

Clinton County Comprehensive

Trail + Greenway Plan 2012

Clinton County Regional Planning Commission
/ Energize Clinton County

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- * Clinton County Trails Coalition
- * Clinton Streamkeepers
- * Clinton County Open Lands
- * Lytle Creek League of Conservators



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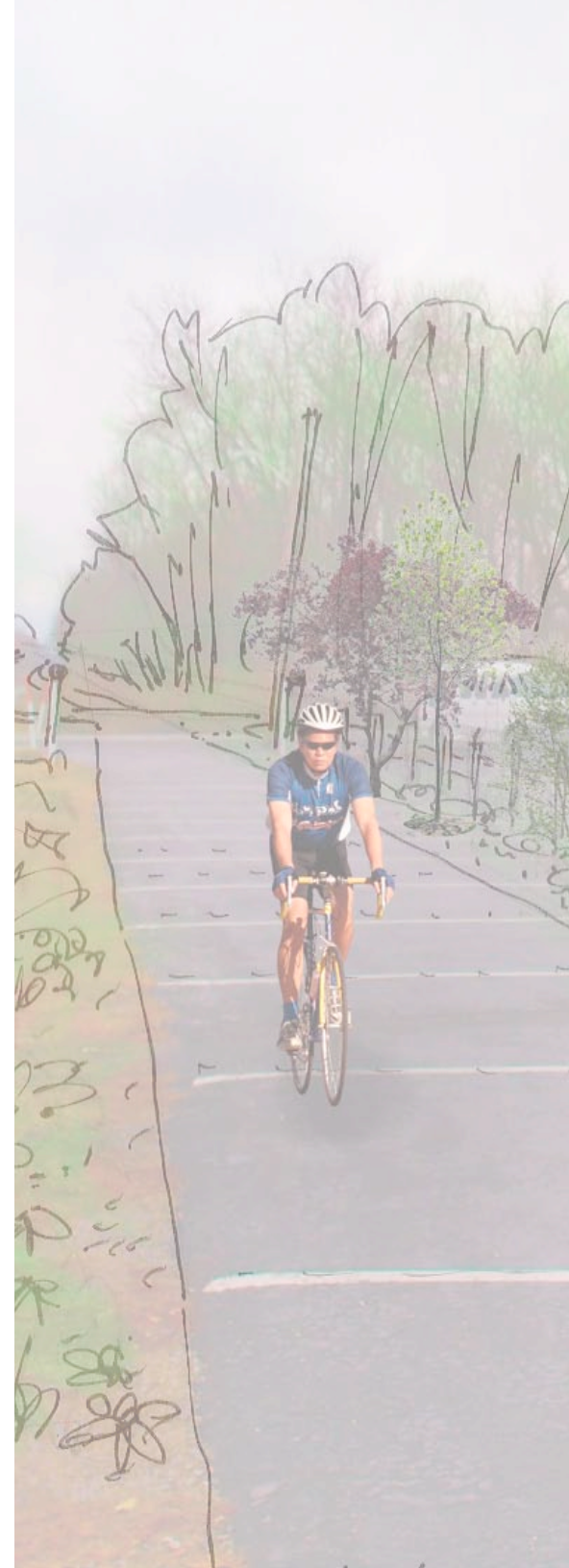
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TRAIL DEVELOPMENT PRIORITIES

The Clinton County trail system is strategically located between the Dayton and Cincinnati metropolitan areas, and completes a key linkage in the broader State of Ohio Trail Plan to connect existing trails in those metropolitan areas and across the State. Clinton County is a strategic point in the broader regional and state trail system. There have been robust trail user reports and economic studies from both metropolitan planning organizations (MPOs) for Dayton and Cincinnati, the Miami Valley Regional Planning Commission (MVRPC), and the Ohio Kentucky Indiana Regional Council of Governments (OKI) which detail the positive impacts of trail development.

The Ohio Kentucky Indiana Regional Council of Governments completed a landmark Little Miami Scenic Trail Users Study in 1999. The study concluded that “that there are 150,000 to 175,000 trail visits annually on the 27 mile section between Loveland and Corwin in Warren County, Ohio.” It was noted at this major trail facility, which is less than 25 miles from the proposed trail, that “66% of trail users were bicycling; 25% were walking or jogging; and 8.5% were in-line skating” (Little Miami Scenic Trail User Study; Ohio Kentucky Indiana Regional Council of Governments, 1999).

The Miami Valley Regional Planning Commission (MVRPC) completed their Miami Valley Trail User survey, which included trail locations throughout the MPO area in December of 2009. The survey determined that trail use is “bike-dominated” with many users referring to them as “bike trails.” The study showed that “on the weekend, over two thirds of counted trail users were on bikes; this was slightly lower on the weekday counts and over three-quarters of survey respondents included biking as one of their primary activities on the trail.” In general, the study found that the use of mobility assistance devices is low and that demographically “trail users tend to be male (~60%), between the ages of 36 and 65 (~66%) and frequent users of the trail. Over 65% of survey respondents indicated they use the trail ‘1 or 2 times per week’ or more often” (Miami Valley Trail User Survey; Miami Valley Regional Planning Commission, 2009).



While there are many national studies which note the positive economic impacts, Clinton County is fortunate to also have relevant local studies completed recently that show the positive economic impact of the existing trail systems in the Dayton and Cincinnati metropolitan areas. The further development of trails in Clinton County is not only a positive economic impact to our local area, but a great economic benefit to the region.

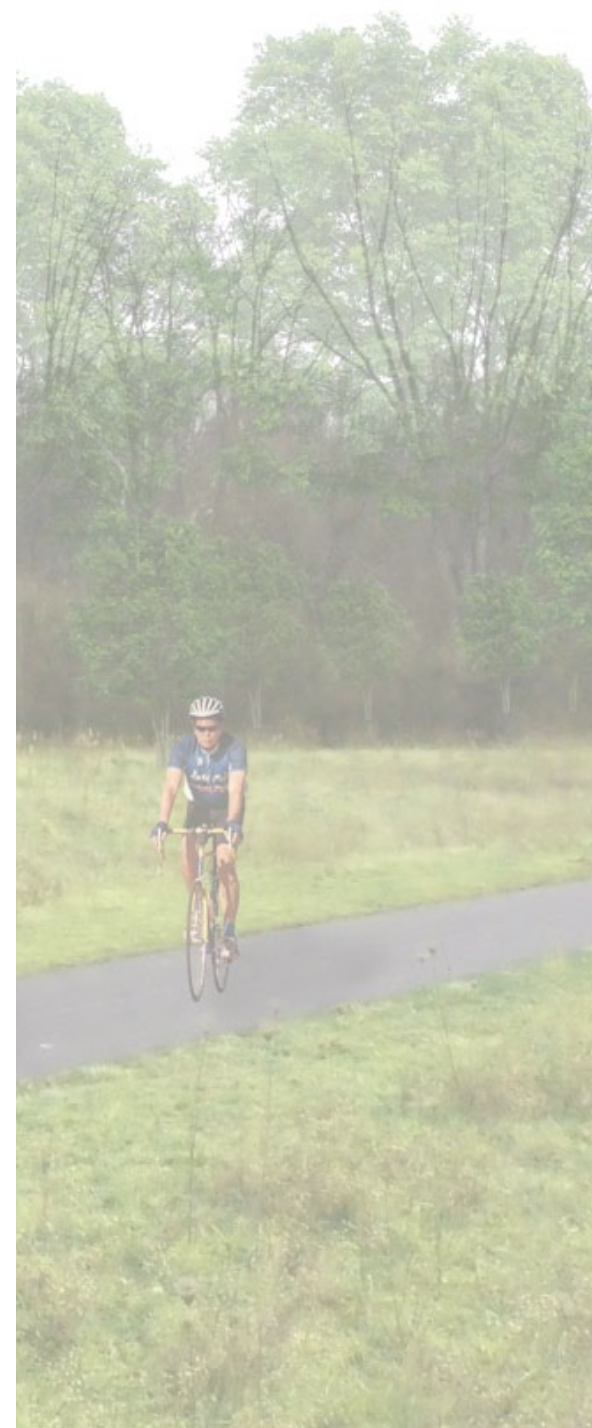
The University of Cincinnati, studying housing prices along the 72 mile Little Miami Scenic Trail, less than 25 miles from the proposed trails in this plan, found that “homeowners were willing to pay a premium to be located within close proximity of the trail” (University of Cincinnati, School of Planning; Rainer vom Hofe & Olivier Parent, 2011).

The Ohio Kentucky Indiana Regional Council of Government study noted the economic impact of the trail users, highlighting that the users “spend approximately \$3.1 to \$3.7 million annually on trip-related expenditures and trail-related durable goods,” and many of these goods were purchased in establishments adjacent and near the trail (Little Miami Scenic Trail User Study; Ohio Kentucky Indiana Regional Council of Governments, 1999).

The Miami Valley Regional Planning Commission study found that the trail system within the metropolitan area had a significant economic impact in at least 3 ways (Miami Valley Trail User Survey; Miami Valley Regional Planning Commission, 2009):

1. Hard Goods--Purchases of athletic equipment, clothing, shoes and other such goods related to trail use total between \$6.4 million and \$7.1 million annually.
2. Soft Goods--Food, beverage, and snack purchases related to trail usage total between \$5.5 million and \$7.1 million annually, and
3. Overnight accommodations--trail users from outside the region spend between \$1.6 million and \$1.8 million in total annually.

The development of trails can also have a positive impact on overall community health. It is widely recognized that obesity is a health epidemic in the United States and that childhood obesity is an especially challenging public health issue. A recent report found that “children with low neighborhood amenities or



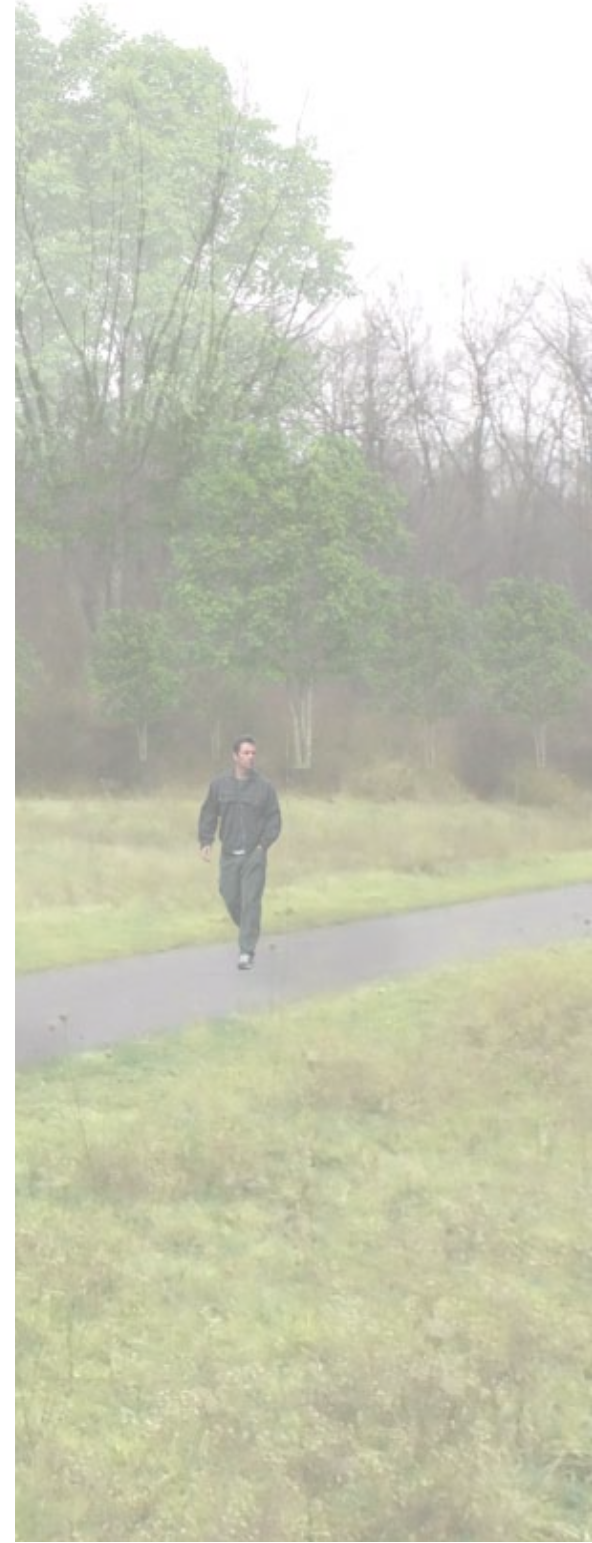
those lacking neighborhood access to sidewalks or walking paths, parks or playgrounds, or recreation or community centers, had 20-45% higher odds of becoming obese or overweight compared to children who had access to these amenities” (White House Task Force on Childhood Obesity, May 2010).

FINDING:

- Trail and greenway development has a positive impact on home values, recreational and tourism opportunities. The investment of public and private funds into trail and greenway development provides both health and environmental quality benefits and is positive for economic development. Proactive trail development leads to a better quality of life and the physical, social and economic development of all of Clinton County.

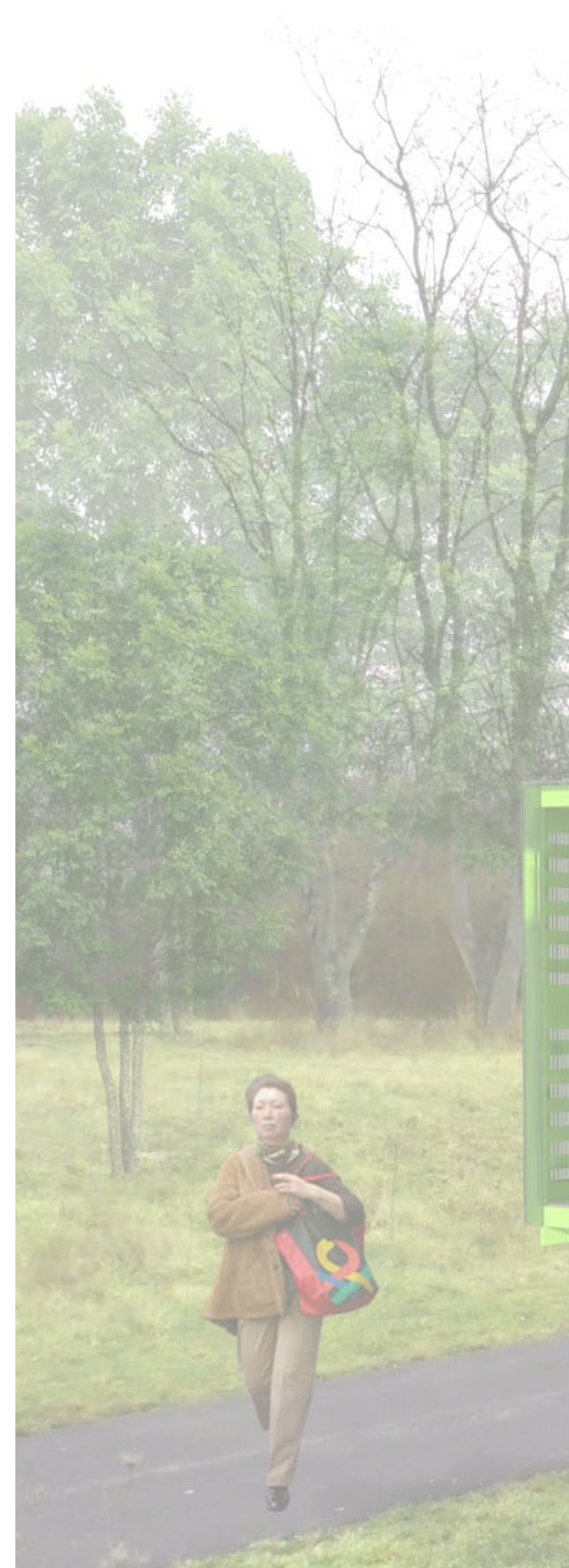
ACTION:

- + Trail and greenway development should be promoted, celebrated and continually enhanced in Clinton County
- + Future trail projects should be prioritized to ensure regional connections to statewide and national trail networks
- + Clinton County trail and greenway development is a positive force for tourism, local health and wellness, and economic development



THE TOP PRIORITY AREAS IN CLINTON COUNTY INCLUDE:

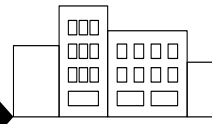
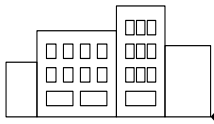
- Extend the existing Luther Warren Peace Path Trail westward from Nelson Road in Wilmington towards Clarksville
- Develop 'on-sidewalk' trails where possible to establish the urban trail linkages between existing and future trails, especially along the Sugartree Street Corridor
- Complete the Clinton Fayette Friendship Trail from Melvin to the Fayette County line through Sabina along the corridor secured by the Clinton County Parks District
- Develop an urban trail Downtown Sabina connector from the Clinton Fayette Friendship Trail
- Establish a village-centered multipurpose trail system along public alleys in Downtown Blanchester
- Work collaboratively with Warren County to complete a Morrow to Clarksville trail along the abandoned railroad adjacent to Todd's Fork
- Complete the Wilmington to Melvin portion of the Clinton Fayette Friendship Trail adjacent to the existing, active railroad or along another agreed upon route
- Establish a trail along the abandoned railroad adjacent to Fancy Street in Blanchester and eastward towards Westboro and Lynchburg
- Explore options for the establishment of a trail park facility at the McKee Farm on Cuba Road at the Union Twp./Washington Twp. line
- Explore funding options to ensure that trail development, maintenance and repair can be sustainably funded by the Clinton County Parks District or the respective local parks boards
- Ensure that all new major subdivisions and planned unit developments within both incorporated and unincorporated areas properly include sidewalks and trails as appropriate



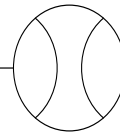
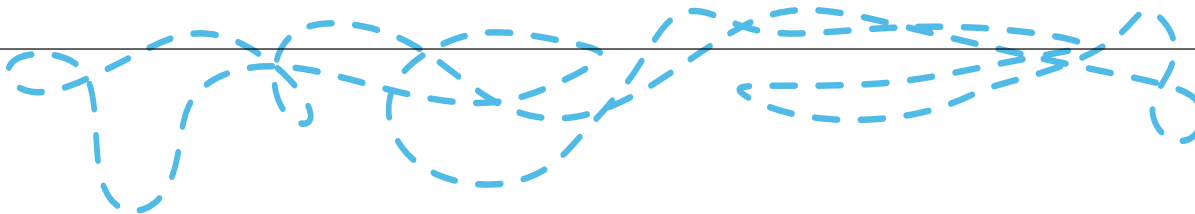
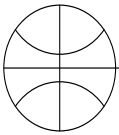
PROPOSED CLINTON FAYETTE FRIENDSHIP TRAIL: SABINA, OHIO



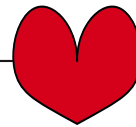
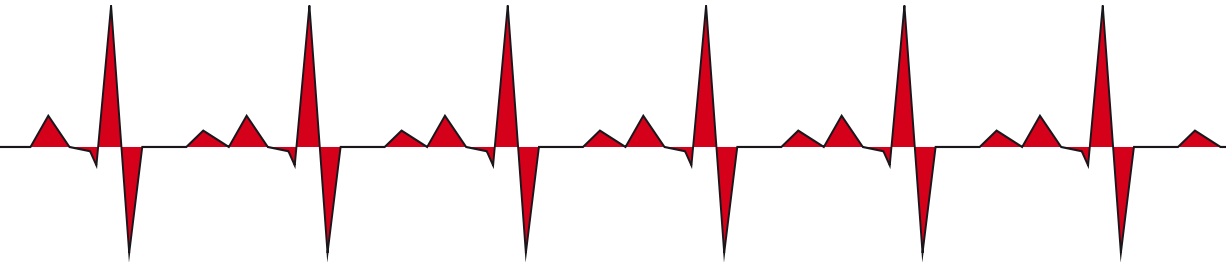
TRAILS ARE IMPORTANT FOR DIVERSE REASONS:



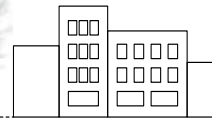
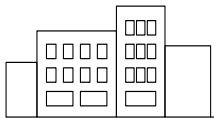
Transportation



Recreation



Exercise



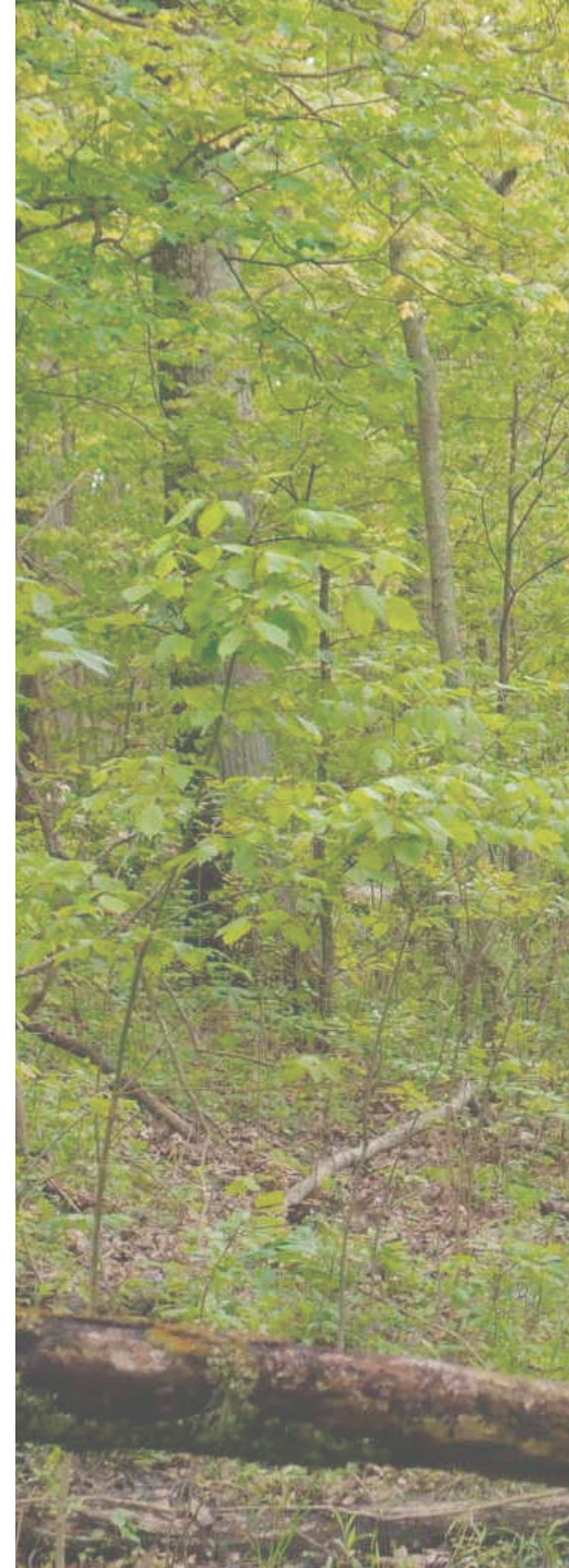
Access to
Environment

TRAIL FUNDING + ADMINISTRATION

The development of a comprehensive trail and greenway system in Clinton County requires a more comprehensive funding mechanism for the development, maintenance and repair of the trail system. If trails and greenways are a countywide and regional asset, they must be funded at the broadest level possible for the development to be successful and sustainable.

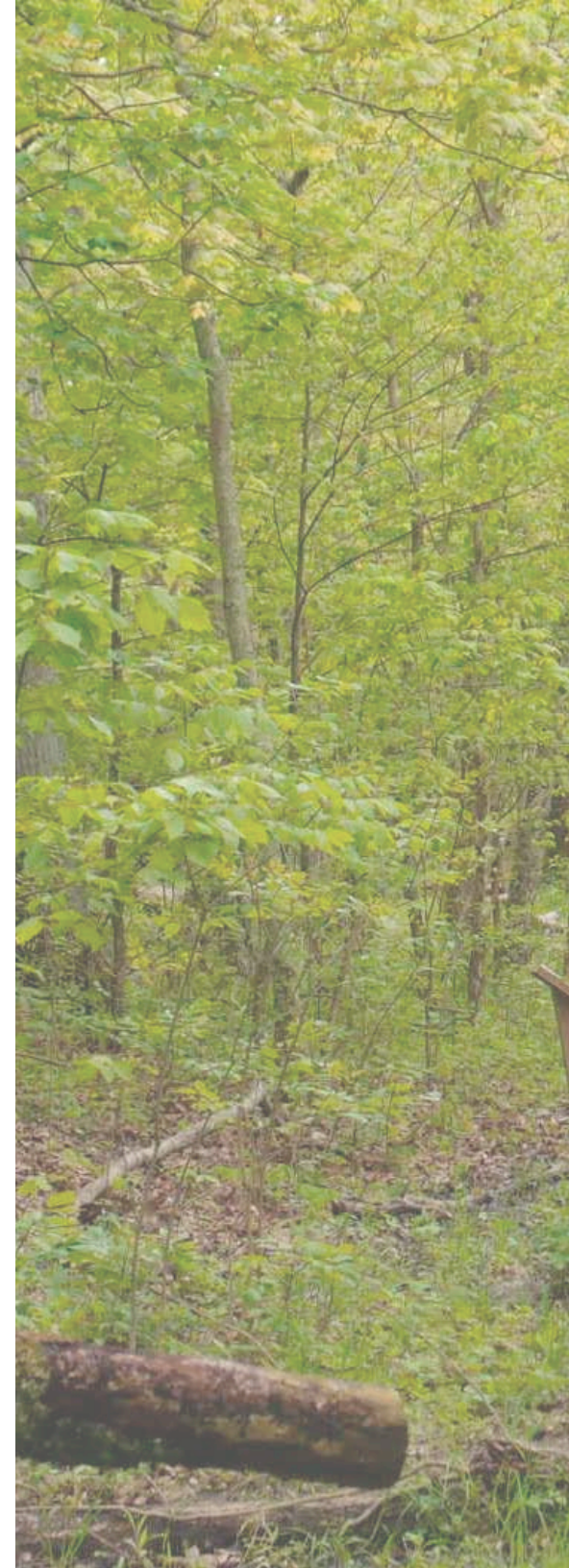
FINDING:

- The development of a comprehensive trail and greenway system in Clinton County requires a more comprehensive funding mechanism for the development, maintenance and repair of the trail system. If trails and greenways are a countywide and regional asset, they must be funded at the broadest level possible for the development to be successful and sustainable.
- Trail maintenance and management is scalable depending on resources, but should be viewed as a countywide and regional effort. A combination or the structured collaboration of the existing parks districts or the creation of a regional trails district is imperative for the future development of trails and greenways in Clinton County. In addition to traditional forms of funding, such as grants, alternative mechanisms for funding trail development and maintenance should be explored.



ACTION:

- + Explore the merger of the City and County Parks Districts to create a Clinton Metroparks type system which could seek future park and recreational levies from a broader population base than just the City of Wilmington.
- + Work collaboratively with the existing City, Villages, Townships and County to ensure collaboration and coordination on this plan and other efforts. Seek signed cooperative agreements between the local entities regarding trail development, maintenance and repair efforts.
- + Create tax increment financing, special improvement district or other trail development district, coordinated by the City and County Park Districts or a Metro Parks, which could fund construction of buffering improvements and maintenance of adjacent trails through the incremental increase in property values. Through a tax increment approach, a portion of new value derived from trail proximity could provide funding for increased development, improvement, and maintenance of the trail system.
- + Trails are an important part of the Parks and Recreation offerings. All park boards and districts should include trail expansion and trail maintenance in their annual operating and capital budgets, and in future fundraising efforts.
- + The Clinton County Trails Coalition, along with City, County, Villages, Townships and other stakeholders should continue to pursue grant funding for construction of trail corridors identified. The Trails Coalition should also consider charitable trusts and land conservation easements, marketed to property owners on or adjacent to proposed trail development which would allow future trail corridor acquisition and provide tax benefits to the current landowners.



BIKEWAYS ON COUNTY ROADWAYS

While off roadway trail development is the priority of this plan, Clinton County has existing roadways which serve as important linkages across the County. This Plan highlights the best and worst existing roadways for biking, with the best roadways noted as bikeways. These bikeways should be prioritized for bike awareness signage and other safety efforts, while the worst roadways should be highlighted for improvements when investment is scheduled for those corridors in the future.

FINDING:

- Where possible, off roadway trail development should be encouraged and prioritized. In places where trail development is not possible or unlikely in the future, existing roadways serve as an important part of the bike transportation network in Clinton County. The use of chip and seal pavement techniques should be limited to the greatest extent possible on the bikeway designated roadways below, in cases where this is unavoidable, the roadway should be immediately swept following the chip and seal.

ACTION:

+ As biking opportunities bring important recreation and tourism, existing roadways which are considering valuable for biking for connectivity, safety or scenic value should be highlighted and those roadways

most dangerous for biking should be examined as future improvements are possible.

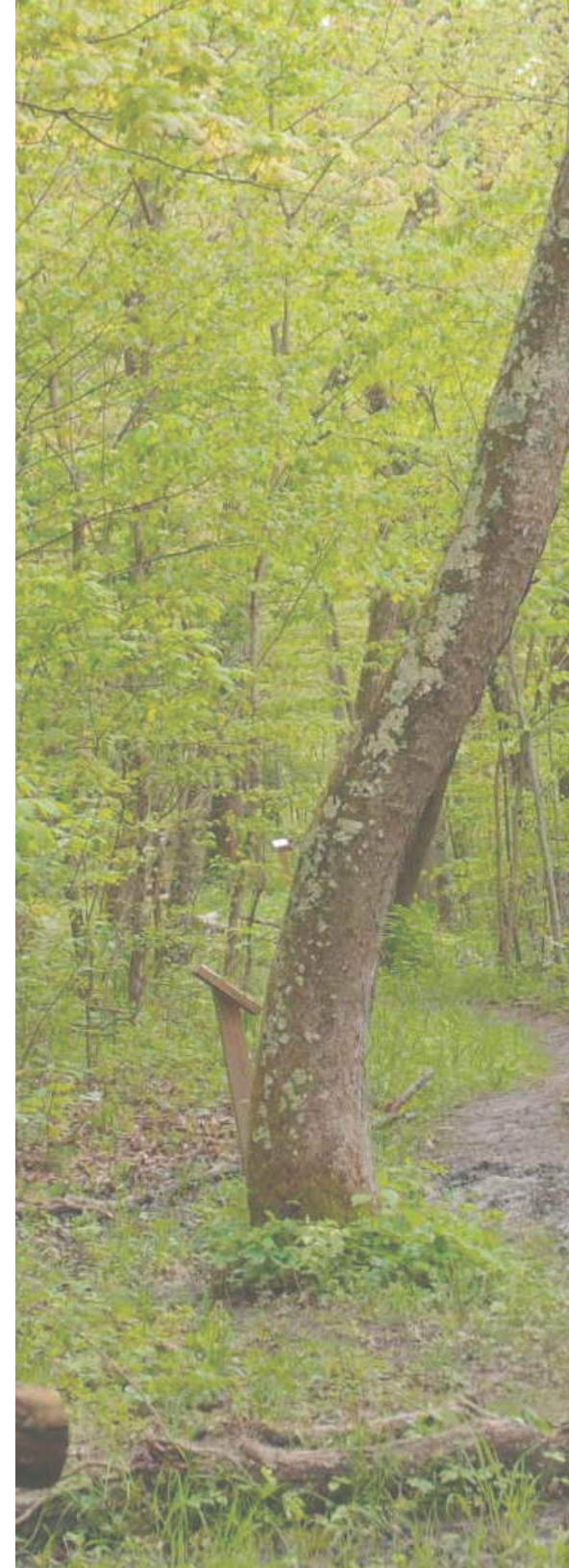
+ Roadways considered the best for biking in Clinton County 'Bikeways', and which should be considered for bike awareness signage:

- OH134 North of Wilmington
- Prairie Road North of Wilmington
- Nelson Road and Center Road North and West of Wilmington
- Gurneyville Road from US68 to New Burlington Road
- Cuba Road South of Wilmington
- Martinsville Road between Cuba and Martinsville
- US22&OH3 between the Warren County line and Wilmington

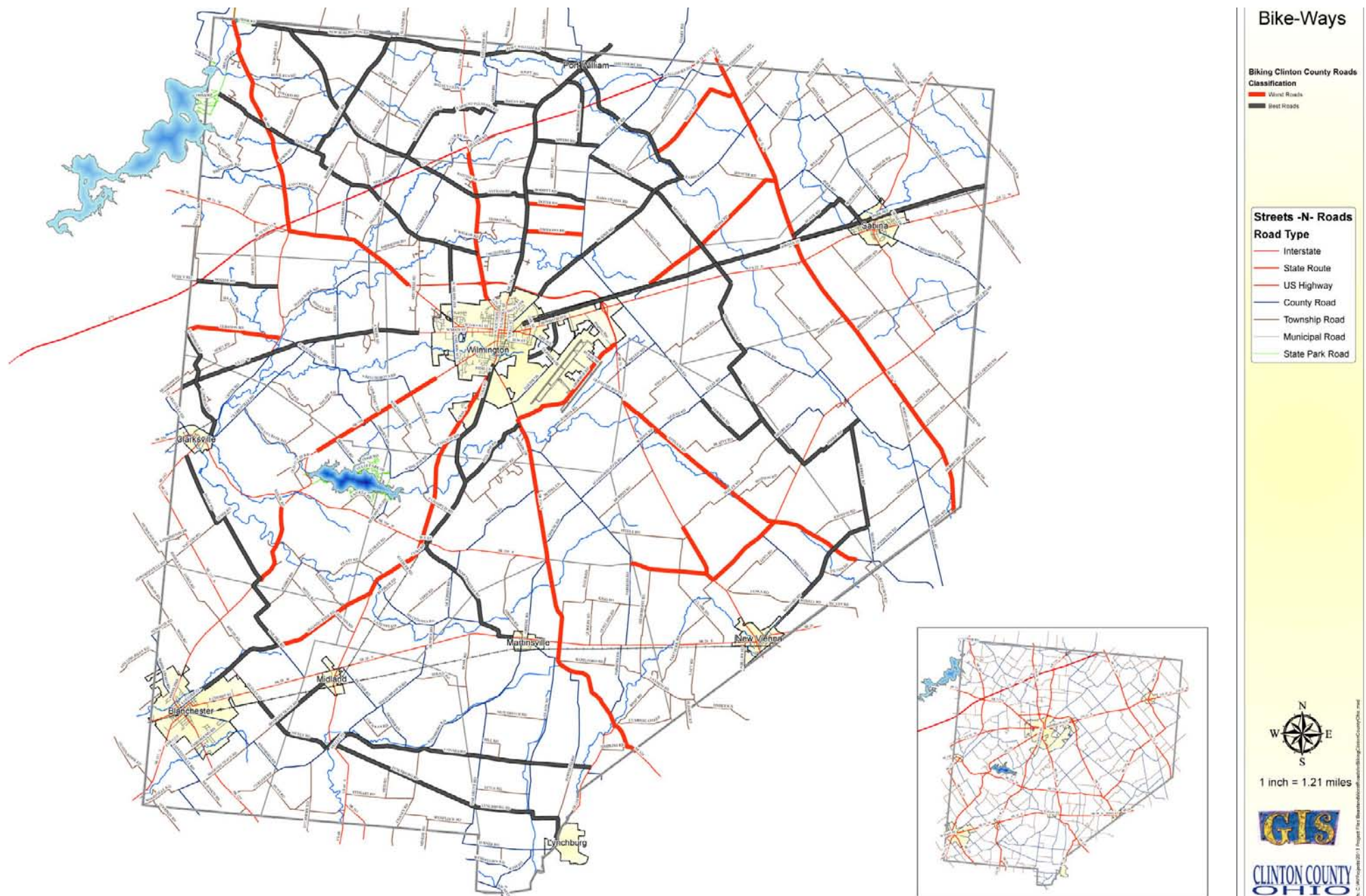
+ Roadways considered the worst and most dangerous for biking in Clinton County should be considered for future additional carriage-way paving, along with safety signage at hills and curves- in an effort to create safer shoulder areas for biking on these roadways:

- OH72 from Greene County to Highland County
- OH134 South of Wilmington
- US68 North and South of Wilmington
- OH73 West of Wilmington

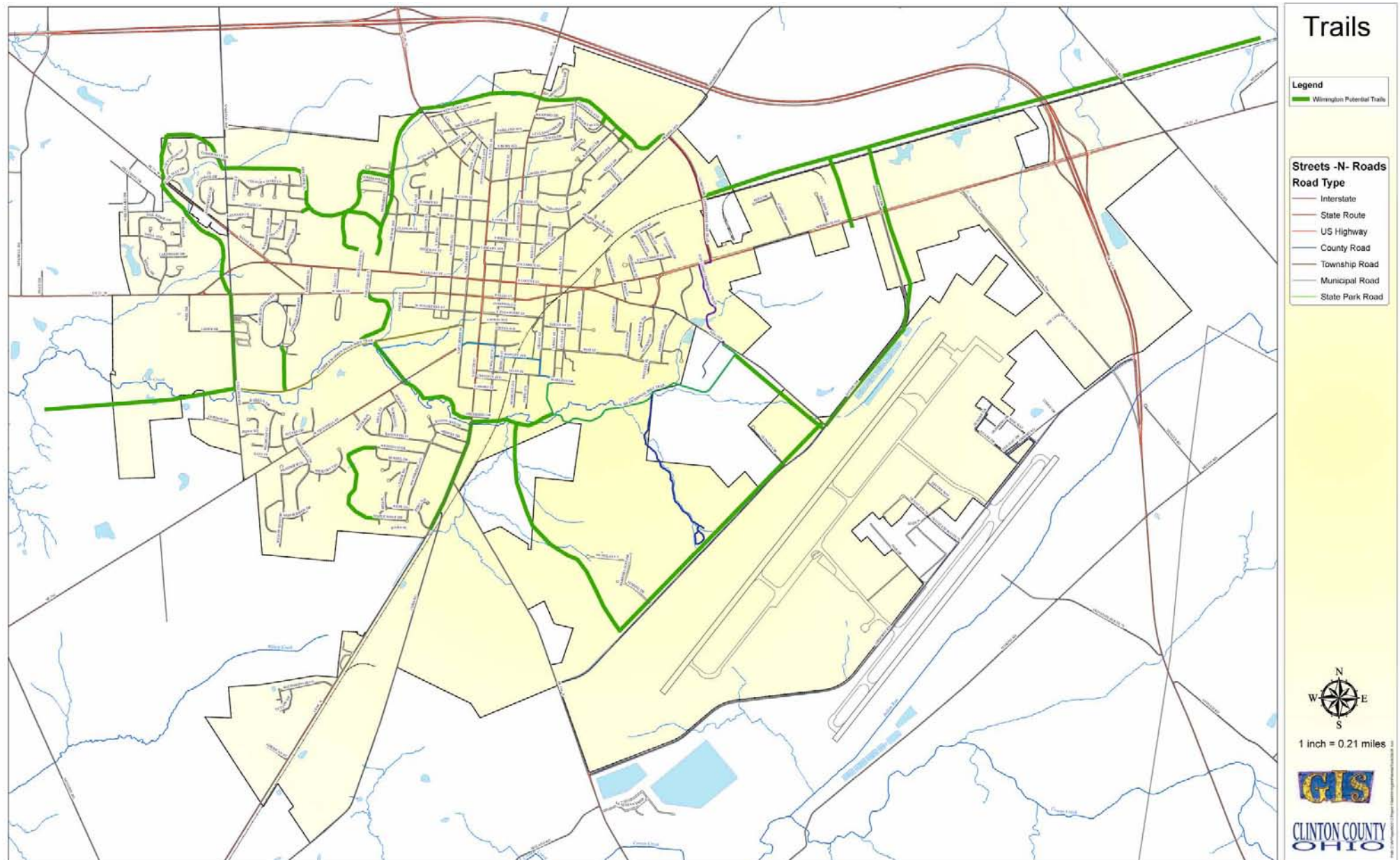
The use of chip and seal pavement techniques should be limited to the greatest extent possible on bikeway (black) designated roadways.



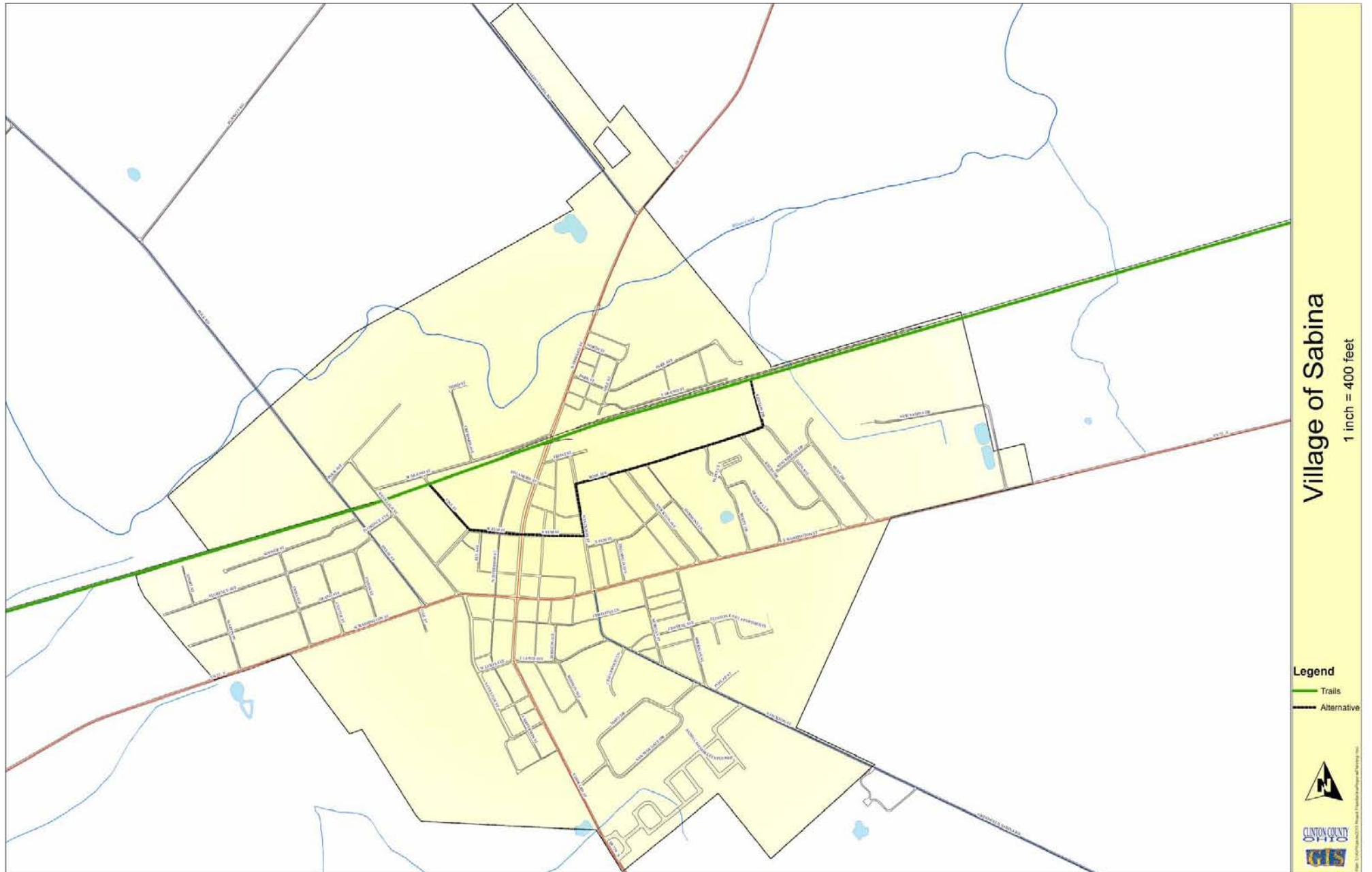
CLINTON COUNTY BIKEWAYS: **WORST** / **BEST**



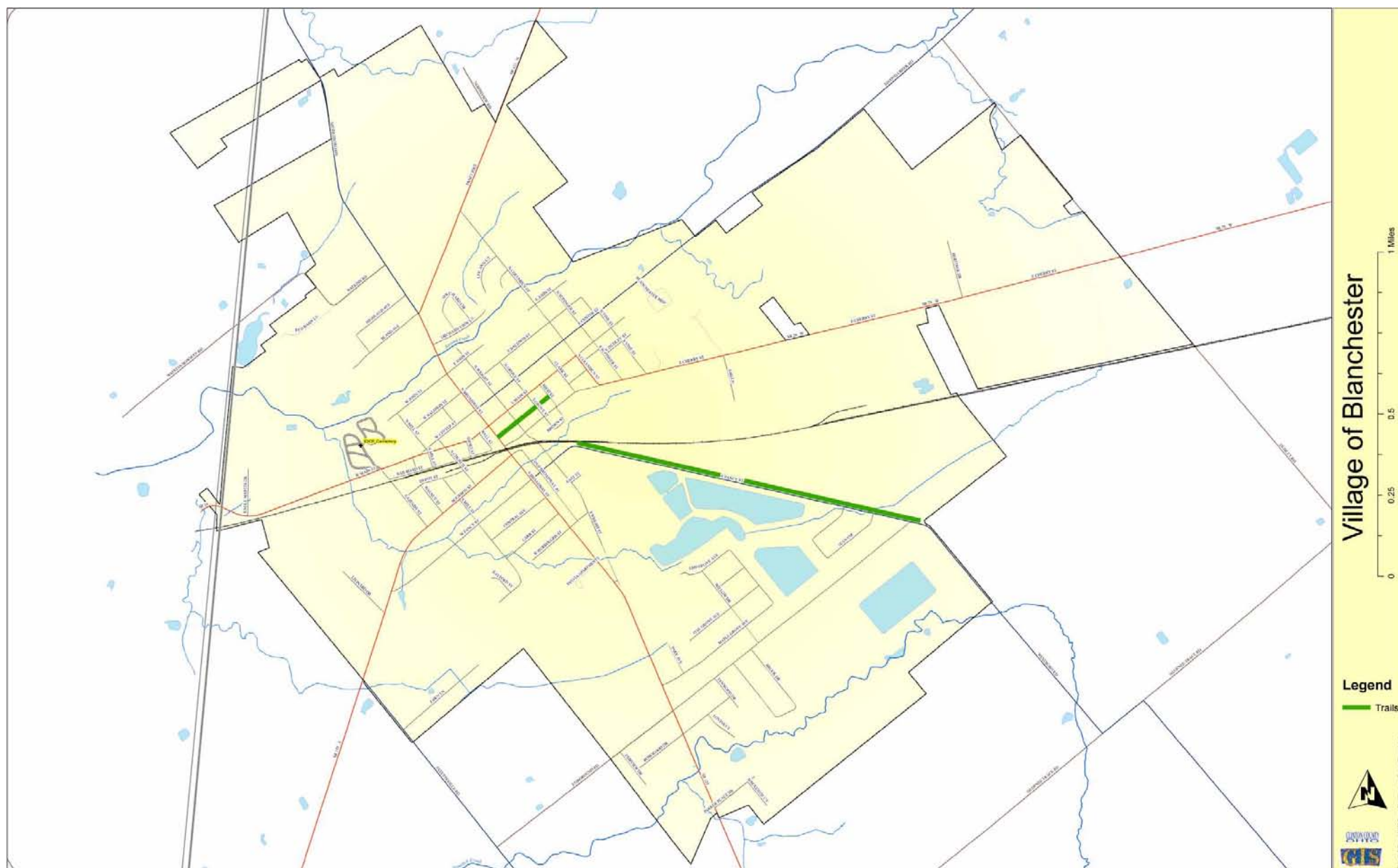
WILMINGTON TRAILS



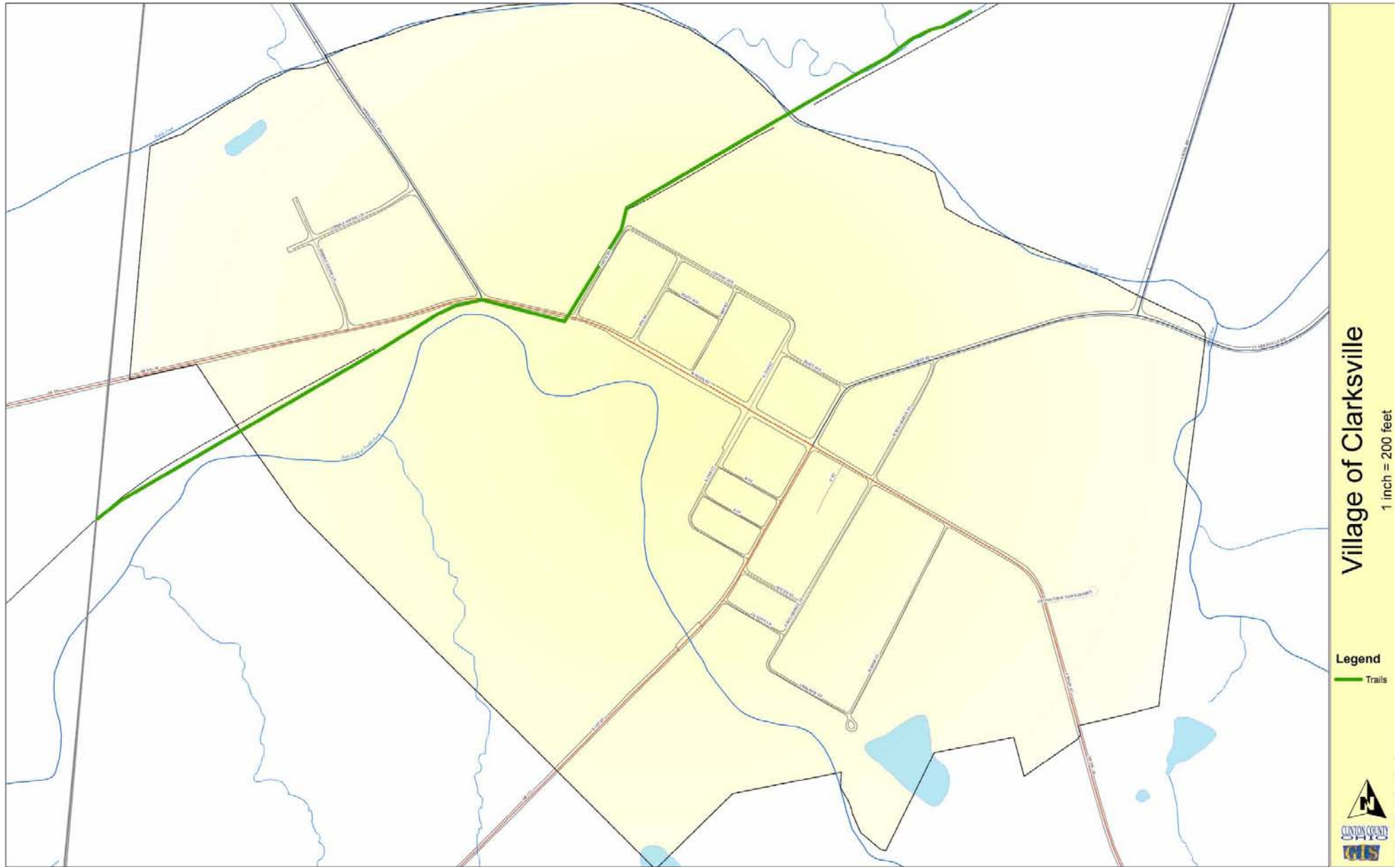
SABINA TRAILS



BLANCHESTER TRAILS



CLARKSVILLE TRAILS



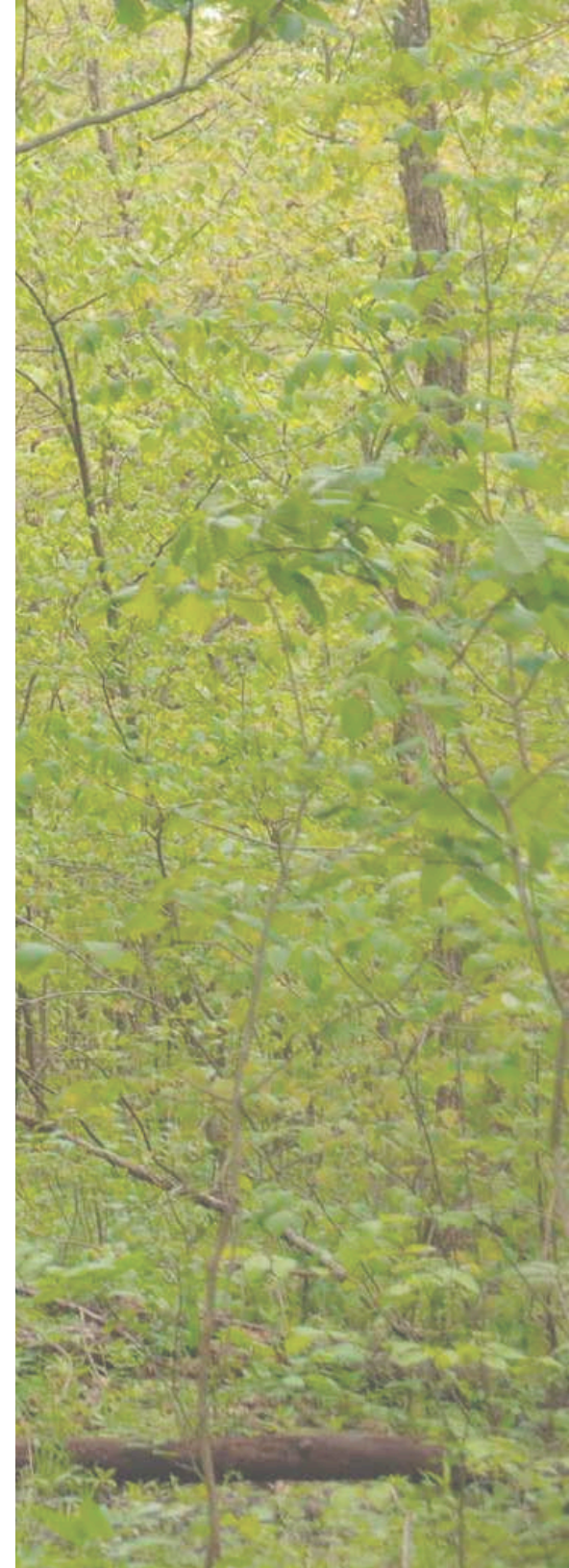
GREENWAY DEVELOPMENT

Finding:

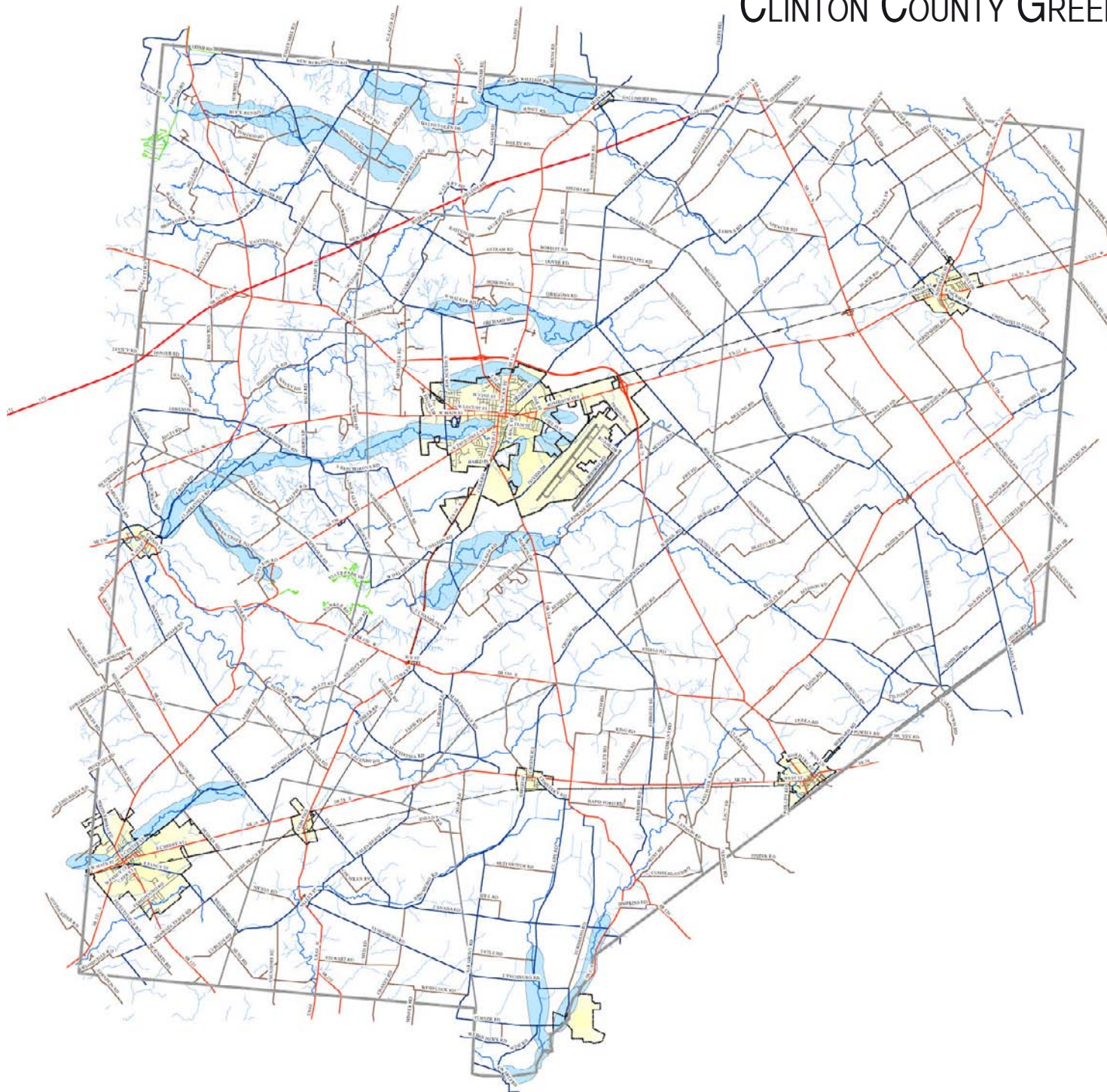
- Greenways are linear corridors or ribbons of natural or generally undisturbed lands which link people, places and wildlife- this may include topographic features, streams, utility or railroad corridors, etc. Highlighting and utilizing the existing greenway corridors in Clinton County is an important tool to develop future trails and other linear networks.

Action:

- + Greenway areas should be preserved in their natural state, with no change to the natural slope and vegetation (except the removal of invasive species), especially within the greenway corridors highlighted in this plan. Both the County and City have adopted riparian area setbacks which should be enforced.
- + The Lytle Creek Greenway serves as the most important corridor in the County as it presents the best balance of environmental assets with population proximity. The Lytle Creek Greenway should be developed to include both passive environmental preservation and active trail development.
- + Areas of parcels along the Lytle Creek Greenway should be dedicated to permanent preservation where possible, with landowners considering conservation easements, land donations or other mechanisms especially within a 100ft. critical buffer area of Lytle Creek.
- + Permanent farmland preservation, through agricultural easement or other means, is a crucial step to the preservation of greenway and other natural habitats. This Plan prioritizes the work of Clinton County Open Lands and other 'land trust' organizations to secure permanent agricultural easements across the County, especially in or adjacent to designated Greenways.
- + Future storm water management fees collected by the City should include a portion of funds to the care and maintenance of the Lytle Creek Greenway as this stream is tasked with all of the storm water for the City of Wilmington.
- + Stream monitoring programs and awareness signing of local streams should be a priority as it increases the understanding of local environmental assets and environmental impacts- changes in stream chemistry composition and local invertebrate census counts is often a first sign of more serious environmental impacts.



CLINTON COUNTY GREENWAYS



Greenways

Legend

Greenway Areas

Streets -N- Roads

Road Type

- Interstate
- State Route
- US Highway
- County Road
- Township Road
- Municipal Road
- State Park Road



1 inch = 1.29 miles



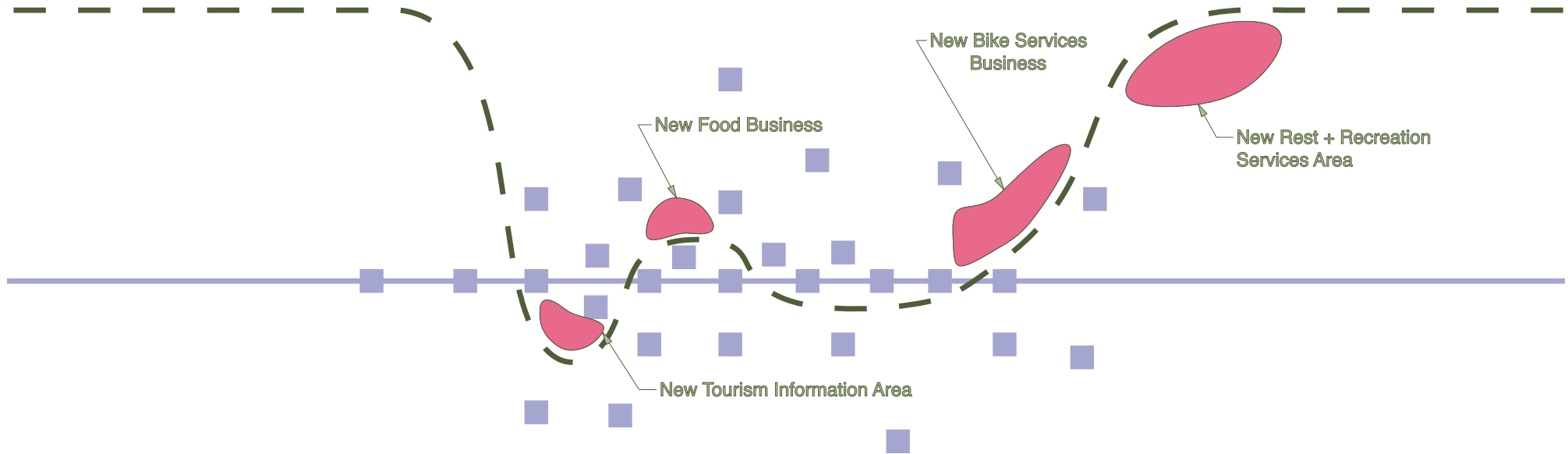
CLINTON COUNTY
OHIO

PARK + TRAIL INTERSECTION DEVELOPMENT

Where possible, site trailhead facilities at junction points of multiple activities and alternate means of transportation. These nodes of mixed use often increase overall activity.



TRAIL DEVELOPMENT POTENTIALS



TRAIL DESIGN + CONSTRUCTION

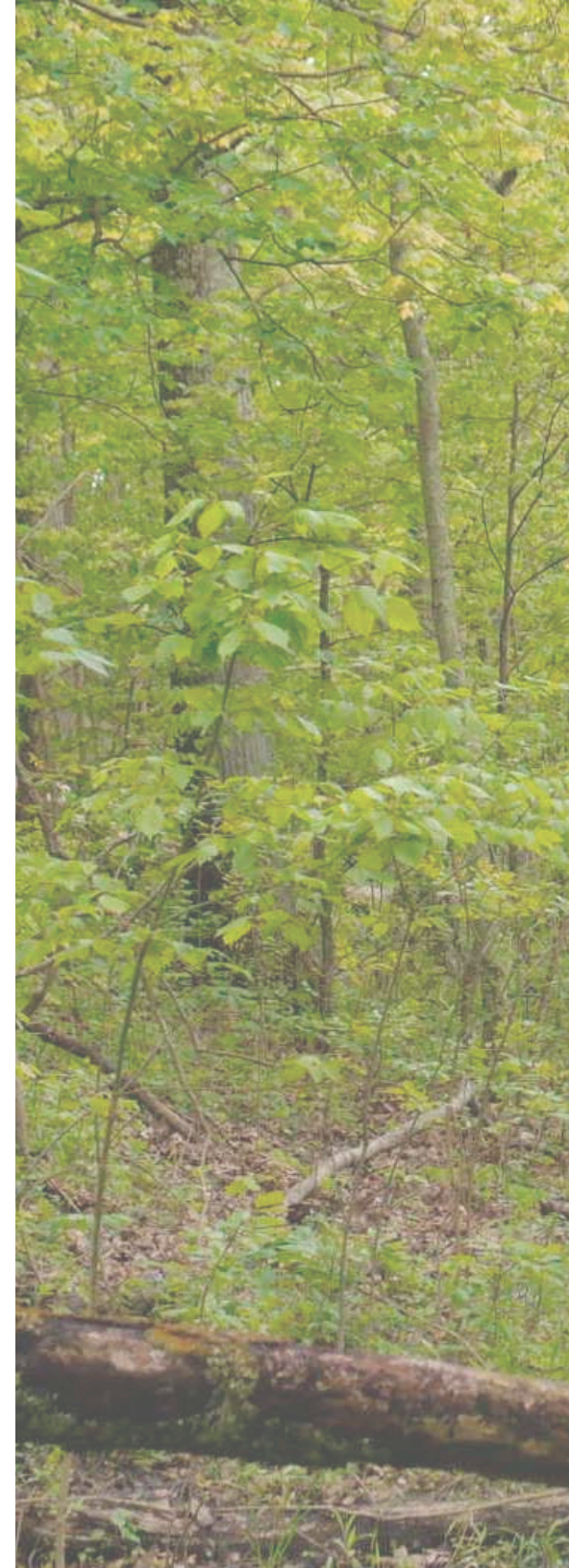
The Clinton County trail system should be accessible, encourage use by a variety of users, and be designed to be as multipurpose as possible. There are commonly accepted multipurpose trail construction techniques and best practices, including standard Ohio Department of Transportation standards which should be utilized for future trail development in Clinton County to ensure public access and safety. The Plan also suggests the included common design elements be accepted as a standard and incorporated in future trail development to ensure that the trail system has a unified look.

FINDING:

- Consistent trail implementation and construction throughout Clinton County will create a uniform brand and experience that stresses the advantages and unique style of the area as presented in this plan.

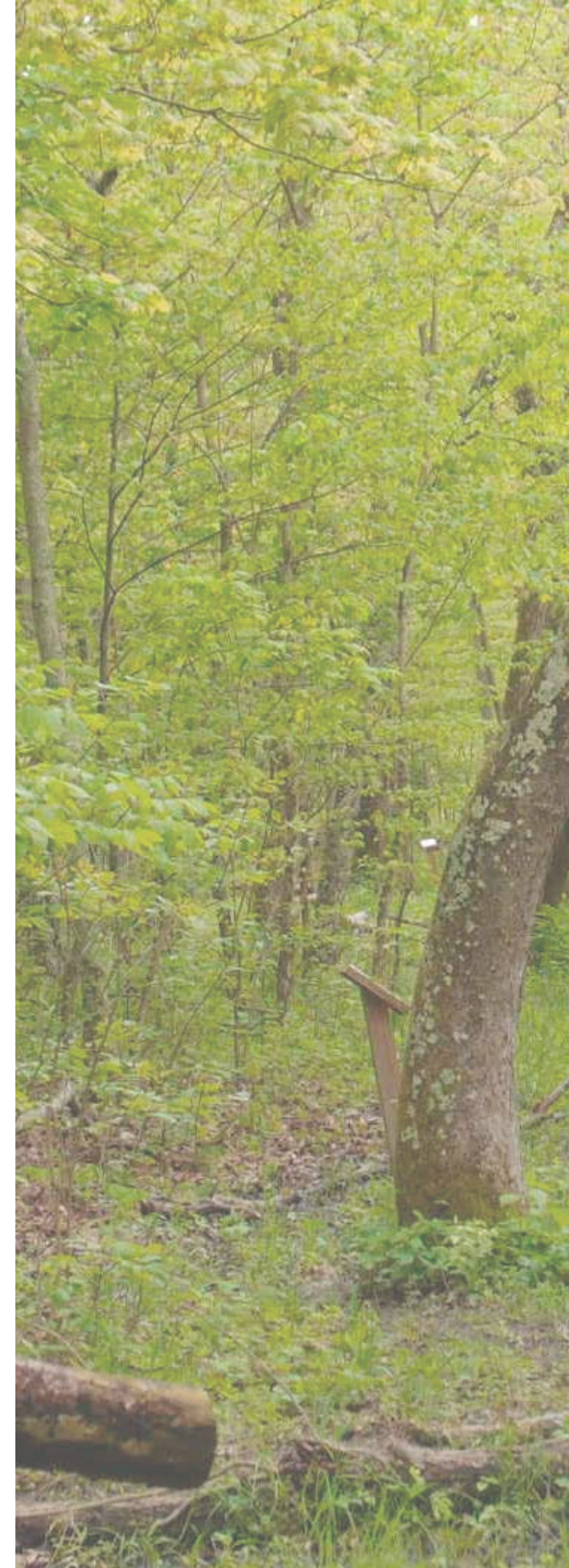
ACTION:

- + New trail development should incorporate aspects of the design strategies summarized within this plan and structural design of trailheads, signage, and consistent themes should be used across the trail network within the County.
- + Areas along existing and new trail development, especially at trailhead locations should include interpretative spaces where information on local history and the local environment could be presented and showcased.



TRAIL DESIGN ELEMENTS

- + While much of the trail construction will be quite standard, there are trail amenities that provide opportunity to create unique user experiences, when their design is integrated into the place. A unique design can create a memorable association with the activity and the place in which it occurs. Covered in the following pages are design typologies for trailhead shelters, covered bridges, trail kiosks, and rough overview of trail construction itself.
- + Material selection was driven by a survey of local building materials and components produced in the area. Much of the land intended for trail development is along agricultural land, and the few built structures visible along those routes use the corrugated metal for their grain bins. Recycling this material into trailhead shelters bridges, and kiosks provides some visual continuity sense of place. Another prevalent building material are shipping pallets, which can be created locally through our wood processing plants and logistics companies.
- + The trail architecture and signage can enhance recreation, environmental and commercial areas if the siting and design of those facilities aims to accommodate both the existing attributes of the site and the planned use.

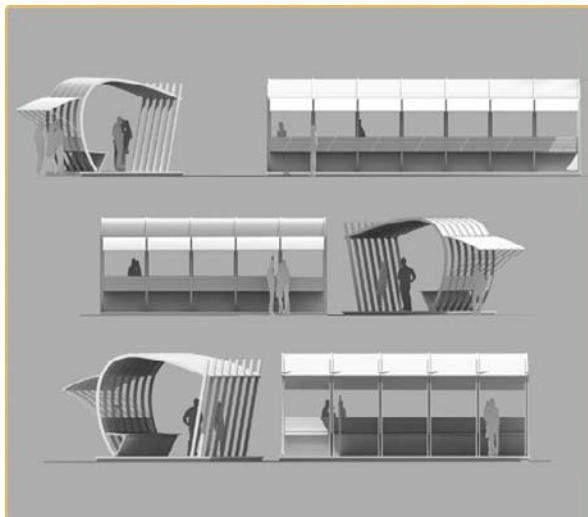




TYPICAL TRAILHEAD AMENITIES: Shelter from precipitation, access to water, toilets, signage + maps



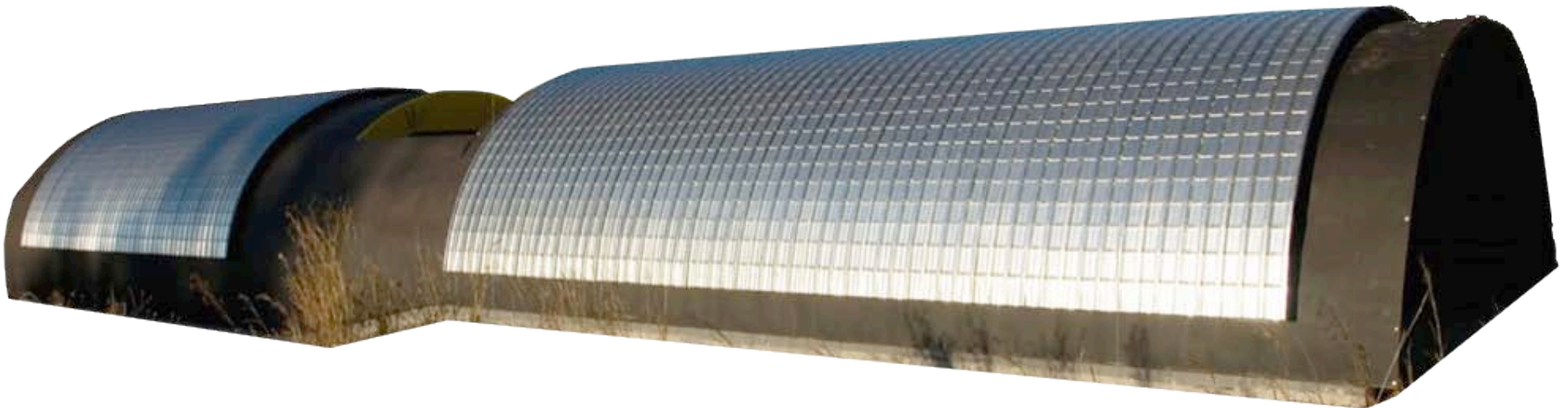
TRAILHEAD PAVILION EXAMPLES



SELECTED ARCHITECTURE MATERIALS



EXAMPLES OF
RECLAIMED GRAIN SILO
ARCHITECTURE



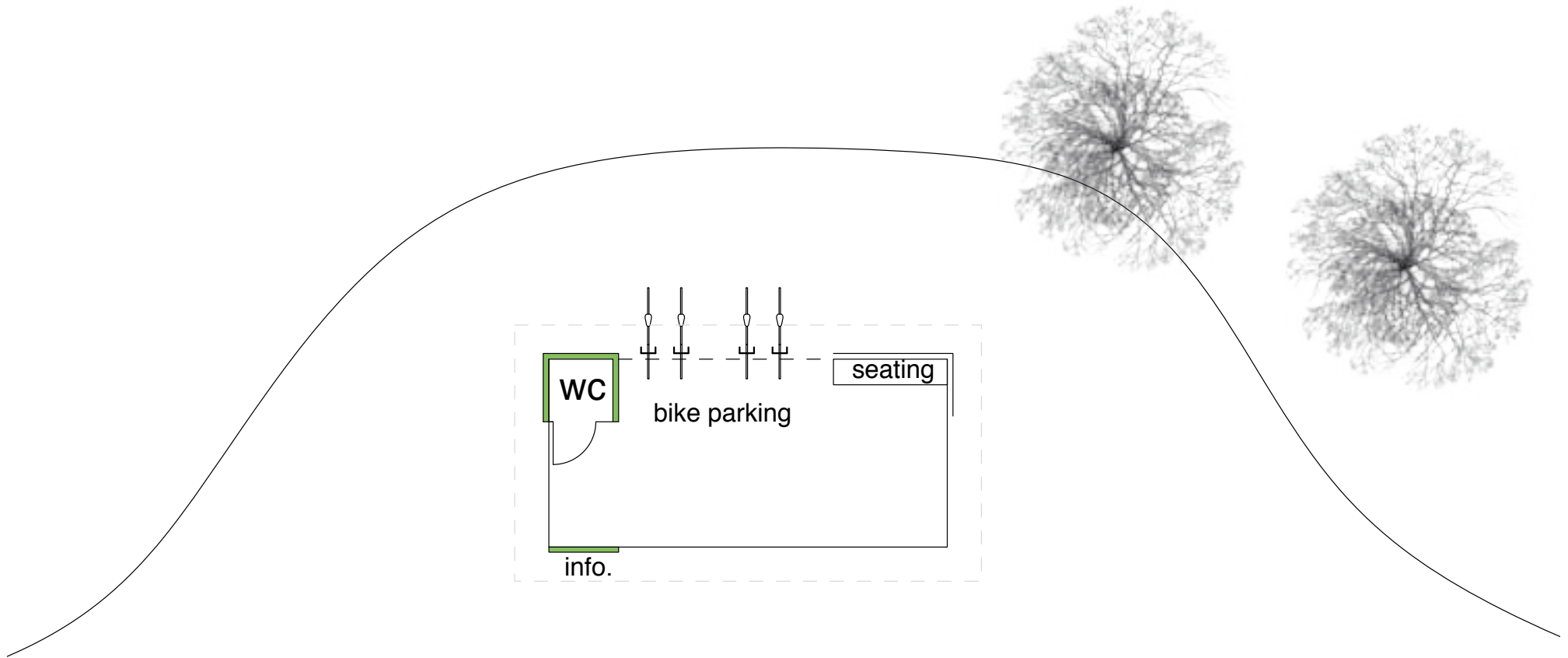
SELECTED ARCHITECTURE MATERIALS



EXAMPLES OF
PALETTE STRUCTURES



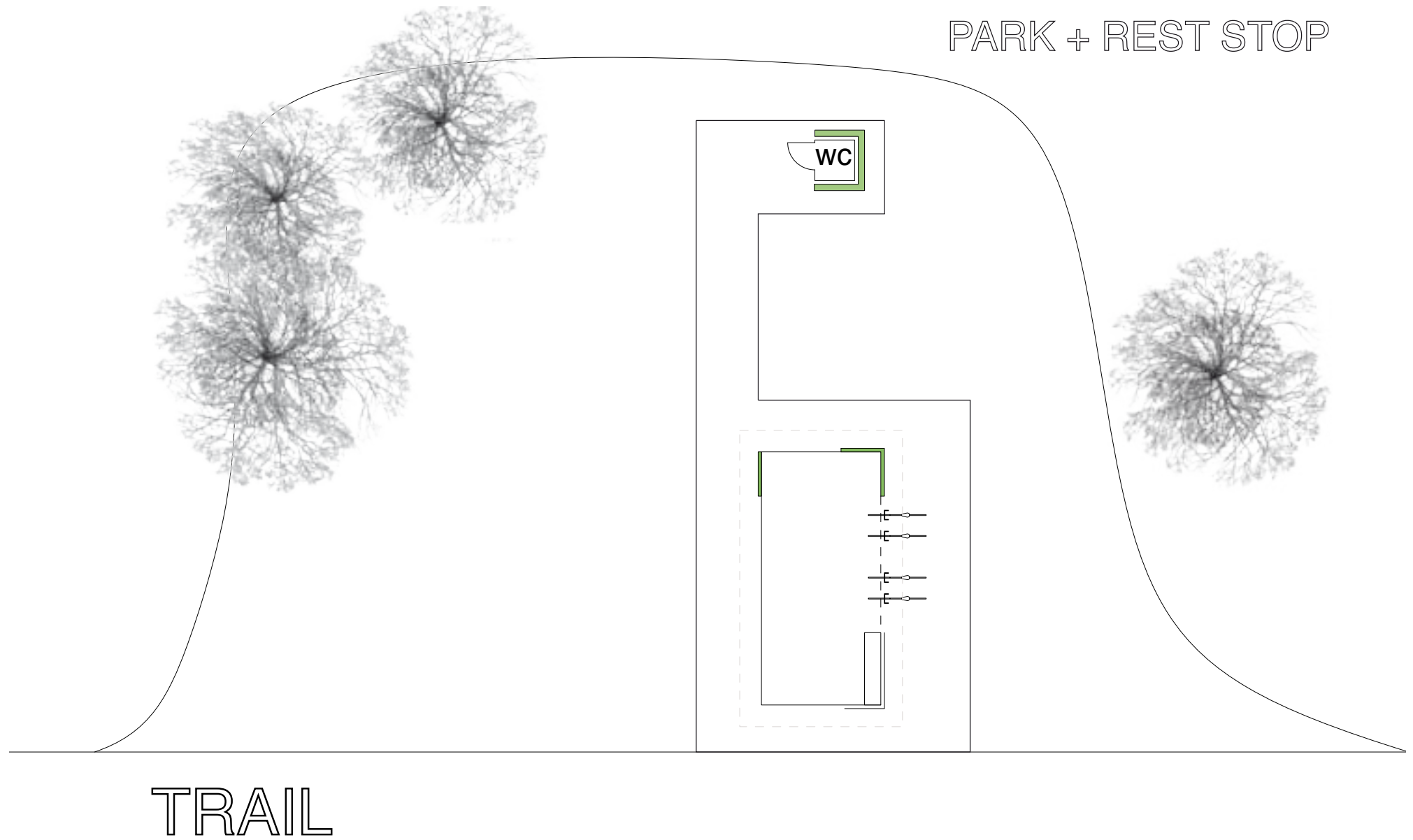
EXAMPLE OF PAVILION LAYOUT



TRAIL

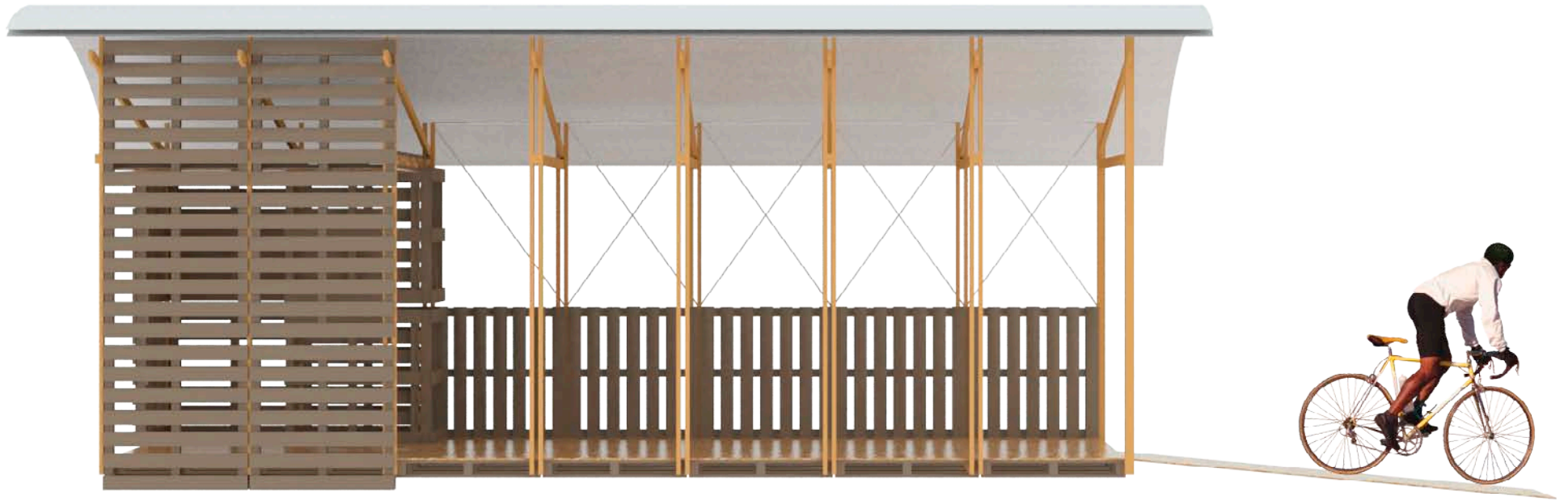
pavilion_1

EXAMPLE OF PAVILION LAYOUT



pavilion_2

EARLY RENDITION OF PAVILION



PROPOSED VISION FOR PAVILION



Clinton Fayette Friendship Trail Sabina, Ohio 2012



PROPOSED KIOSK DESIGN





EXISTING KIOSK



PROPOSED KIOSK

COVERED BRIDGE ARCHITECTURE



EXISTING:
COVERED BRIDGE ARCHITECTURE



POTENTIAL DESIGN: MODERN ADAPTATION ON BRIDGE ARCHITECTURE



CONSTRUCTION COST ESTIMATES:

Kiosk: \$500.00



PAVILION: \$15,000.00



BRIDGE: \$20,000.00



TRAIL IMPACT + BUFFERING

Trail and greenway development has a positive impact on housing and land values. A recent University of Cincinnati study conducted on the nearby Little Miami Trail found that homeowners were willing to pay a premium to be in close proximity to the trail. This study complements numerous other national studies which have consistently demonstrated similar results. Even with the positive results, active trail development must also be designed in a way that is sensitive to neighbors and adjacent uses.

FINDING:

- Trails are good neighbors; they increase property values and have been consistently found to be safe from a public safety perspective in a variety of situations and neighborhoods. There are well-recognized buffering strategies that allow trails and trail users to be compatible with all adjacent uses. With the proper design and deployment of buffering techniques that are detailed in this plan, trails are appropriate in nearly every area of Clinton County.

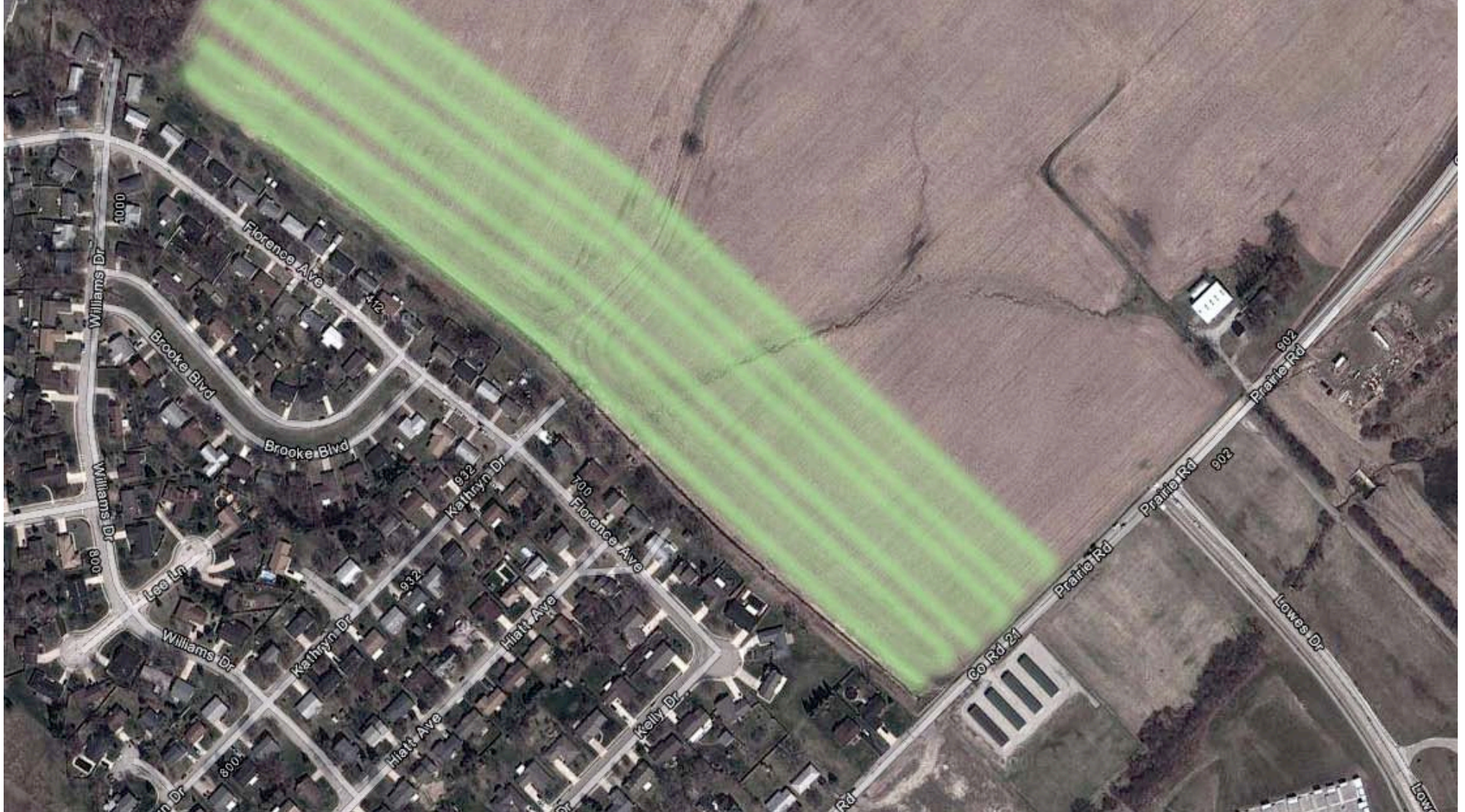
ACTION:

- + Active trail development should be buffered in populated areas with a combination of 4 strategies which include: spacing, fencing, plantings and berming where appropriate as detailed in this Plan.

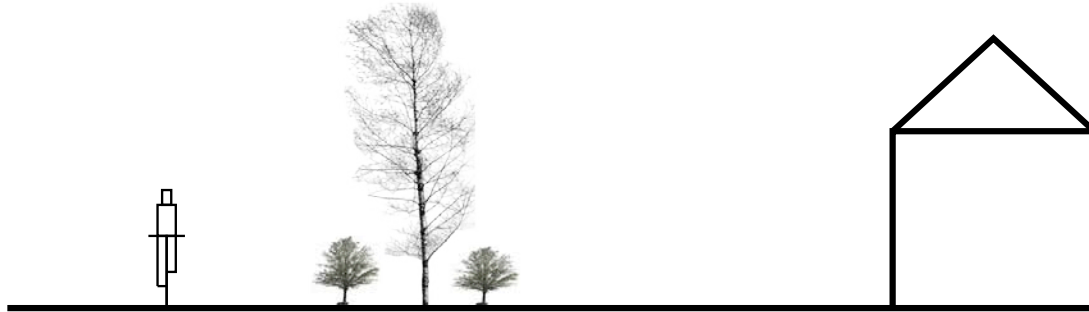


LANDSCAPE BUFFERING

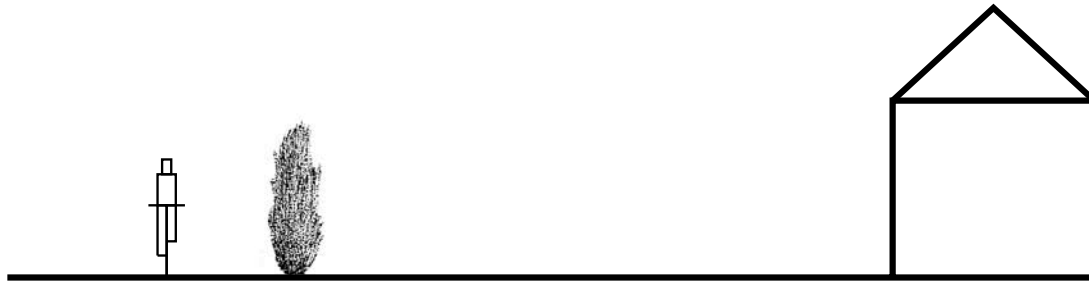
FISHER PLAINS STUDY



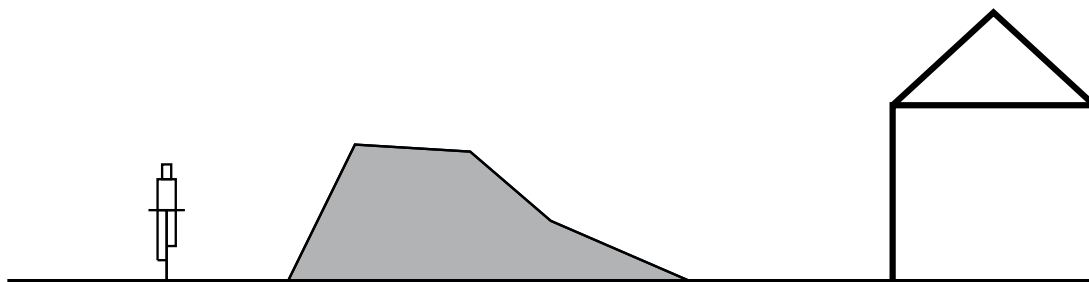
PROPOSED BUFFERING TECHNIQUES



MIXED PLANTING



HEDGING



LAND MASS BERM



LARGE SPACING

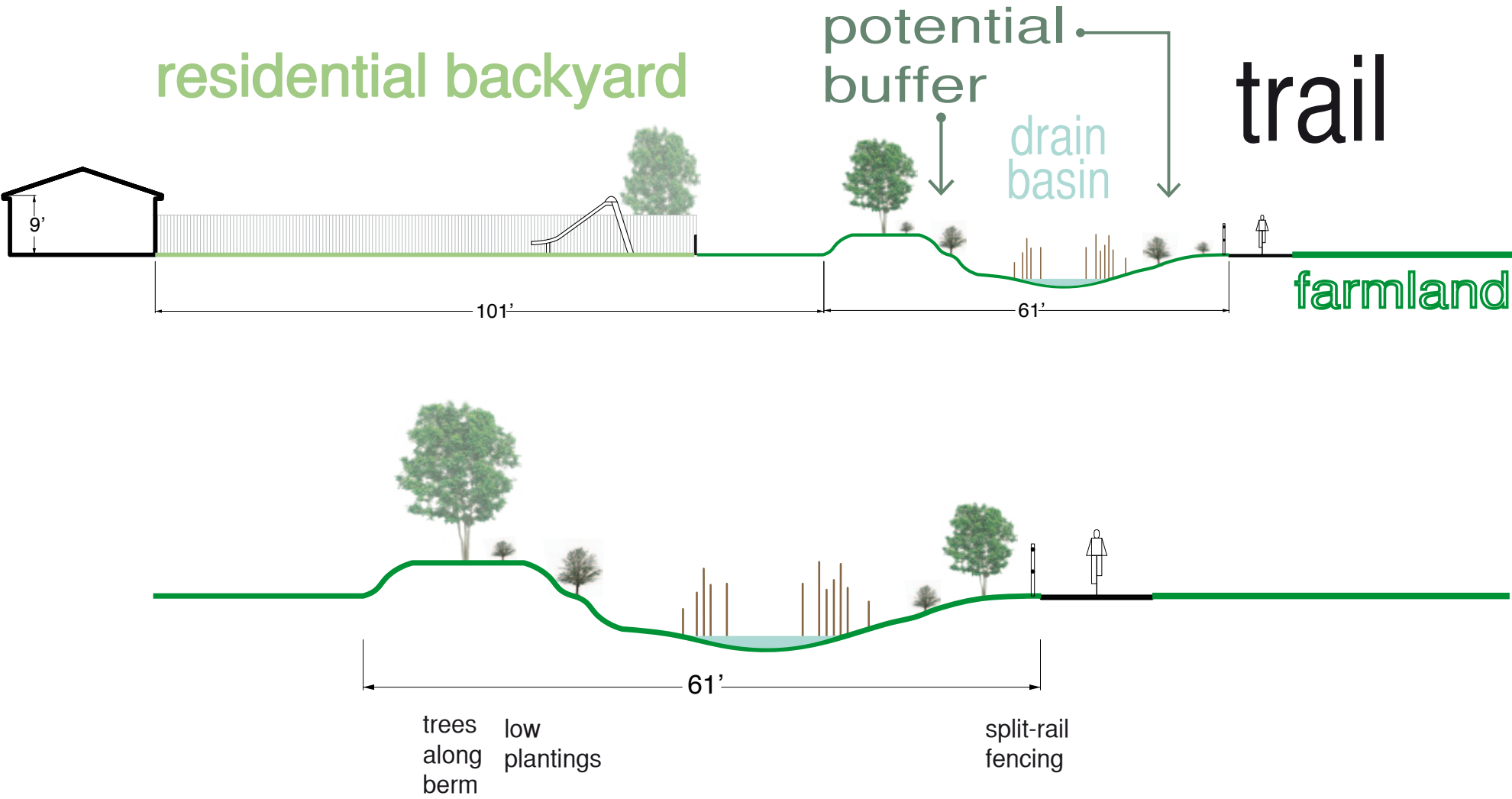
EXAMPLE OF MIXED PLANTINGS



EXAMPLE OF MIXED FENCING



BUFFERING STRATEGY: Fisher Plains



RENDERING OF POTENTIAL FISHER PLAINS DEVELOPMENT



TRAIL BUFFERING STRATEGY: SABINA

LOOKING WEST - WITHOUT VEGETATIVE BUFFERING



TRAIL BUFFERING STRATEGY: SABINA

LOOKING WEST - WITH VEGETATIVE BUFFERING



TRAIL BUFFERING STRATEGY: SABINA

LOOKING EAST



CONSTRUCTION DETAILS

TYPICAL PATH SECTION:

Horizontal Clearance

- Obstructions = 3' desired, 2' min.
- Separation from Roadway = 5'
- Steep Embankment (> 3:1) = 5'

Vertical Clearance

- 10' desired, 8' min.

Width

- Path Width = 10'
- Graded Shoulder = 2'
- Bridge or Tunnel Width = 14'

Cross Slope

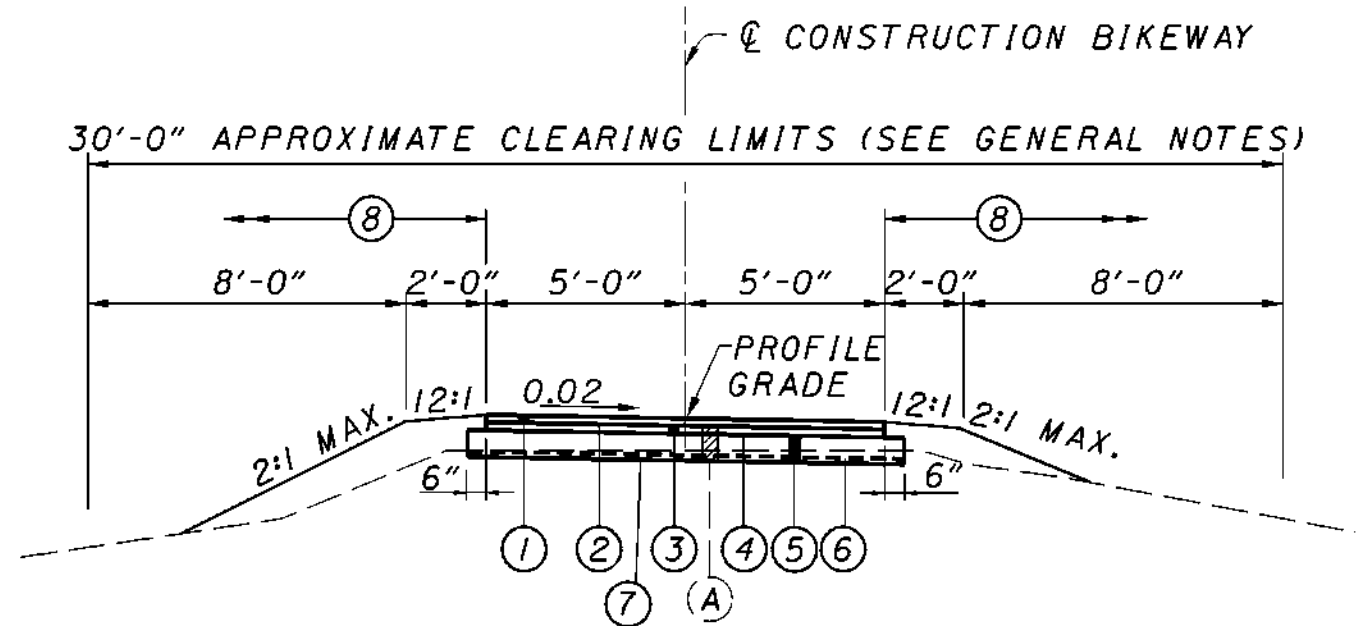
- Path Slope = 2% pref., 3% max
- No crown
- Graded Shoulder = 12:1 pref., 6:1 max.

Pavement Composition

- Design for expected emergency, law enforcement, & maintenance vehicles
- ODOT commercial drive design is recommended

Section Drawing (right): ODOT Bike Design on Abandoned Railroad

ODOT: TYPICAL SECTION OF BIKEWAY ON ABANDONED RAILROAD



TYPICAL SECTION OF BIKEWAY ON ABANDONED RAILROAD USING EXISTING RAILROAD BALLAST

STA. 1458+84.95	TO	STA. 1564+05.66	=	10520.71 FT.
STA. 1565+09.65	TO	STA. 1606+12.03	=	4102.38 FT.
STA. 1607+07.53	TO	STA. 1650+00.00	=	4292.47 FT.
STA. 1687+00.00	TO	STA. 1717+19.52	=	3019.52 FT.
STA. 1718+19.44	TO	STA. 1749+69.78	=	3150.34 FT.
STA. 1750+22.45	TO	STA. 1754+76.16	=	453.71 FT.
STA. 1756+34.56	TO	STA. 1874+58.08	=	11823.52 FT.
STA. 1876+21.92	TO	STA. 1895+19.16	=	1897.24 FT.
				39259.39 FT.

ITEM LEGEND

- (A) EXISTING BALLAST FROM ABANDONED RAILROAD (THK.-VARIES)
- (1) ITEM 448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
- (2) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)
- (3) ITEM 448 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
- (4) ITEM 408 PRIME COAT - APPLIED AT THE RATE OF 0.4 GAL./S.Y.
- (5) ITEM 304 8" AGGREGATE BASE
- (6) SPECIAL GEOGRID
- (7) ITEM 204 SUBGRADE COMPACTION
- (8) ITEM 659 SEEDING AND MULCHING (SEE GENERAL NOTE)

Drainage:

Use Bicycle safe grates (4" max. grid spacing)

Provide ditch on uphill side of the path

Culvert design per ODOT Location & Design Manual

Ditch flow depth per L&D section 1102.4 (District 12)

- 9" below edge of path, pref.
- 0" below edge of path, min.

Vertical Alignment:

Max. Grade Break w/o a vertical curve

- Not addressed directly in AASHTO
- Use ODOT Location & Design Manual (L&D) Figure 203-2

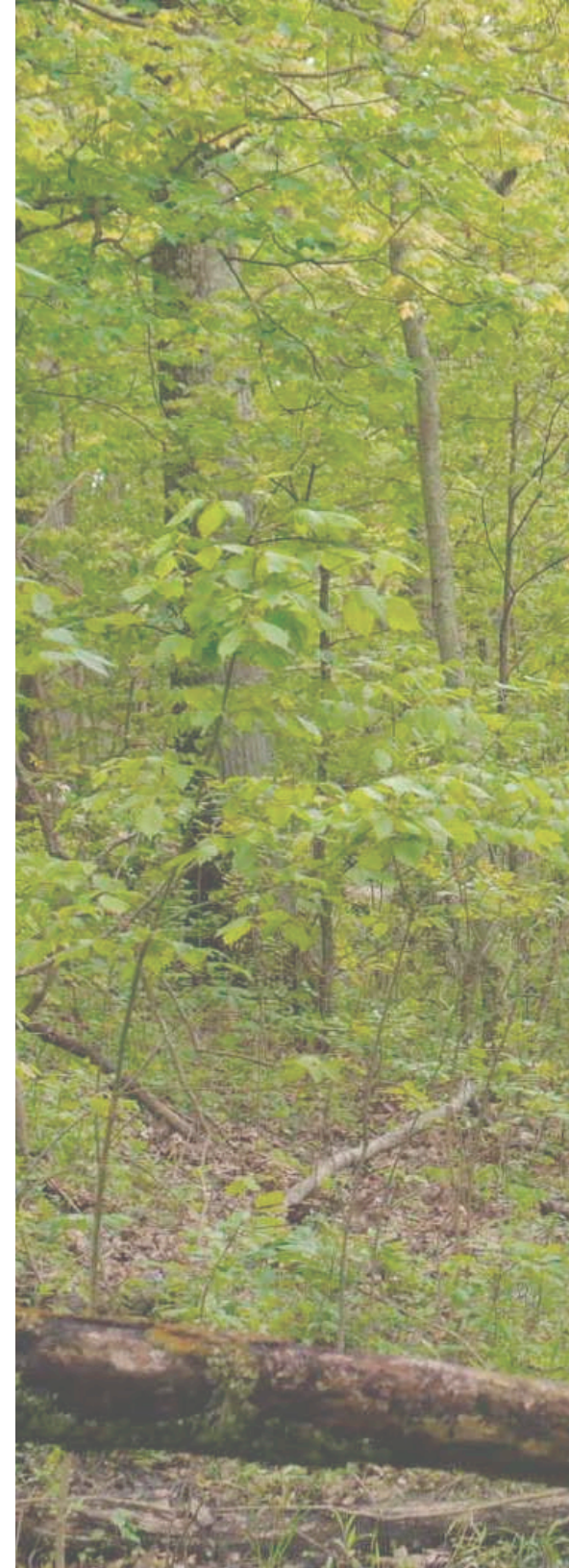
Minimum length of vertical curve

- Establish Stopping Sight Distance (SSD) for crest curve

Recommended Speed:

30mph = 1.30%

20mph = 2.9%



DESIGN REFERENCES:

- AASHTO “Guidelines for the Development of Bicycle Facilities,” (1999 or latest edition)
- FHWA Publication No. FHWA-EP-01-027, “Best Practices Design Guide Part 2, Designing Sidewalks and Trails for Access,” (2001)
- OMUTCD “Ohio Manual of Uniform Traffic Control Devices (2005 or latest edition, Chapter 9)