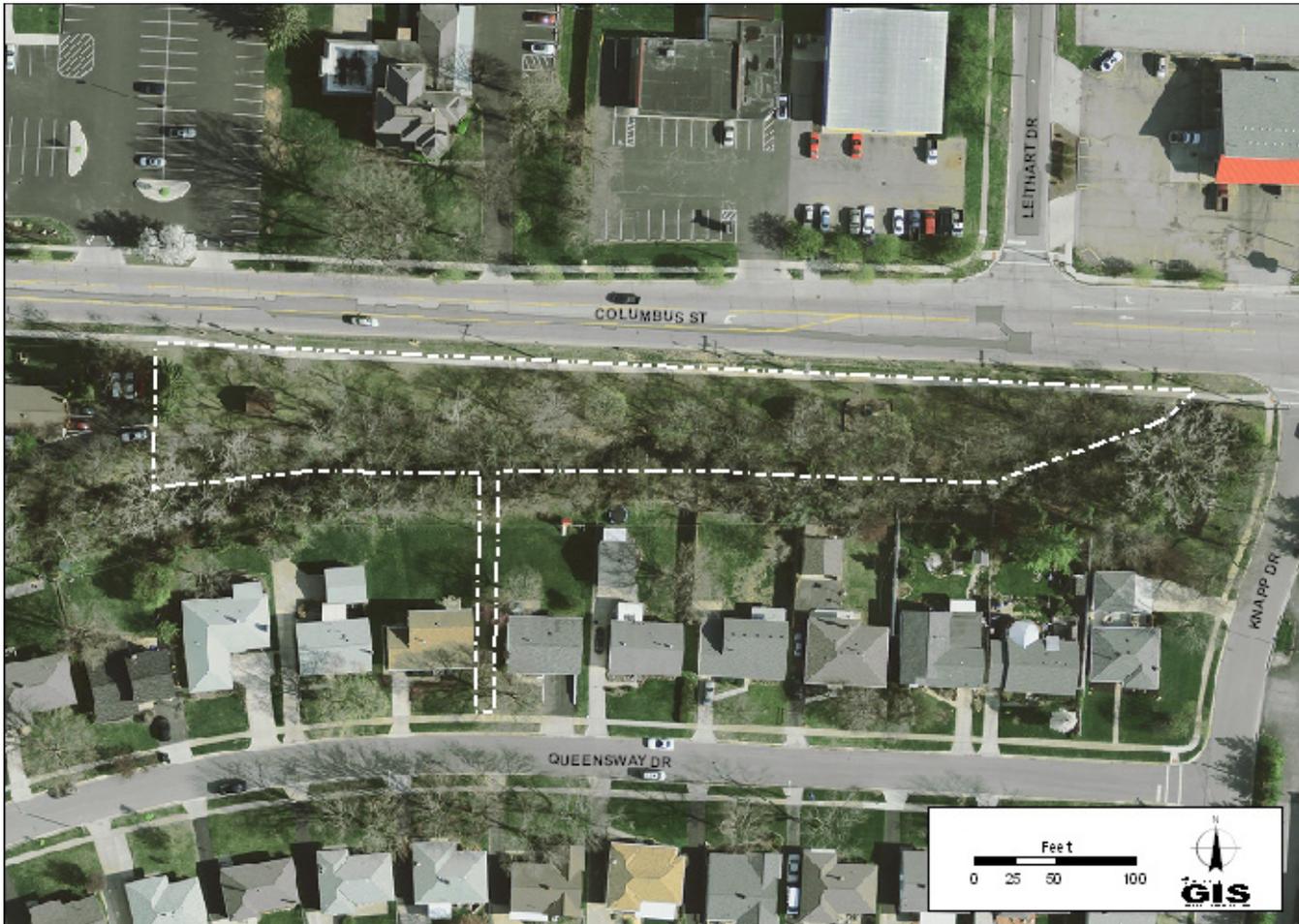
PRELIMINARY SITE RECOMMENDATIONS

- Install permanent restroom facilities
- Install a shelter area



Swearingen Park (1.0 acres)

Off Columbus St.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

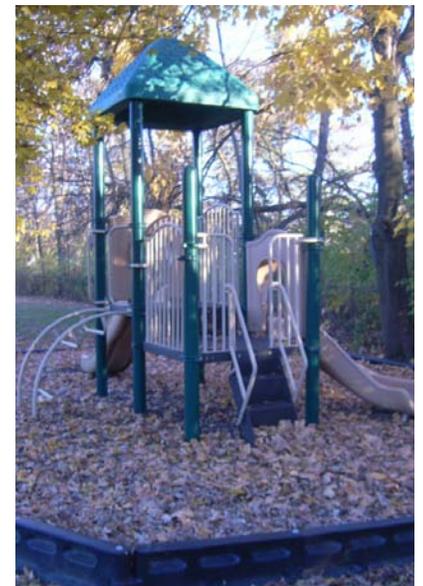
- 1 Entry Sign
- 2 Charcoal Grills
- 4 Picnic Tables
- 1 Piece of Playground Equipment
- 2 Shelters
- 2 Trash Receptacles

Swearingen Park (1.0 acres)

Off Columbus St.

PRELIMINARY SITE RECOMMENDATIONS

- Reclaim the city's property fronting Queensway Drive connecting to the park
- Install a bridge over Republican Run to access the park from the south
- Install public art within the park



Walden Bluff Park (1.8 acres)

Off Walden Bluff Ct.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- Currently not connected to the bikeway network

Amenities

- 1 Basketball Goal
- 1 Entry Sign
- 2 Lighting Fixtures
- 2 Pieces of Playground Equipment

Walden Bluff Park (1.8 acres)

Off Walden Bluff Ct.

PRELIMINARY SITE RECOMMENDATIONS

- Install a trail through the south and southwest portion of the park connected to the trail network
- Install a shelter and picnic tables
- Install new playground equipment



Westgrove Park (5.7 acres)

Off Southwest Blvd.



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- About 1/3 mile of recreational trails within the park
- Currently not connected to the bikeway network

Amenities

- 2 Basketball Goals
- 4 Benches
- 1 Entry Sign
- 1 Charcoal Grill
- 2 Lighting Fixtures
- 4 Picnic Tables
- 3 Pieces of Playground Equipment
- 1 Shelter
- 4 Trash Receptacles

Westgrove Park (5.7 acres)

Off Southwest Blvd.

PRELIMINARY SITE RECOMMENDATIONS

- Install recycling containers at the shelter
- Install an entrance sign at the parking area off Red Oak Street
- Install drinking fountain
- Extend the walking trail around the perimeter of the park



Windsor Park (34.0 acres)

4414 Broadway



EXISTING SITE INVENTORY

Bikeway / Trail Connectivity

- More than 1 mile of recreational trails within the park
- Connects to the Town Center Trail through a series of bike routes and bicycle boulevards

Amenities

- 11 Ball Diamonds
- 1 Basketball Goal
- 6 Benches
- 2 Bike Racks
- 1 Blue Light (Safety)
- 3 Drinking Fountains
- 1 Entry Sign
- 3 Charcoal Grills
- 1 Informational Kiosk
- 31 Lighting Fixtures
- 20 Picnic Tables
- 4 Pieces of Playground Equipment
- 4 Recycling Containers
- 2 Shelters
- 6 Significant Trees
- 4 Tennis Courts
- 36 Trash Receptacles

Windsor Park (34.0 acres)

4414 Broadway

PRELIMINARY SITE RECOMMENDATIONS

- Keep the public informed of development on park addition off of Broadway
 - Redevelop parking areas
 - Install a miracle field / all access field
 - Install a three season pavilion
 - Continue to acquire property on Ventura Blvd. as it becomes available
-
-
-
-
-
-



Appendices

Chapter 4

Trails & Connectivity



Funding & Grant Opportunities

The Parks and Recreation Department aims to deliver the most cost-effective trail system for Grove City without compromising the quality of the network. It is anticipated that the development of a complete trail system for Grove City will be funded through several mechanisms, including local funding sources and federal funding programs.

The following table shows the costs associated with typical trail construction costs per mile for projects awarded from 2003-2006, according to the Ohio Department of Transportation's Division of Transportation Systems Development.

Trail Type	Cost per Mile
Shared Use/Multi-Use Paths	\$470,958 / mile
Paved Shoulders (Bike Lanes)	\$181,730 / mile both sides of road
Bridges (tend to be 0.3 miles or less)	\$1,080,786 / quarter mile

Local Funding Sources

Partnerships: Partnerships with other public authorities, educational institutions, or private entities could include joint fundraising efforts, joint construction, or joint facility usage and maintenance.

Adopt A Trail Program: This donation seeking program can be used for construction improvements to trails or maintenance of a different portions of a trail. This program can be attractive to businesses, individuals, or organization that are located near or along a trail.

Business Sponsorships/Donations: Similar to "Adopt a Trail"; individual businesses or groups or local businesses may sponsor improvements and/or programs or maintenance through donations to the Parks and Recreation Department.

Establishment of a Parks & Recreation Foundation: Establishing a Parks & Recreation Foundation for supporters of the department and its efforts will likely facilitate donations and community involvement for years to come.

Funding & Grant Opportunities

Federal & State Allocated Funds

Current federal surface transportation law provides flexibility to states and Metropolitan Planning Organizations (MPO's) to fund projects that improve bicycle and pedestrian transportation and the majority of transportation funding programs can be used to benefit bicycle and pedestrian related projects. Grove City should strive to work closely with the Mid-Ohio Regional Planning Commission (MORPC), Ohio Department of Natural Resources (ODNR), and the Ohio Department of Transportation (ODOT) to find the appropriate funding sources for the development of its trail system, even if it not a transportation specific fund. Developing a complete trail system for Grove City is a project that could meet the goals and be eligible for the following funds:

Clean Ohio Fund

The Clean Ohio Trails Fund is intended to improve outdoor recreational opportunities for Ohioans by funding trails. Up to 75% matching state funds are reimbursed under Clean Ohio Trails Fund. All projects must be completed within 15 months from the date that they are signed into contract. Eligible projects include land acquisition for a trail, trail development, trailhead facilities, engineering and design.

Congestion Mitigation and Air Quality Improvement Program (CMAQ)

CMAQ projects must demonstrate reductions in emissions of transportation related pollutants.

Nature Work Grant (ODNR)

These grants can provide 75% reimbursement grants (state funded) for acquisition, development, or rehabilitation of public park and recreation areas. The agency must have proper control through a title or at least a 15 year non-revocable lease to be eligible for a development of rehabilitation grant

Recreational Trails Program (ODNR)

This matching federal fund can provide up to 80% reimbursement for projects that include development of urban trail linkages, trail head and trailside facilities, maintenance of existing trails, restoration of trail areas damaged by usage, improving access for people with disabilities, acquisition of easements and property, development and construction of new trails, purchase and lease of recreational trail construction and maintenance equipment, environment and safety education programs related to trails.

Safe Routes to School Program

Safe Routes to School (SRTS) is a federal, state and local effort to enable and encourage children to walk and bicycle to school - and to make walking and bicycling to school safe and appealing. Local and regional governments, schools and community non-profit organizations ready, willing and able to implement SRTS initiatives are eligible to apply for funding. Funding is reimbursable and may be awarded at 100%. Ohio requires communities to develop a School Travel Plan.

Funding & Grant Opportunities

Federal & State Allocated Funds

State and Local Capital Improvements Program

State Capital Improvements Program funds or Local Transportation Improvements Program funds can be applied for through the communities District Public Works Integrating Committee (DPWIC). After evaluating and scoring the projects, the DPWIC creates a list of high priority projects that is submitted to the Ohio Public Works Commission. The Commission reviews the project selection and evaluation methodology used by the DPWIC to ensure fair and objective decision-making. Then, each application is reviewed for completeness and project eligibility. After all requirements are met on the district level and the application is approved, a formal agreement is issued by the Ohio Public Works Commission to the individual subdivision. The Commission's staff maintains ongoing contact with local communities, providing technical assistance through the project's completion.

Transportation Enhancements (TE)

Transportation Enhancements (TE) activities are federally funded community-based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of our transportation infrastructure. TE projects must meet one of 12 eligible activities and must relate to surface transportation. For example, projects can include creation of bicycle and pedestrian facilities, streetscape improvements, refurbishment of historic transportation facilities, and other investments that enhance communities and access

Most funding programs require a local dollar match and it is encouraged that the city provide above the minimum 20% required amount and pair other funding sources in order for a local government to be competitive.

Funding programs are administered by several agencies including the Ohio Department of Transportation, Ohio Department of Natural Resources, Ohio Public Works Commission, Ohio Department of Development, regional MPOs, regional transit authorities, and Housing and Urban Development entitlement Cities & Counties.

Design Standards

General design guidelines for trails and other bikeways have been set forth by the American Association of State Highway and Transportation Officials (AASHTO), Ohio Manual of Uniform Traffic Control Devices (OMUTC), and the Mid-Ohio Regional Planning Commission (MORPC), and utilized by existing networks throughout central Ohio.

Design standards vary greatly based on the type of bikeway proposed and the road on or next to which the trail will be designed. The anticipated user and purpose must also be considered when designing a bikeway either on road or off road. Transportation based bikeways will have very different design standards than recreational bikeways. Below, design standards have been categorized based on being on-road (shared roadway) or off-road (multi-use path) facilities.

Shared Roadways

Bike Lane:

The minimum bike lane width is 4 feet on open shoulders and 5 feet from the face of a curb, guardrail, or parked cars. Bike lanes should be 4'– 6' wide when adjacent to a curb edge, and 5'–6' when adjacent to on-street parking. Bike Lanes are generally constructed next to two-lane roadways with 20-22-foot-wide pavement without existing paved shoulders. Typically, traffic volumes and speeds are high and the road is frequently used by bicyclists, or is a needed corridor for area bicyclists. Bike lanes work best where intersections and turning traffic is infrequent.



High Volume Roadways

On roads where there is a high volume of traffic, bicycle lanes should be marked and signed. The width of the bicycle lane should appropriately reflect the volume and speed of the vehicles using the roadway.

Moderate Volume Roadway

On roadway with moderate traffic volume, such as neighborhood collectors, bicycle lanes are located between the curb and the travel lane with a planting strip that separates the bicycle lane and the sidewalk. The illustration to the right shows a typical bicycle accommodation in urbanized areas with a 60-foot Right-Of-Way and a 44-foot travel area for traffic. Bicycle lanes are usually five or six feet wide with 11 or 12 foot travel lanes.

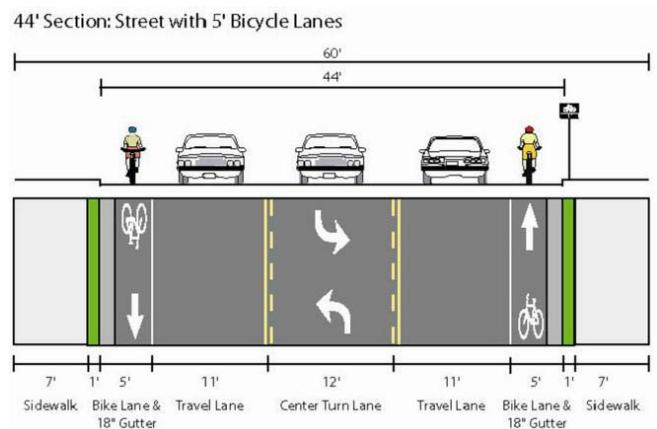


Image from the Columbus Bicentennial Bike Plan

Design Standards

Shared Roadways

Signed, Shared Roadway (Bicycle Route):

On roadways with low traffic volume, such as neighborhood residential streets within subdivisions, bicyclists can usually be accommodated on these roadways through bicycle route signage, occasional traffic calming to slow traffic, and intersection improvements where low-volume roadways intersect high-volume roadways.

In terms of placement, route signs should consistently be located at every turn, after every major signalized intersection, or every quarter-mile. Signage along straight portions of routes should use a single panel, simply showing a bicycle symbol and destination. Signage where routes intersect should include panel signs that provide cyclists with destination, direction and distance. This signage system offers less sign clutter, lower costs, and greater clarity at locations with multiple bike routes.

Bicycle Boulevard:

Bicycle Boulevards tend to be residential streets with lower traffic volumes, typically between 3000 to 5000 average daily vehicles, but can include secondary commercial streets. They typically lack a center line, and have designated speed limits of 25 mph. Signage should be colored with commonly used bikeway signage such as purple or green and should be retroreflective. Supplemental arrows may be used to indicate approaching turns, and the installation of markings just after each intersection in intervals of approximately 200 feet is recommended. Size of marking can range from 12-24 inches to 30 feet by 6 feet.

Shared Lane (Sharrow):

The primary purpose of the Shared Lane Marking (sharrows) is to provide guidance to bicyclists on roadways that are too narrow to be striped for bicycle lane designation, as well as, to alert motorists of the amount of lane space a cyclist will potentially occupy.

“Sharrows” should be 9’ in length and 4’ from any on-street parking. Sharrows should be spaced approximately 250’ center to center, with the first marking on each block or roadway segment placed immediately after the nearest intersection. On long blocks, supplemental markings may be necessary.

Shared Lane Markings are designed to reduce the likelihood of a cyclist colliding with an open car door of a vehicle parked on-street. Shared Lane Markings are appropriate on streets that are too narrow for striped bicycle lanes, areas that experience a high level of “wrong-way” riding, and streets that have moderate to high parking turnover, typically commercial areas.

Shared Roadways on Rural Roads

Paved shoulders are required to be a minimum of 4’ wide, and are built as part of the roadway rather than a place for cyclists to ride, though they may serve the same purpose as a bike lane.

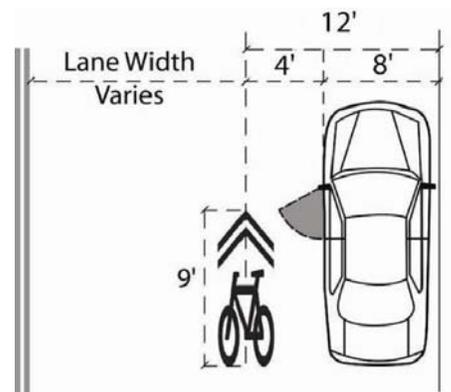


Image from the Columbus Bicentennial Bike Plan

Design Standards

Multi-Use Paths

Recreational Trail:

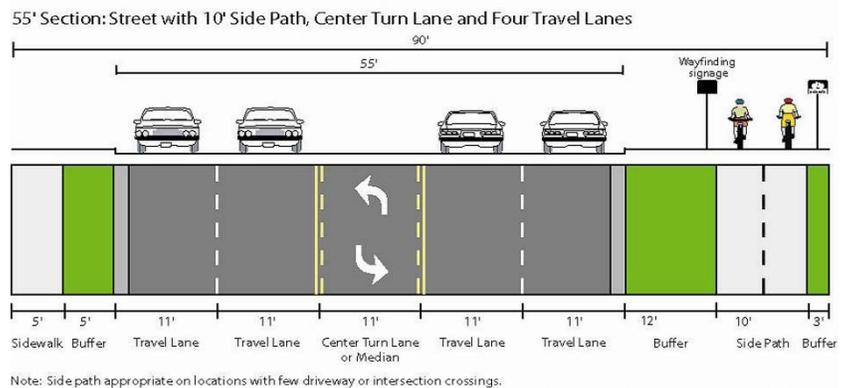
Recreational Trails are 10-12 feet wide paved trails typically located along a natural waterway or wooded region, independent from the road network. Recreational trails are intended for multiple travel methods such as bicycle traffic, walkers, joggers, skaters, and other recreational users. The path is usually divided with a marked center line to encourage two-way traffic flow. These trails allow those who wish to travel at higher speeds over long distances to do so, primarily for recreational purposes. A buffer of at least three (3) feet should be provided on either side of the trail, to be clear of structures and vegetation for the comfort and maneuvering of users on the path. A vertical clearance of at least eight (8) feet should be provided.



The Central Ohio Greenways Signage Program presents thoroughly detailed design guidelines for greenway signage. Facilities connecting to these regional greenways and trails should feature a hybridized system combining on-street route signs with the Central Ohio Greenways Signage Program. This system should encourage safe use of trails for recreational as well as functional bicycling trip-purposes, with amenities like informational kiosks.

Sidepath:

Sidepaths are built roughly parallel to roadways in the usual location for sidewalks and are designed for shared use. Sidepaths should be a minimum of 8 feet wide with a landscape buffer of at least five feet from the roadway. The width of the buffer should increase as the width of the roadway and speed of traffic increases. The sidepath should be installed at wider widths if the right-of-way permits.



Complete Streets

Complete streets are roadways designed to accommodate all users, not just motorists. Complete streets are safe for motorists, cyclists, pedestrians, and transit vehicles. They are also designed to be safe for users of all ages and abilities and do not favor one mode of transportation over the other. In April 2010 the Mid-Ohio Regional Planning Commission (MORPC) adopted a regional Complete Streets Policy to ensure that every roadway user can travel safely and comfortably and that sustainable transportation options are available to everyone. Additional requirements include working with nearby jurisdictions, tying in nearby destinations with access to pedestrian and bicycle facilities, and providing the opportunity for infrastructure to accommodate future growth. Any proposed roadway project that will use federal funds allocated through MORPC must adhere to the Complete Streets policy.

While all new roads in Grove City will not need to meet these standards, it is important to keep them in mind when designing new roads. For example, all roadways are not necessarily appropriate for a bike lane and would instead utilize another form of bikeway such as a sidepath, sharrow, or a wider outside lane. Also, roadways that will not likely be the future route for public transit would not need to be designed to accommodate transit traffic.

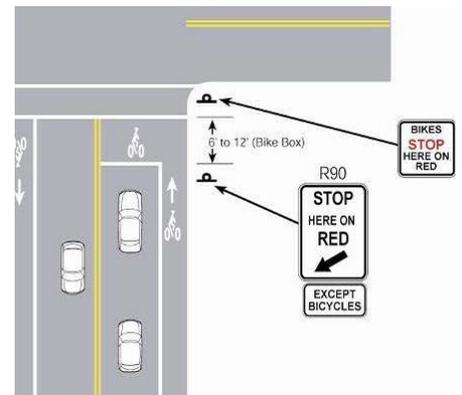
Design Standards

Intersections & Crossings

Intersection treatments can help bicyclists and pedestrians travel through intersections and alert motorists of their presence. Good intersection design will alert motorists to bicyclists, indicates to motorists and bicyclists where bicyclists may ride, and guides bicyclists through intersections.

Bike Box:

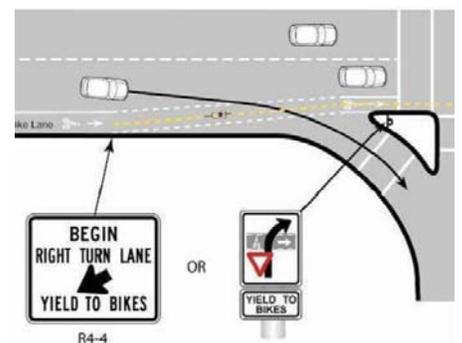
Bike Boxes are relatively simple solutions to improve turning movements for bicyclists without requiring cyclists to merge into traffic to reach the turn lane or for pedestrians to access a crosswalk. They are created by pulling the stop line for vehicles back from the intersection, and adding a stop line for bicyclists immediately behind the crosswalk. When a traffic signal is red, bicyclists can move into this “box” ahead of the cars to become more visible to cars. The most appropriate use for a Bike Box are at intersections with a high volume of both bicycle and motor vehicle traffic, intersections with a number of turning movements by cyclists and motorists, and instances where right turns are prohibited at red lights.



Images from the Columbus Bicentennial Bike Plan

Free Right Turns with Porkchop Islands:

Many arterial intersections are designed with free right-turn lanes at each corner, separated from the through lanes by triangular cement “pork chop” islands. While this “pork chop” configuration can provide an area for safe pedestrian refuge, they present difficulties for bicyclists. Bike lane striping is typically dropped approaching the right-turn lane; creating difficulty for bicyclists traveling straight who need to merge left across the right-turn lane in order to position themselves along the right side of the through lane. Bicyclists may wait until too late to merge, which can cause conflicts because of the wider turn radius and relatively higher turning speeds afforded by the free right configuration. Also, the pork chop island provides no space for bicyclists waiting to precede straight, as the concrete island, if not well designed, cuts off the normally available shoulder width. The following illustration shows how a dashed bike channel through the merge zone and along the right side of the through lane can help guide bicyclists and alert motorists. In order to provide a reasonable width for such a bike channel, it is likely that the right through lane will need to be narrowed.



Freeway on/off Ramps:

Freeway on and off-ramps present a point of conflict for bicyclists. Since bike lanes are dropped—cyclists must merge across travel lanes where vehicles are accelerating or decelerating from their freeway speeds. A marked bike channel as the one prescribed for ‘porkchop’ islands will guide cyclists and alert motorists in order to allow cyclists the proper chance to gain positioning in the through lane well before the mouth of the ramp.

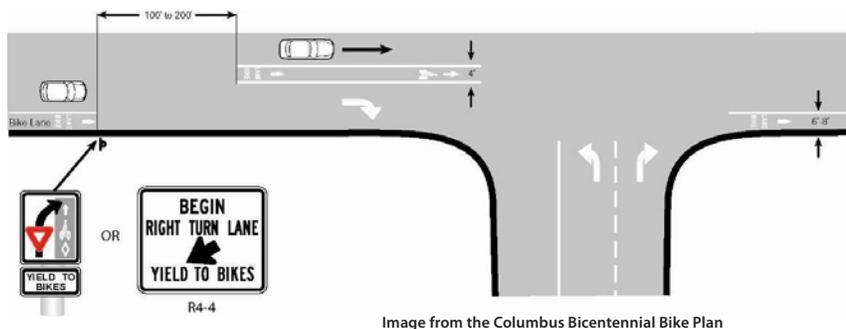
I-71/SR 665 Interchange

The reconfiguration of the I-71 / SR 665 interchange into a Single Point Urban Interchange will include the construction of a sidepath on the south side of the overpass “deck.”

Intersections & Crossings

Right-Turn Only Lanes:

Right-turn only lanes present challenges for bicyclists traveling through an intersection. It is often the case that bike lanes are striped on the right side of the right-turn only lanes, creating a direct conflict with a right turning vehicle. The correct treatment for right-turn only lanes is to drop the bike lane entirely as it approaches the right-turn only lane, or to offer a bike lane pocket between the right-turn only lane and the right-most through lane.



Signaling:

Another potential solution to create friendly intersections is the use of signaling. Signaling could be improved by customizing signal timing for a designated crossing, calibrating loop detectors for bicycles rather than automobiles, and camera detection. These methods make it easier are all achievable and offer a more customized treatment to a roadway or trail by operating according to the level of traffic and use. While camera detection and signal timing is self explanatory, the use of calibrated loop detectors is the simple manipulation of existing motor vehicle detectors. These can be installed within the roadway to identify the metal of a motor vehicle or calibrated in order to detect bicycles instead of cars. When using loop detectors as an intersection treatment, OMUTCD standards recommend that signaling be combined with markings and signage to indicate the location where cyclists should position themselves in order to activate a signal.

Design Standards

Additional Design Guidelines

Bicycle Stairs:

Bicycle stairs are appropriate where slopes are too steep for a cyclist to ascend comfortably. Bicycle stairs allow the user to walk up the stairs, while rolling their bike next to them on the adjacent ramp.

Curbing:

Trails should incorporate good curb design to ensure quality trails. Drop curb cuts are used to provide a smooth transition between bike paths and roadway. Straight curbs are preferred to a combined curb and gutter since the combined option will often experience uneven settlement of pavement, which leads to uneven trail surfaces.

Markings:

Common marking types for trails include pavement markings, curb markings, object markers, colored pavements, and barricades. Markings are often used to supplement other traffic control devices such as signs, signals and other markings, although markings can be used independently to convey regulations, guidance, or warnings.

Pavement markings can enhance roadway delineation with the addition of audible and tactile features such as differential surface profiles, raised pavement markers, or other devices intended to alert the road user of the changes in the trail or roadway. Standards set forth by OMUTCD require any markings that must be visible at night must be retroreflective to ensure the markings are visible.

When relying on markings to guide trail or roadway traffic, proper maintenance is a vital component to maintain their effectiveness, especially in the case of painted markings. Proper and consistent debris (snow, leaves, water, dirt, etc) removal is necessary to ensure visibility of markings. Marking durability is also subject to inevitable 'wear and tear' due to traffic volumes, weather, and location. Therefore, markings should be maintained to reduce the lack of visibility due to fading.

Parking (Short term):

Short term bicycle parking facilities, bike racks, are best used to accommodate those cyclists that are expected to depart within two hours after parking their bicycle. Bicycle racks should be located in highly visible areas near the entrance to the destination to increase awareness and provide convenient access for cyclists. It is most common for bicycle racks to be located at schools, commercial locations, and activity centers such as parks, libraries, and retail locations; however as the popularity and cycling grows, bicycle racks are becoming more prevalent at work locations throughout the community. There are currently no standards for bicycle parking in Grove City; however development plans are recommended to include the location and design of all proposed bicycle parking facilities.

Bike racks need adequate room for cyclists to maneuver in and out of the bike parking area without disturbing bicycles already parked. If multiple bicycle racks are located together with an aisle between them, the aisle should be between 48" and 72" apart, depending on the amount of traffic the racks are expected to generate. The amount of space dedicated to the bike rack will vary based on the dimensions of the bike rack, but generally, 24 square feet of paved area should be devoted for every bike stall. All racks should not impede the movement of pedestrians or traffic and should be at least 2.5 feet from any adjacent walkways.



Design Standards

Additional Design Guidelines

Parking (Long term):

Long Term bicycle parking facilities, bike lockers, accommodate cyclists expected to park their bicycles for more than two hours. Bike lockers offer cyclists the option to store their bikes in an enclosed area for increased security and protection against the elements. Lockers can be controlled with traditional key systems or through a subscription system, in instances where a particular cyclist will consistently travel to that destination and use the locker.

Grove City currently has bike lockers at the Central Ohio Transit Authority (COTA) "Parks and Ride" station at Stringtown Road and Parkmead Drive. Bike lockers are approximately three feet wide, 6.6 feet wide and four feet tall and are able to accommodate most types of bicycles.



Storm Water Grates:

Development of a complete trail system must consider adequate spacing and design for safe storm water grates. Bicycle-safe drainage grates should have slats with only 1 inch widths and should be transverse to the direction of traffic or set at a 45 degree angle to the direction of the traffic on that road.

Potential Bikeway Expansion

Grove City is home to a variety of bikeways; however the system lacks connectivity in some areas. In order to ensure that all residents have a number of safe transportation options, a number of roads have been examined as the site of future bikeways. For the analysis, roads have been categorized into three levels based on the level of recommended rider.

Roads ranked “A” are only recommended for advanced riders. These roads have heavier traffic, high speeds, and other factors that make the road unsafe for riders with less experience.

Roads ranked “B” are safe for beginner or novice riders. These roads would be comfortable and safe for casual cyclists who are not as comfortable riding with a lot of vehicular traffic.

Roads ranked “C” are safe for children. Only roads with low vehicular traffic and slow speeds are given this ranking

Andover Strait.



Children and beginners should feel safe in this residential environment with low traffic and not much, if any— on street parking. This street would benefit from the installation of bicycle route signage considering the frequency of children playing in the neighborhood. Also, this street could potentially be the target for a multi-purpose (recreational trail) or (sidepath) that cuts through Casa Blvd to the north and connect the Windsor Park existing trails, while also connecting the Haughn Road Trail.

Rating: C



Carlotta St.

Carlotta Street is a residential street that provides neighborhood connectivity to residents of the Concord Lakes and Elginfield subdivisions. It is a typical residential street with two travel lanes, slim shoulders, and a speed limit of 25 mph, which makes it a relatively safe street for cyclists of all skill levels. This road feeds into Lake Mead Drive, which connects to the Southwest Boulevard & Big Run South Road intersection. A simple and effective way to enhance Carlotta Street is to take advantage of its connection with Lake Mead Drive, and install bicycle route signage to alert motorists and enhance safety for cyclists all skill levels.

Rating: C

Potential Bikeway Expansion

Demorest Rd.

Demorest Road connects Grove City Road to the south and Southwest Boulevard to the north. The subdivisions of Concord Lakes, West Grove, and Elginfield are accessible by Demorest Road. The traffic volume is relatively high with a speed limit of 35 mph. There is no paved shoulder on this road, which suggests that only advanced cyclists should travel on Demorest Rd. However, there is significant space to seek an easement on the western side of Demorest Rd, in order to widen the existing sidewalk which currently separates the residential lots from their mailboxes and form it into a multi-use side path. There is also room to widen the road in order to add a bike lane that could connect to Southwest Boulevard's current bike lane, or be used to add a signed sharrow. This road can enhance connectivity for residents living near Tanglebrook Park, Concord Lakes Park, Westgrove Park, and the Central Crossing High School.

Rating: A



Demorest Rd. at Tanglebrook Park

This portion of Demorest Road near Tanglebrook Park is a typical residential street that contains a landscaped median with street lights that provide a well lit environment for cyclists. The existing park provides increased pedestrian traffic, especially children. The entrance/exit onto Grove City Road presents a point of conflict with an increased traffic volume and higher traveling speeds. Therefore, the installation of a stop sign, with increased bicycle route signage and a marked crosswalk would regulate automobile traffic and alert motorists of bicycle traffic.

Rating: B



Dennis Ln.

Dennis Lane experiences cut through traffic for those residents traveling to Richard Avenue Elementary School and Brookpark Middle School. Dennis Lane also connects to La Rosa Drive to the south and Sonora Drive to the east. Dennis Lane does not have much on-street parking, nor does it have any curbside mailboxes. This combination creates potential for the widening of a sidewalk into a sidepath. However, installation of bicycle route signage and street markings could adequately serve the duty of alerting motorists and cyclists to share the road.

Rating: A



Potential Bikeway Expansion

Dunmann Way

Many young walkers, joggers, dog walkers, and cyclists use this road. The installation of bicycle route signage would connect the southernmost point of Longridge Way to the existing Hoover Rd Trail and Haughn Road Trails. This improvement would equip this residential area with an effective trail system for cyclists and pedestrians to enhance the existing bikeway network.

Rating: B

Gunderman Ave.

Gunderman Avenue is unique since there are no sidewalks or on-street mailboxes, yet many students use this road to travel home from school. Therefore, adding a multi-use sidepath could serve as an off-street secluded path for central Grove City. However, buildings/homes setbacks seem rather short, therefore—the installation of bicycle route signs to alert motorists and offer direction for cyclists would benefit this streets cycling capacity. The low traffic volume makes this street a nice path for children and beginners to travel.

Rating: C



Hoover Crossing Way

Since many high school students use this road to travel to and from school and there is a lack of space to add an off-street path, increased bicycle route signage would provide connection for Hoover Crossing Way into both Longridge Way and Dunmann Way in order to create a complete bicycle route for students of the nearby high schools and neighborhood residents.

Rating: C



Kingston Ave.

Kingston Avenue experiences a moderate to high volume of traffic. Even though the speed limit is 35 mph, automobiles frequently travel over this limit. Marking a sharrow on this road would alert motorists to the presence of cyclists in the roadway and of the existing bike routes in this area stemming north from Windsor Park. Aside from the possibility of a sharrow, the installation of additional signage will be necessary to make cyclists and motorists aware of the preferred routes for bicycles.

Rating: A

Potential Bikeway Expansion

Kingston Ave (East).

The eastern portion of Kingston Avenue has two through lanes, with one left hand turning lane which connects to Haughn Rd. This portion of Kingston Ave. experiences heavy to moderate traffic levels. Children or beginners should not travel this road, however many students are known to walk along this road after school. Given the high volume of students who use this road and that Kingston Avenue creates a vital connection between Hoover Road and Haughn Road, this road is a good target for increased bicycle safety by installing bicycle route signage, and color marking existing cross walks. Due to the heavier traffic, a marked sharrow or widening of the existing sidewalk to create a sidepath would provide congestion free traffic to path users.

Rating: A

La Rosa Dr.

La Rosa Drive has a curvy design that impairs visibility, which suggests that young children should refrain from using this road. Increased signage would help here, along with street markings. While the lack of space makes a signed shared roadway the optimal choice, there may be enough room to widen the existing sidewalk to create a multi-use sidepath. Heavy bicycle route signage that would improve safety for cyclists and awareness for motorists.

Rating: A



Lake Mead Dr.

Lake Mead Drive is a residential street that provides neighborhood connectivity as well as access to Holt Road. Lake Mead Drive provides two through lanes for traffic with a speed limit of 25 mph. The southern portion of this road is a typical residential street that serves as a safe street for cyclists of all skill levels. However, Lake Mead Drive feeds into the Southwest Boulevard and Big Run South Road intersection, where a high volume of traffic traveling at higher speeds is present. This increase in traffic flow, coupled with the lack of shoulder width decreases the level of safety for cyclists. This road is vital for students attending Central Crossing High School or Holt Crossing Intermediate, as well as, residents attending the South Western Career Academy.

This streets safety and connectivity could be enhanced by installing bicycle route signage, as well as, a marked crosswalk for riders to safely cross Southwest Boulevard to access the Southwest Boulevard sidepath located across the street.

Rating: B



Potential Bikeway Expansion

Larchemere Dr



Larchemere Drive is a typical residential street that provides neighborhood connectivity to residents of Elginfield and Concord Lakes. This street runs through well lit subdivisions, Concord Lakes and Elginfield with two travel lanes consisting of slim shoulders and a speed limit of 25 mph. While the greater portion of Larchemere Drive is safe for all levels of cyclists, the access point from Grove City Road is less safe due to an increased level of traffic and higher speed limits on this road. Given that Larchemere Drive connects this subdivision from east to west and north to south, installing signage indicating a bicycle route would enhance alertness and safety for both cyclists and motorists. While Grove City Road would require much more attention and alterations to widen and designate as a road for shared use, it could serve to connect the subdivisions to the west and north with the southern portion of Grove City.

Rating: B

Longridge Way

Longridge Way is a typical residential street that intersects with Haughn Road and is used heavily by students traveling to and from school. Children should feel safe in this residential neighborhood, but also should be accompanied by adults or those with experience when approaching Haughn Rd. Longridge Way can better serve cyclists and motorists with the installation of bicycle route signage. Also, there is potential to connect to the existing Hoover Road Trail, as well as to Lori's Way near Orders Road by building a multi-use (off-street) sidepath.

Rating: C

Lotz Dr



There are no sidewalks or on-street mailboxes on Lotz Drive, which is located to the east of Broadway Avenue near the Town Center (easement), yet many students use this street to walk home from school. Therefore a multi-use sidepath (off-street) that utilizes the area where the mailbox is traditionally placed could connect existing bike routes that stem from Windsor Park area to the bike route that travels south near Richard Ave. This road is also lightly traveled enough by motorists to make it a safe designated bike route.

Rating: C

Potential Bikeway Expansion

Magnolia St.

Magnolia Street is a typical residential street that serves residents of the West Grove subdivision. Magnolia Street is safe for all levels of cyclist until the street meets Southwest Boulevard. Increased bicycle route signage should be installed to connect Carlotta Street, Larchemere Drive, Sequoia, and Lake Mead Drive. Also, Magnolia Street could enhance the greater trail system by connecting via marked/colored crosswalk to the existing Southwest Boulevard sidepath. This could potentially connect to Tamarack Avenue, and eventually lead to the extension of sidepath from Southwest Boulevard to expand the existing sidewalk on Demorest Road by seeking easements from the residents of Demorest Road who have excess sidewalk buffers.

Rating: C



Meadow Grove Dr.

This road could be improved for cyclists with the addition of bicycle route signage. It would serve as a connecting route to the trails at Henceroth Park, and Holton Road Trail—and as a point along a future connection from Hoover Rd Trail and Buckeye Parkway Trail by using Springhill Rd and Stargrass Avenue.

Rating: C



Park St

Park Street has an ample amount of lined, on-street parking approaching the intersection at Broadway from the east and west. Due to the presence of rear alley ways, heading west on Park St, there are spans of land that lack sidewalks and driveway curb cuts. Since Park Street is located in Town Center, where there are existing signed bicycle routes, the installation of additional signage for bicycle routes would enhance this street. Park Street, both west and east of Broadway could be marked with a sharrow due to the high frequency of on-street parking and limited right-of-way.

Rating: B



Quail Run Dr.

Quail Run Drive is a typical residential street that could benefit from the installation of bicycle route signage that indicates sharing of the roadway to motorists and cyclists to deter cyclists from riding on the pedestrian sidewalks. This increased signage would also serve to identify a bicycle route that could connect the Holton Road Trail, Henceroth Park trails, Meadow Grove Park, and Buckeye Parkway Trail.

Rating: C

Potential Bikeway Expansion

Richard Ave.



Richard Avenue is a typical residential street that is located near an elementary school. Even though this road is in a school zone, it is also an important connection between Columbus Street or Southwest Blvd, making it more of a target road to enhance connectivity and safety for cyclists. The high level of automobile traffic and inevitable pedestrian traffic traveling to and from the school would be better served if more bicycle route signage is installed, along with colored or heavily marked crosswalks.

Rating: A

Rising Sun Dr.



Rising Sun Drive is a typical residential street that could benefit from the installation of bicycle route signage that indicates sharing of the roadway to motorists and cyclists in order to deter cyclists from riding on the pedestrian sidewalks. This increased signage would also serve to identify an alternate bicycle route that could connect London Groveport Road and the Buckeye Parkway Trail.

Rating: C

River Trail Drive



River Trail Drive is lightly traveled to be designated as a safe signed shared roadway, and could connect residents in the Indian Trails subdivision east of Buckeye Parkway to the Buckeye Parkway trail and the various parks along this trail.

Rating: C

Potential Bikeway Expansion

Scott Court.

There is heavy usage of on street parking, but it is not lined or designated on Scott Ct, and the surrounding collector streets such as Helen Place, Brunswick Drive, and McDonald Court. Scott Court is located between two main roads, Hoover Rd, and Southwest Blvd—which makes it a cut through for motorists to access these roads. Therefore, it is generally safe for all cyclists, but children should be supervised or avoid traveling near Hoover Road and Southwest Boulevard. Because Scott Court is located so close to Southwest Boulevard and Hoover Road, heavy bicycle route signage that offers a preferred safe route for cyclists and pedestrians to avoid Southwest Boulevard and Hoover Road should be strategically installed.

Rating: B



Sequoia Ave.

Sequoia Avenue runs through the well lit neighborhood of West Grove which provides residents of this subdivision with street access. The two travel lanes, low traffic volume, low speed limit, and minimal on street parking creates a friendly environment for all levels of cyclists. Even with the slim shoulders, children and beginners should feel comfortable riding this street. Sequoia Avenue could be enhanced in terms of connectivity and safety for cyclists by installing increased bike route signage that would connect West Grove with both the Concord Lakes and Elginfield subdivisions. This would enhance the cycling experience for residents of this neighborhood, and hopefully serve as a catalyst to enhance the busier arterial streets such as Demorest Rd, Grove City Rd, Southwest Boulevard, and Big Run South Rd.

Rating: C



Spring Hill Rd.

Spring Hill Road is a typical residential street that could benefit from the installation of bicycle route signage that indicates sharing of the roadway to motorists and cyclists to deter cyclists from riding on the pedestrian sidewalks. Designating this road as a bikeway would provide connectivity to Meadow Grove Park, as well as provide connectivity to other existing and proposed bikeways connecting to numerous other parks.

Rating: C



Potential Bikeway Expansion



Tamarack Ave.

Tamarack Avenue is another typical residential street located in the West Grove (North) subdivision. Tamarack Road is safe for cyclists to travel, but children should be accompanied or ride with caution as approaching Demorest Rd. This road is already connected to Southwest Boulevard Trail, but could benefit from the installation of increased bicycle route signage throughout the subdivision and onto Demorest Road in order to safely connect to the existing trail on the west side of Demorest Road.

Rating: C