

Town of Harrisburg
Comprehensive Bicycle, Pedestrian,
& Greenway Master Plan

June 2015



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EXECUTIVE SUMMARY

A. PURPOSE

The purpose of this Comprehensive Bicycle, Pedestrian, and Greenway Master Plan (2015) is to evaluate, assess, and make recommendations regarding bicycle, pedestrian, and greenway needs for the Town of Harrisburg for 2015 – 2025. The goal of this plan is to put in place a clear, logical, and precise guideline that can be used for future development and growth of the Town of Harrisburg's Bicycle, Pedestrian, and Greenway System.

The development of the Harrisburg Bicycle, Pedestrian, and Greenway System will occur over time. Bicycle, pedestrian, and greenway facilities and segments will more than likely be developed one at a time, focusing first on priority projects that have been identified in this Comprehensive Plan. As development continues within the town of Harrisburg and land uses evolve, bicycle, pedestrian, and greenway facility locations and priorities may need to take better advantage of site conditions and connection opportunities. The following steps are recommended to begin the process of transforming planned bicycle, pedestrian, and greenway segments into real facilities and connections for all Harrisburg residents to enjoy.

B. BUILD PUBLIC SUPPORT

The Harrisburg Comprehensive Bicycle, Pedestrian, and Greenway Plan is a product of the stakeholders and residents of Harrisburg. Public involvement is critical to any successful planning process. Not only is public input crucial during the planning of the Harrisburg Bicycle, Pedestrian, and Greenway System, but the next step of the facility development process involves continued public involvement and support for the proposed bicycle, pedestrian, and greenway facilities outlined in this plan.

It is the recommendation of this comprehensive plan that the town's Parks and Recreation Advisory Board promote and support the implementation of the plan through:

- The education of citizens on the objectives of the master plan and multiple bicycle, pedestrian, and greenway facility needs
- The coordination with other entities, programs, and departments to prioritize bicycle, pedestrian, and greenway facility development and acquisition through a point-based system
- The identification and solicitation of resources to accelerate land acquisition and bicycle, pedestrian, and greenway facility construction
- The development of a regional bicycle, pedestrian, and greenway system by working with surrounding communities to establish linkages to their recreational and natural resources

It is also the recommendation of this comprehensive plan that the town's Planning and Zoning Advisory Board promote and support implementation of the plan through:

- The education of citizens on the objectives of the master plan and multiple bicycle, pedestrian, and greenway facility needs
- The identification and solicitation of resources to accelerate land acquisition, detailed design and feasibility studies, and construction of bicycle, pedestrian, and greenway facilities
- The development of a comprehensive bicycle, pedestrian, and greenway system in Harrisburg by utilizing the rezoning and development process to encourage dedication of lands and access and/or trail easements, and construction of required facilities

C. PLAN AND DEVELOP PRIORITY BICYCLE, PEDESTRIAN, AND GREENWAY FACILITIES

It is unrealistic to expect the Town of Harrisburg to develop the entire Bicycle, Pedestrian, and Greenway System within a short period of time. A phased implementation plan for land acquisition, funding, design, construction, and maintenance of facilities is necessary. Initial implementation efforts should focus on priority bicycle, pedestrian, and greenway projects.

D. IDENTIFY FUNDING AND FINANCING

The Town of Harrisburg should pursue a variety of funding sources for the development of the Bicycle Pedestrian, and Greenway System, including funding for land acquisition, design, construction, and maintenance. Many government entities are unable to fully fund the development of every bicycle, pedestrian, and greenway facility within a network using in-house funds. It is recommended that the Town of Harrisburg develop a multi-tiered approach for funding development using a variety of financing options, including public funding (federal, state, and local), as well as funding from private sources. A summary of potential funding sources is provided in Appendix 2.

E. EVALUATE LAND OR RIGHT-OF-WAY ACQUISITION OPTIONS

The acquisition of land for bicycle, pedestrian, and greenway development is an important and necessary step of the development process. Land acquisition provides the land resources necessary for development of bicycle, pedestrian, and greenway facilities, protects sensitive environmental and natural resources, and preserves historic and cultural treasures. The Town of Harrisburg should utilize a variety of land acquisition methods, which may include purchase, donations, zoning and development regulations and/or developer contributions. Detailed descriptions of these methods can be found in Chapter 6, D. Land Acquisition Strategies of this document.

F. DESIGN, CONSTRUCT, AND MAINTAIN BICYCLE, PEDESTRIAN, AND GREENWAY FACILITIES

As the Town of Harrisburg selects a segment(s) of the Bicycle, Pedestrian, and Greenway System and acquires necessary land and/or easements for the facility, the design and construction of the facility can begin. The town and its partners will need to determine the desired use or uses for each facility. The facility type will be determined by the desired use(s), existing site conditions, cost of construction, and required level of maintenance. Typical bicycle, pedestrian, and greenway surface materials include natural surface, crushed stone, asphalt, and concrete. Appendix 1 of this Comprehensive Bicycle, Pedestrian, and Greenway Plan provides further description and design guidelines for the development of the Harrisburg Bicycle, Pedestrian, and Greenway System.

G. CONCLUSION

The Harrisburg Comprehensive Bicycle, Pedestrian, and Greenway Plan represents a collaborative planning process for the development of the Harrisburg Bicycle, Pedestrian, and Greenway System. Now that the master planning process is complete, the next steps are for the stakeholders, citizens, and staff of the Town of Harrisburg to transform this plan from proposed bicycle, pedestrian, and greenway facilities on a map to actual facilities on the ground. The Harrisburg Bicycle, Pedestrian, and Greenway System will provide an important connection for Harrisburg, linking residents to the history and places that make the town unique.





- A. Introduction
- B. Vision Statement
- C. Plan Goals and Objectives

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INTRODUCTION

A. INTRODUCTION

The Harrisburg Bicycle-Pedestrian Connectivity Study was completed for the Town of Harrisburg in July 2006 by the UNC Charlotte Urban Institute. The purpose of this study was to inventory and assess pedestrian and bicycle facilities within the Town limits, especially within close proximity to important recreational and retail destinations. The study provided recommendations to improve pedestrian and bicycle connectivity within Harrisburg. Closing in on ten years post study, it is time to update findings and recommendations of the 2006 connectivity study.

B. VISION STATEMENT

The purpose of this Comprehensive Bicycle, Pedestrian, and Greenway Master Plan (2015) is to evaluate, assess, and make recommendations regarding bicycle, pedestrian, and greenway needs for the Town of Harrisburg for 2015 – 2025. The goal of this plan is to put in place a clear, logical, and precise guideline that can be used for future development and growth of the Town of Harrisburg's Bicycle, Pedestrian, and Greenway System.

C. PLAN GOALS AND OBJECTIVES

Goal 1: Provide safe bicycle, pedestrian, and greenway facilities throughout the town that are convenient for all user types

- Objective: Provide safe bicycle and pedestrian access to major commercial and service centers, health care centers, public facilities, residential areas, and outdoor resources
- Objective: Provide a system that safely accommodates all experience levels and ages of users
- Objective: Minimize potential conflicts between bicyclists, pedestrians, and vehicles by separating bicycle and pedestrian facilities from roadway facilities where possible
- Objective: Provide signage, markings, and improvements to ensure safe and easy usage of all bicycle, pedestrian, and greenway facilities
- Objective: Educate bicyclists and pedestrians on the rules of the road and proper interactions with vehicular traffic
- Objective: Provide secure bike parking by installing bike racks throughout the town
- Objective: Ensure that bicycle, pedestrian, and greenway facilities are regularly cleared of debris and obstacles that may restrict mobility of users

Goal 2: Improve connectivity between neighborhoods and important destinations within and around the Town of Harrisburg

- Objective: Identify the strengths and weaknesses of the Town of Harrisburg's existing bicycle and pedestrian infrastructure
- Objective: Assess the condition of existing sidewalks, crossings and bikeways
- Objective: Connect residential areas with major commercial and service centers, health care centers, public facilities, and outdoor resources via bicycle, pedestrian, and greenway facilities
- Objective: Encourage or require developers to include bicycle, pedestrian, and/or greenway facilities in all projects
- Objective: Establish a land acquisition program for bicycle, pedestrian, and greenway facilities
- Objective: Coordinate future roadway construction and improvements projects with NCDOT to push for the inclusion of bicycle, pedestrian, and greenway facilities

- Objective: Provide connections to safe rural roads for distance cyclists

Goal 3: Provide and promote opportunities for walking and bicycling in and around Harrisburg to improve public health

- Objective: Inform the public of the health benefits of walking and bicycling
- Objective: Provide safe bicycle and pedestrian access to major commercial and service centers, health care centers, public facilities, residential areas, and outdoor resources
- Objective: Provide a system that safely accommodates all experience levels of users
- Objective: Provide bicycle, pedestrian, and greenway facility maps and make them widely available throughout the town
- Objective: Partner with local businesses to provide incentives to those that walk or bike to work, or allow employees time to walk or bike while at work (some employers may offer incentives for physical activity through their insurance provider)

Goal 4: Enhance the quality of life for all Harrisburg residents by expanding recreation opportunities to include more bicycle, pedestrian, and greenway facilities

- Objective: Promote public access easements and open space corridors through existing and future development areas for use as linear parks
- Objective: Develop greenway corridors that link existing and proposed recreation facilities

Goal 5: Create bicycle, pedestrian, and greenway facilities so that they may serve as an alternate mode of transportation

- Objective: Provide safe bicycle and pedestrian access to major commercial and service centers, health care centers, public facilities, residential areas, and outdoor resources
- Objective: Coordinate future roadway construction and improvements projects with NCDOT to push for the inclusion of bicycle, pedestrian, and greenway facilities
- Objective: Coordinate bicycle, pedestrian, and greenway projects with the Cabarrus Rowan Metropolitan Planning Organization (CRMPO) to maximize funding opportunities

Goal 6: Provide signage and markings to ensure safe and easy usage of all bicycle, pedestrian, and greenway facilities in the town

- Objective: Clearly mark all bicycle and pedestrian routes throughout the town
- Objective: Incorporate signage at key points, especially at intersections and mid-block crossings to ensure the safety of the user
- Objective: Create bicycle, pedestrian, and greenway facility maps and make them widely available throughout the town



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BENEFITS OF BICYCLE, PEDESTRIAN, AND GREENWAY FACILITIES

A. INTRODUCTION

Any good investment provides a beneficial return. Bicycle, pedestrian, and greenway facilities provide a great return on the investment required if properly planned, built, and maintained. The benefits of bicycle, pedestrian, and greenway facilities are multifaceted and the subject of numerous studies and reports. The following overview of the many benefits provided by bicycle, pedestrian, and greenway facilities is divided into four categories:

- Connecting Communities
- Health Benefits
- Economic Impacts
- Environmental Benefits

B. CONNECTING COMMUNITIES

The primary function of transportation facilities, be it urban streets, rural roads, or interstate highways, is to connect one place to another. Bicycle, pedestrian, and greenway facilities serve the same purpose. Well planned facilities provide useful connections between homes, schools, businesses, parks, and other nearby destinations.

Provide neighborhood connections

Connections to bicycle, pedestrian, and greenway facilities allow residents to choose the form of transportation they would like to use on a daily basis. The absence of such facilities dictates that all trips, no matter how short, are made via automobile. A recently completed study by the U.S. Department of Transportation, the Federal Highway Administration, and the Bicycle and Pedestrian Information Center indicates that when bicycle, pedestrian, and other trail-type facilities are available, people will use those facilities.

Their study indicates that the number of trips taken by residents from their homes to nearby destinations using non-vehicular modes of transportation increased by 25% between 2001 and 2010. During this same time period, funding for the development of bicycle, pedestrian, and other trail-type facilities has increased . The provision of dedicated bicycle, pedestrian, and greenways facilities provide alternative choices in transportation.

Facilities for all to use and enjoy

Where most transportation facilities are exclusively designed for vehicles, bicycle, pedestrian, and greenway facilities are designed to be inclusive of most non-motorized modes of travel. These facilities are designed to accommodate a broad range of users, different age groups, skill levels, and ability levels. The facilities designed to be part of the Harrisburg Bicycle, Pedestrian, and Greenway System will be easy to access. Some facilities will be located along local streams and creeks, while others may be located within the rights-of-way of roads. Bicycle, pedestrian, and greenway facilities are made to accommodate a variety of non-vehicular uses including walking, jogging, cycling, skating or rollerblading, and in some instances, horseback riding. For this reason the facilities are designed to be wide enough to support all potential uses. These facilities are primarily built with materials that provide stable and consistent surfaces that meet the requirements of the Americans with Disabilities Act, and are designed to minimize steep slopes to allow the facility to be utilized and experienced by people of all skill levels and abilities.

Connects communities to nature

Much has been written about peoples' need to interact with nature. Last Child in the Woods, by Richard Louv, explores the reduced connection between children and nature, its effects on children, and how that connection can be made again. A recent article in Psychology Today shares that "walking through green spaces can put the brain into a meditative state, allowing you to pay attention to the world around you, while creating the calmness needed for reflection. It's in this calm, quiet reflective state where our creativity can flourish." Bicycle, pedestrian, and greenway facilities provide physical connections to nature in any environment, whether it is through a developed park, wooded floodplain within an urban context, or a conservation easement or nature preserve.

C. HEALTH BENEFITS

Many people understand that exercise is healthy and it is something that most people agree they need to do more often. However, many people lose sight of just how important exercising is and how it can positively affect day to day life. Experts continue to draw links between exercise and its positive effects on our health.

The American Heart Association states that research has shown that the benefits of walking and moderate physical activity for at least 30 minutes a day can help you reduce the risk of coronary heart disease, improve blood pressure and blood sugar levels, improve blood lipid profile, maintain body weight and lower the risk of obesity, enhance mental well-being, reduce the risk of osteoporosis, reduce the risk of breast and colon cancer, and reduce the risk of non-insulin dependent (type 2) diabetes .

Parks and recreation facilities that offer a safe location for exercise can provide residents with easily accessible options for a healthier lifestyle.

Encourages physical activity

Bicycle, pedestrian, and greenway facilities can be constructed in a variety of environments. Traditional parks often require certain types of land for development, provide amenities that support a single activity, and can be much more costly to develop. Furthermore, traditional parks tend to function as a destination point where physical activity takes place. Often the users drive to the park, take sports equipment and refreshments with them and plan to spend several hours enjoying the park. The adaptable nature of bicycle, pedestrian, and greenway facilities provides an advantage when compared to traditional parks. Such facilities serve as convenient and accessible venues that support a variety of recreational activities, such as walking, cycling, running, canoeing or kayaking (on blueways), and horseback riding. By design, these facilities function as linear corridors, purposefully located to create linkages between neighborhoods, providing direct access to a recreation resource. Bicycle, pedestrian, and greenway facilities can help make the choice to exercise easier.

Relieves stress and improves psychological health

Many studies have been conducted to measure the benefits that regular exercise offers our physical health. Researchers also recognize the

effects that exercise can have on mental health. A Duke University study tracked subjects suffering from depression. The study results indicated that depression was successfully treated for 60% of test subjects who exercised just 30 minutes a day for three days a week without the use of medication. Interestingly enough, the study also found that depression was successfully treated for the same percentage of test subjects who only used antidepressant medication. Many people are turning to trail activities as their main source of exercise and resulting mental health benefits.

Health care professionals have been slow to encourage exercise as part of a treatment plan for anxiety, opting first for medication. Some within the research community are trying to change this. Two researchers (Jasper Smits of Southern Methodist University and Michael Otto of Boston University) have written a book for mental health professionals and are currently developing literature for general physicians and the public, encouraging the prescription of exercise. Such prescriptions would include recommended amounts, or doses, of exercise. Helpful tips for beginning and continuing an exercise program will be included within each prescription. The direct link between regular exercise and the reduction of anxiety are unknown. Major questions linger as to which types of exercise work best, how much exercise is enough, and how exactly exercise helps with anxiety. Theories of the exercise/anxiety relationships include the brain's chemical response to activity, the effect that exercise has on improving sleep, and the sense of accomplishment given to participants of regular exercise. Despite the insufficient scientific data on the subject, many agree that the benefits stretch beyond physical health.

It is important to provide easily accessible parks and recreation facilities for residents to use for exercise and recreation. Upon the completion of the Town of Harrisburg's Comprehensive Bicycle, Pedestrian, and Greenway Master Plan, and the development of the system, residents will have a multi-use facility that connects their neighborhood and extends the current recreational infrastructure within the town, providing additional places for residents to exercise.

C. ECONOMIC BENEFITS

The positive impacts that bicycle, pedestrian, and greenway facilities have on communities are far-reaching. Economic data from communities where such facilities have been developed provide real world numbers on the direct and indirect positive economic impacts that they provide. These numbers help justify the expenditure of public dollars to develop transportation and recreational facilities that provide both an improved quality of life and positive long term economic impacts on nearby businesses, municipalities, and homeowners.

Increases property values

Greenways are one of the most desired amenities that homeowners look for when purchasing a house. A study by the National Association of Realtors shows that over 50% of Americans agree that homes and businesses should be located within walking distance of stores and shops to reduce the use of automobiles for every shopping trip. Armed with this information, many developers provide greenways as amenities within new residential communities. One study in North Carolina indicated that a developer put a premium on homes located near a greenway. Despite this higher price, the homes nearest to the greenway sold first. Homeowners are willing to pay more for homes located near a greenway. The convenience of living within a short distance from greenways provides added value to nearby properties.

Attracts tourism

Many communities that have invested in their local and regional bicycle, pedestrian, and greenway networks have found that these networks attract visitors. These visitors provide a much needed boost to local economies when the bicycle, pedestrian, and greenway facilities are properly marketed. The communities along the KATY Trail, a 185-mile trail in Missouri, partnered together to market toward outdoor enthusiasts interested in two-to-four day excursions. This combined marketing effort allows local towns to benefit from marketing exposure they would not be able to afford otherwise.

Economic benefits associated with bicycle, pedestrian, and greenway facilities are not just limited to large regional networks. These benefits can also be experienced in small, rural towns. Abingdon and Damascus, Virginia are two small towns connected by the Virginia Creeper Trail. A survey of trail users conducted as part of a study by the Virginia Department of Conservation in 2004 estimates that trail users pump \$2.5 million into the

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Ability to attract new business and retain nearby businesses

Businesses are located along highly traveled roadways to attract potential customers. A business located along a high volume highway increases the exposure that business has to the traveling public. Increased exposure results in increased revenue. Restaurants, hotels, gas stations, and other industries that cater to the motoring public seek locations that give them the best chance of attracting customers.

As the popularity and use of bicycle, pedestrian, and greenway facilities continue to grow, business owners have taken notice in a similar fashion. Business owners in New Orleans located, and in some cases moved, their businesses to be closer to the Lafitte Greenway. Business owners along the Great Allegheny Passage Trail and the C&O Canal Trail have experienced increases in revenue since the completion of those trail networks. According to the Year 3 Findings Report for the Greenville Health System Swamp Rabbit Trail, two bike shops along the trail reported an average of 75% of their customers purchased bikes to use the Swamp Rabbit Trail in Year 3, and reported a revenue range from \$300,000 to \$400,000 from trail users. The majority of the businesses surveyed for the Year 3 Findings Report reported increases in sales/revenue ranging from 10% to as high as 85%, with annual revenue from trail users from non-bike shops being as high as \$400,000 according to the managers and owners who were surveyed. Several owners report repeat customers from one year to the next, a trend that contributes to staying in business. Bicycle shops, bed and breakfasts, campgrounds, restaurants, and other similar businesses have found success by locating near trails.

Some government agencies have found it helpful to produce literature and guidelines to help local communities take full economic advantage of bicycle, pedestrian, and greenway facilities. The Iowa Department of Transportation developed a handbook entitled *Implementing Trail-Based Economic Development Programs*. The handbook provides a list of guiding principles that helps communities determine the types of businesses that will be most likely frequented by trail users and identify the best locations for those businesses. Case studies from similar communities, lessons learned by communities located along existing trails, and a step-by-step, how-to guide for the development of a plan for capitalizing on trail recreation are also provided.

D. ENVIRONMENTAL BENEFITS

Most people understand that bicycle, pedestrian, and greenway facilities provide many benefits, however, many do not realize the environmental benefits that such facilities can provide. These benefits are very important given the ever expanding development of previously undeveloped lands. Harrisburg's population grew by 5.7% between 2000 and 2013 according to Census data. However, the development associated with any growth can negatively impact our natural resources. Bicycle, pedestrian, and greenway facilities help preserve natural amenities, protect agricultural lands, improve water and air quality, and provide habitats for native wildlife.

Preserve natural and agricultural land uses

Greenways possess the unique ability to provide transportation facilities and connections between communities while protecting and preserving existing land uses. Most roadways impact wide swaths of land, require extensive site disturbance, and invite development. Greenways, by contrast, work within narrow corridors, respond to existing land features, and help preserve existing natural features and land uses. Conservation easements or fee simple purchases of land for greenways help ensure that protected natural open space is preserved. These conservation efforts may also protect rural and agrarian land uses through agricultural conservation easements which restrict development, but allow for agricultural operations to continue in perpetuity.

Improve water quality

The protection and preservation of natural areas along streams provides many very important benefits. Riparian buffers, or protected, undeveloped, and forested lands along either side of streams, act as filters for runoff into streams. These buffers have been shown to remove pollutants, such as sediment, phosphorus, and nitrates from runoff. The trees within riparian buffers help to shade existing streams, keeping temperatures down and sustaining native fish populations. The roots of vegetation within riparian buffers help to stabilize soils within floodplains, thereby reducing the risk of stream bank erosion.

The linear nature of greenways mimics the natural alignment of streams and water courses. The similar nature of the two provides added benefit in the protection of personal property within floodplains. The National Flood Insurance Program states that the average annual costs of losses, due to

floods over the last 10 years within the U.S., equals \$2.7 billion. The cost of damage to homes and structures can be dramatically reduced by protecting floodplains through the implementation of development restrictions and the acquisition of lands for greenways.

Improve air quality

Bicycle, pedestrian, and greenway facilities can help improve air quality in two distinct ways. First, these facilities provide alternative transportation routes. An EPA study in 2006 revealed that pollution from automobiles causes over half of the carbon monoxide, over a third of the nitrogen oxides, and almost a quarter of the hydrocarbons in our atmosphere. When properly planned, these facilities can be used by cyclists and pedestrians to commute to and from work, visit a park, or run errands. The reduced use of automobiles for such trips decreases the amount of pollution being delivered into the atmosphere.

The second way that these facilities improve air quality is through the trees that are preserved and protected through greenway development. Trees can help reduce air pollutants such as carbon monoxide, nitrogen dioxide, ozone particulates, and sulfur dioxide through gas intake in leaves. Tree surfaces can intercept pollution particulates in the air. Preserving trees along greenways within urban areas can have a significant impact on reducing the amount of localized air pollution.

Provide wildlife habitats and wildlife corridors

Natural, undeveloped lands provide habitats for numerous varieties of flora and fauna. Greenways help to preserve these natural areas, protecting habitats for birds, mammals, and plants. Greenways also provide connectivity between fragmented natural areas within urban environments. Signage can be added to greenways to educate users on the types of local plants and animals that benefit from the preservation of land on which these facilities exist.



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3

EXISTING CONDITIONS

A. GEOGRAPHY OF THE STUDY AREA

The Town of Harrisburg is located in southwest Cabarrus County and directly borders Concord to the north and Mecklenburg County to the west. The town's central location in the state and its proximity to I-85 and I-485 creates easy access from Harrisburg to other destinations in the mid-Atlantic/southeastern region.

Harrisburg occupies an area of approximately nine square miles and is one of six municipalities located in Cabarrus County. Harrisburg's Town Center is located just five miles east of the University of North Carolina at Charlotte and just three miles south of Charlotte Motor Speedway. NC 49 is the major transportation corridor in Harrisburg, bisecting the town as it runs east to west from Asheboro to Charlotte.

The town is notable for an extensive network of rivers and creeks, including the Rocky River, Mallard Creek, Back Creek, Fuda Creek, and Reedy Creek.

B. HISTORY

Harrisburg was settled mostly by Scotch-Irish sometime between 1732 and 1765 and is still home to families that arrived in the 1700s. According to the Cabarrus Genealogical Society and other local sources, a pioneer likely supplied the original name for the town - Query's Quarter. The town's name change was derived from the Robert Harris family, who owned the land that the railroad purchased for construction of a depot in the 1850s. Harris Depot then became Harrisburg with the construction of the local post office in 1874.

A business district and town center developed near the railroad, but in 1923, with the construction of what is now known as N.C. 49, Harrisburg's business district shifted to the new road. Harrisburg Depot closed in 1933.

On March 28, 1973 the North Carolina General Assembly ratified a bill to incorporate the Town of Harrisburg.

C. POPULATION

Due to its proximity to Charlotte and convenient highway access, Harrisburg has developed into one of the top ten most affluent zip codes in the Charlotte region, with population growing from 2,000 a decade ago to over 13,000 today. The town is projected to be one of the top five fastest growing municipalities in North Carolina over the next ten years, according to the NC Office of State Budget and Management.

Harrisburg's population will continue to increase and so will the need for bicycle, pedestrian, and greenway facilities. Such facilities are an important element in the overall recreation plan for the town. This master plan identifies bicycle, pedestrian, and greenway facilities that are instrumental for the development of a comprehensive system. Providing these facilities for the community will be an essential part of the future transportation network, economic foundation, and recreational activity of Harrisburg. By developing these facilities, the town will attract new residents to the area, which will increase property values, tax revenues and increase health awareness.

D. EXISTING PLANS

Livable Community Blueprint for Cabarrus County (2002)

The Livable Community Blueprint (LCB) was prepared as a guide to assist Cabarrus County and the municipalities (including Harrisburg) in developing parks and recreation facilities and to identify bicycle and pedestrian routes in which the government entities could focus on during the following ten years. Bicycle and pedestrian priorities for the Harrisburg area included:

- Back Creek: From Rocky River to county line (4.6 miles)
- Rocky River: From Mallard Creek to the proposed middle school site (6.9 miles)
- Harrisburg Town Connector: connecting the Town Park to the new school site to Town Center and the Rocky River (2.0 miles)

The LCB takes into consideration that every citizen who resides in Cabarrus County should have access to quality parks and recreation services and that in order to meet the demands for recreation opportunities and alternate transportation routes, the county and the municipalities must be proactive in developing a comprehensive bicycle and pedestrian system.

Harrisburg Bicycle-Pedestrian Connectivity Study (2006)

The Harrisburg Bicycle-Pedestrian Connectivity Study was completed in June 2006 by the UNC Charlotte Urban Institute. The study inventoried and assessed pedestrian and bicycle facilities within the town limits and identified the strengths and weaknesses of the town's existing bicycle and pedestrian infrastructure. The study provided recommendations to improve pedestrian and bicycle connectivity throughout Harrisburg.

Carolina Thread Trail Master Plan for Cabarrus County Communities (2009)

The Carolina Thread Trail Master Plan for Cabarrus County Communities was adopted by the Town of Harrisburg in 2009 and outlines the steps necessary to preserve natural amenities, conserve historic sites, and provide public recreation facilities through greenway and trail development. The Carolina Thread Trail is a regional network of greenway, trails, and conserved lands that will reach approximately 2.3 million citizens throughout 15 counties in North and South Carolina. The adopted Carolina Thread Trail Route is highlighted as part of this Comprehensive Bicycle, Pedestrian, and Greenway Master Plan.

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Harrisburg Area Land Use Plan (2010)

The Harrisburg Area Land Use Plan was completed in June 2010 and serves to define a direction for future growth and development in and around Harrisburg. The plan was adopted by the town as a policy document that conveys a future vision and the steps to achieve that vision. The following recommendations were outlined in this plan as it pertains to parks, recreation, greenways and open space:

- PR-1: Ensure consistency in plans for parks, recreation, greenways and open space
- PR-2: Plan for greenway, pedestrian and bicycle paths linking neighborhoods through an interconnected network within floodplain corridors, utility easements, and road rights-of way
- PR-3: Strategically work with private and public recreation providers to create high-quality recreation opportunities to all residents while reducing fiscal impacts

Town of Harrisburg Parks and Recreation Master Plan (2010)

The Parks and Recreation Master Plan for the Town of Harrisburg was completed in October 2010. A major recommendation of this plan is the development of a Pedestrian Master Plan to address the community desire for greater connectivity through the use of sidewalks and greenways. It is also recommended that the Harrisburg Parks and Recreation Department work with the town's Planning Department to create a Greenways and Open Space Master Plan. It was noted that public input showed a strong desire of citizens to be able to safely bike and walk to various destinations within Harrisburg. The following planning and programming policies were outlined in the Parks and Recreation Master Plan regarding greenways:

- Provide access and connectivity to the many destinations throughout the community for school, play, work, shop, and relax
- Develop trails and parks along major streams and the Rocky River
- Develop bike lanes along primary transportation routes to provide safe passage to schools, businesses, and parks
- Provide recreation opportunities along trails for biking, hiking, and environmental interpretation
- Connect neighborhoods to parks, schools, and businesses
- Enhance visual interest of the entrance corridors by protecting viewsheds and buffering unattractive land uses
- Protect streams and the Rocky River through prudent land use ordinance and subdivision regulations

Cabarrus-Rowan Metropolitan Planning Organization Comprehensive Transportation Plan

The Cabarrus-Rowan Metropolitan Planning Organization (MPO) Comprehensive Transportation Plan (CTP) is a joint effort between the Cabarrus-Rowan MPO and the North Carolina Department of Transportation. The CTP is currently being updated, and future multimodal transportation needs will be determined and recommendations will be provided for a 25-30 year time frame. The plan will include recommendations for bicycle and pedestrian facilities in and around Harrisburg.

E. TRIP ATTRACTORS/ DESTINATIONS

The following destinations were identified to connect with bicycle, pedestrian, and greenway facilities to better connect Harrisburg's natural amenities, historic landmarks, cultural experiences, existing developments and facilities, and population centers:

Back Creek
Blume Subdivision
Brookdale Shopping Center
Canterfield Subdivision
Charlotte Motor Speedway
CMC-Harrisburg
Fuda Creek
Harrisburg Elementary School
Harrisburg Park
Harrisburg YMCA
Hickory Ridge Middle and High Schools
Holcombe Subdivision
J.M. Robinson High School
Meritage Subdivision
The Mills at Rocky River
Morrison House Historic Site
Pharr Mill Historic Site along Rocky River
Pharr Mill Park
Pitts Elementary School
Reedy Creek
Rocky River
Rocky River Crossing Subdivision
Rocky River Presbyterian Church
Rural Areas of Harrisburg
Stallings Park
State Bike Routes
Town Center
UNC Charlotte

F. EXISTING FACILITIES

Bicycle Facilities

Although there are currently no improved bicycle facilities in Harrisburg, two state bike routes traverse through the town. A portion of Route 1 comes into town along Stallings Road and then heads south along Hickory Ridge Road. Route 6, which is a portion of the state's Piedmont Spur Route, comes down from Concord along Pitts School Road, travels north along Roberta Road for a short distance until it reaches Blackwelder Road, then heads south along Pharr Mill Road. Roberta Road serves as an unsigned connector route between Routes 1 and 6. A note of caution from the NCDOT's Bicycling Cabarrus County map states:

"The highlighted routes shown on this map follow roads of the North Carolina highway system and local streets. These roads do not include any special accommodations for bicycles, such as paved shoulders or bike lanes. Care has been taken to select more lightly traveled roads. In a few places, however, short segments of more heavily traveled roads are used to make connections where no other options exist. The Cabarrus County bike routes are not designed to be used by children as their ability to judge traffic conditions and driver actions is not well developed."

Moving forward, Harrisburg's Unified Development Ordinance states that "the requirement for bike lanes shall be determined by the adopted Bicycle, Pedestrian, and Greenway Plan; if shown on the plan, the developer is responsible for improving the street with a bike lane for the entire frontage of the property being subdivided."

Pedestrian Facilities

The Town of Harrisburg has done a fairly good job at connecting the town via sidewalks. Unfortunately, most residential developments built prior to the adoption of the town's UDO in 2001 do not include sidewalks. Since the adoption of the UDO, "sidewalks shall be provided for the safe movement of pedestrians, separate from the movement of vehicular traffic, through residential areas, as well as to commercial, industrial and public places. Sidewalks shall be constructed along both sides of all new streets in a subdivision and along any street that provides access to the subdivision."

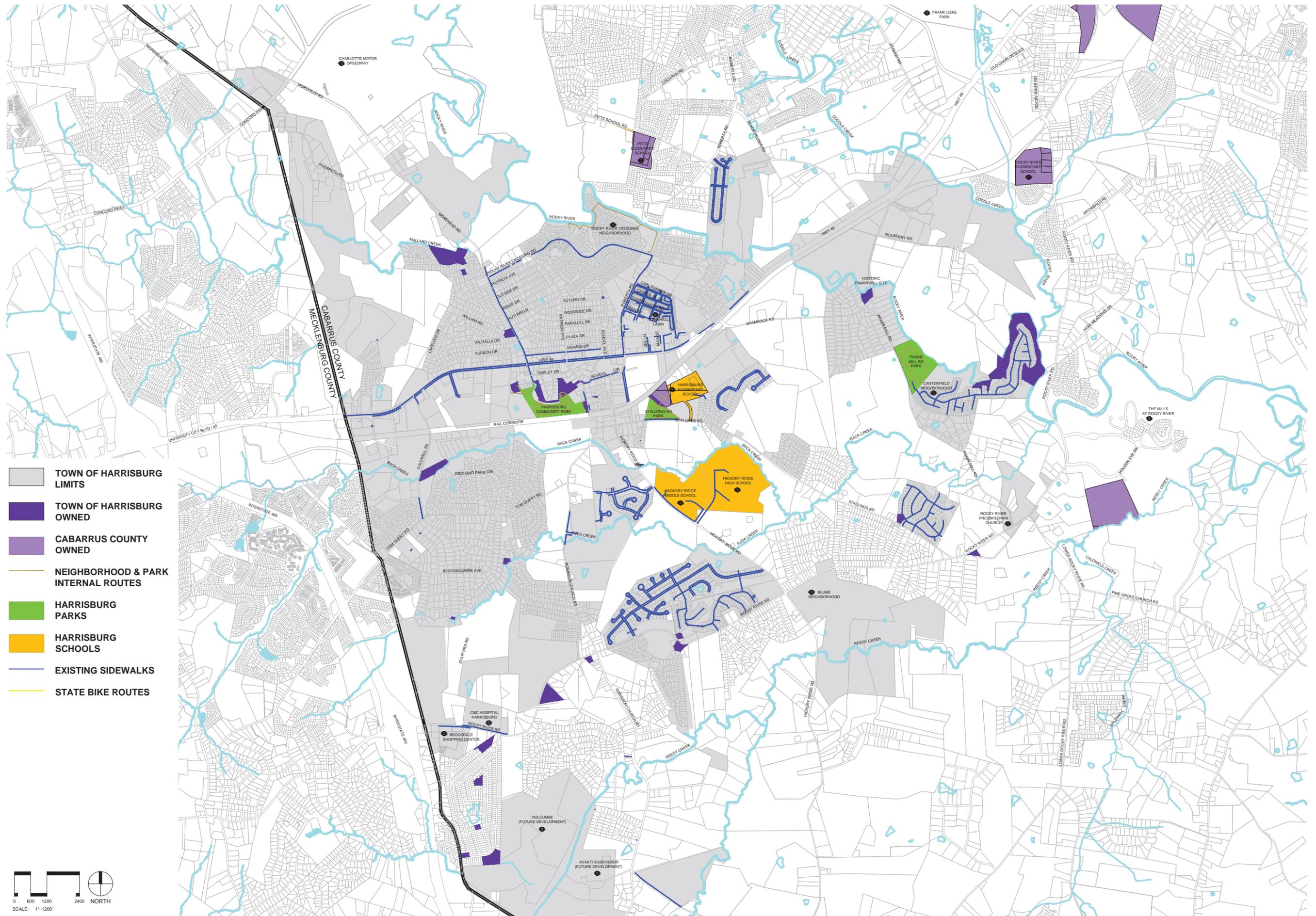
Greenway Facilities

Currently, there are no existing public greenways within the town of Harrisburg. However, there is existing trail within Pharr Mill Park that could be included as a greenway facility, and also signed as part of the Carolina Thread Trail. There is also existing trail within the Rocky River Crossing subdivision, but is an internal neighborhood trail and not currently open to the public. Although there are no existing greenway facilities, the Town of Harrisburg and the Carolina Thread Trail are working together to establish trail easements along the Rocky River for greenway development in the near future. There are also new developments along Fuda Creek and Reedy Creek that the developers are either setting aside trail easements as part of required open space dedications, or building the trail as part of the future greenway system.

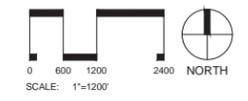
Map 1 highlights all of the existing bicycle, pedestrian, and greenway facilities within the town of Harrisburg.



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- TOWN OF HARRISBURG LIMITS
- TOWN OF HARRISBURG OWNED
- CABARRUS COUNTY OWNED
- NEIGHBORHOOD & PARK INTERNAL ROUTES
- HARRISBURG PARKS
- HARRISBURG SCHOOLS
- EXISTING SIDEWALKS
- STATE BIKE ROUTES



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- A. Overview
- B. Types of Users
- C. Bicycle and Pedestrian Crashes
- D. Community Meetings and Survey Results

4

NEEDS ASSESSMENT

A. OVERVIEW

(adapted from Harrisburg's Bicycle-Pedestrian Connectivity Study, 2006)

It is important for people of all ages and abilities to have a safe option for bicycle and/or pedestrian travel. Without a well-planned infrastructure of sidewalks, bike facilities, greenways, and trails, it is difficult to safely walk to school, work, shopping, and/or places of recreation. If children and adults have to be dependent on the motor vehicle as their sole means of transportation, they will have limited opportunities for outdoor exercise, contributing to obesity and chronic disease.

Most streets are designed for medium to high volumes of traffic and speeds far above 25 mph. Without appropriate pedestrian facilities, pedestrian fatalities rise exponentially according to the speeds, sharply increasing from a 5% fatality rate at 20 mph to 85% at 40 mph. Most pedestrian fatalities occur mid-block near parks and schools, killing the youngest (ages 5 to 9 years). Most bicycle fatalities occur along busy roads after dark and by inexperienced or misinformed riders.

In addition to impact on health and safety, lack of pedestrian and bicycle connectivity limits the chances for neighbors to interact socially. Disconnected streets and sidewalks prohibit pedestrians and bicyclists from easily accessing shopping and employment, whereas well-designed pedestrian shopping environments create destinations desirable to otherwise uninterested shoppers.

Disconnected streets and sidewalks leave no good alternate for residents other than to travel by motor vehicle. As Harrisburg continues to grow its population and job base, congestion will continue to increase if no alternative modes of travel, by way of a well-planned bicycle, pedestrian, and greenway system, are accessible within the Town.

B. TYPES OF USERS

Pedestrian

A pedestrian can be described as any person going on foot. This can be a person walking anywhere in town; along a sidewalk, through a neighborhood, from a parking lot to a work or shopping destination, in a park, etc.

Casual and Less Confident Bicycle Group

This bicycle group includes those users who most often only ride on low-traffic and/or low-speed streets.

Experienced and Confident Bicycle Group

This bicycle group includes users who are comfortable riding on most types of bicycle facilities, including roadways without any special treatments for bicyclists. The range of roadway types can be anything from busy roads with medium to high traffic volumes to low-traffic residential streets.



Casual/Less Confident vs. Experienced/Confident Riders

Experienced/Confident Riders	Casual/Less Confident Riders
Most are comfortable riding with vehicles on streets, and are able to navigate streets like a motor vehicle, including using the full width of a narrow travel lane when appropriate and using left-turn lanes.	Prefer shared use paths, bicycle boulevards, or bike lanes along low-volume, low-speed streets.
While comfortable on most streets, some prefer on-street bike lanes, paved shoulders, or shared use paths when available.	May have difficulty gauging traffic and may be unfamiliar with rules of the road as they pertain to bicyclists; may walk bike across intersections.
Prefer a more direct route.	May use less direct route to avoid arterials with heavy traffic volumes.
Avoid riding on sidewalks. Ride with the flow of traffic on streets.	If no on-street facility is available, may ride on sidewalks.
May ride at speeds up to 25 mph on level grades, up to 45 mph on steep descents.	May ride at speeds around 8 to 12 mph.
May cycle longer distances.	Cycle shorter distances: 1 to 5 miles is a typical trip distance.

Source: AASHTO: Guide for the Development of Bicycle Facilities, 2012

Children

Because children have a wide range of skills and cognitive capabilities, children are generally slower in recognizing and responding to rapidly changing situations. Because of this, children are included in a separate category of bicycle users.

C. BICYCLE AND PEDESTRIAN CRASHES

According to the North Carolina Bicycle and Pedestrian Crash Data Tool, there were 24 recorded pedestrian crashes between the years of 1997 and 2012 in Harrisburg. Of these reported incidents, 10 were at an intersection or intersection-related location, 9 at a non-intersection, and 5 at a non-roadway. Although exact locations are not provided through the state's Crash Data Tool, it is noted that 3 crashes were along a NC route, 2 along a state secondary route, 14 along a local street, 4 within a public vehicular area, and 1 along a private road or driveway. Of the 24 recorded pedestrian crashes, 16 were along a 2-lane road. Of the reported crashes, 17 were during daylight hours, with 2 at dusk, 1 during the night, but along a lighted roadway, and 4 at night along a non-lighted roadway. The following chart depicts the crash type:

Crash Type	Crash Year												Total
	'97	'98	'99	'02	'03	'04	'05	'06	'07	'08	'11	'12	
Backing Vehicle	0	0	0	0	0	0	0	0	1	0	0	0	1
Bus-Related	0	0	1	0	0	0	0	1	0	1	0	0	3
Crossing Roadway - Vehicle Not Turning	0	1	0	1	0	0	1	0	0	0	1	1	5
Crossing Roadway - Vehicle Turning	0	0	0	0	0	1	0	0	0	0	1	0	2
Dash / Dart-Out	0	0	0	2	0	0	1	0	0	0	0	0	3
Off Roadway	0	1	0	0	0	0	0	0	0	0	0	1	2
Pedestrian in Roadway - Circumstances Unknown	0	0	0	0	0	0	0	0	0	0	0	2	2
Unusual Circumstances	1	0	0	0	1	0	0	0	0	2	0	0	4
Walking Along Roadway	0	0	1	0	0	0	0	0	0	0	1	0	2
Total	1	2	2	3	1	1	2	1	1	3	3	4	24

Source: NC Bicycle and Pedestrian Crash Data Tool, www.pedbikeinfo.org

According to the North Carolina Bicycle and Pedestrian Crash Data Tool, there were 4 recorded bicycle crashes between the years of 1997 and 2012 in Harrisburg. Of these reported incidents, 2 were at an intersection, 1 at a non-intersection, and 1 at a non-roadway. Although exact locations are not provided through the state’s Crash Data Tool, it is noted that 1 crash was along a state secondary route, 2 along a local street, and 2 within a public vehicular area. Of the 4 recorded bicycle crashes, 2 were during daylight hours, with 2 at night along a lighted roadway. The following chart depicts the crash type:

Crash Type	Crash Year		Total
	'06	'12	
Crossing Paths - Intersection - Other / Unknown	1	0	1
Motorist Overtaking - Misjudged Space	0	1	1
Motorist Overtaking - Other / Unknown	0	1	1
Non-Roadway	0	1	1
Total	1	3	4

Source: NC Bicycle and Pedestrian Crash Data Tool, www.pedbikeinfo.org



D. COMMUNITY MEETINGS AND SURVEY RESULTS

Public involvement and the analysis of community wants and needs is critical to any successful public planning process. For this plan, two community engagement sessions were held during the spring of 2015. Each session was designed to educate and gather input from residents, with the input received being used to directly influence the development of the Comprehensive Bicycle, Pedestrian, and Greenway Plan for the Town of Harrisburg.

Approximately 50 individuals participated in the two community engagement sessions. The location and attendance for each session is included below and a summary of the sessions can be found in Appendix 3.

Saturday, April 11, 2015	Tuesday, May 12, 2015
8:00 – 11:00 am	5:00 – 7:00 pm
Harrisburg 5k, Town Center	Harrisburg Town Hall
Approx. Attendance: 25	Approx. Attendance: 25

In addition to the two community engagement sessions, an online survey was conducted with a total of 1,002 responses. Major survey findings are included below and all survey results can be found in Appendix 3.

- Majority of respondents feel that the need for more bicycle and pedestrian facilities within the town of Harrisburg is very important
- 37% of respondents currently use a bicycle or pedestrian facility on a weekly basis, 15% use a facility daily, and 18% never use bicycle or pedestrian facilities
- If bicycle and pedestrian facilities were more easily accessible, 45% of respondents would use them daily, and 38% would use them on a weekly basis
- The top 4 existing facilities in and/or near Harrisburg being used by respondents are the trails at Franke Liske Park, trails at Harrisburg Park, existing sidewalks, and trails at Pharr Mill Park
- 38% of respondents live 2-3 miles from an existing bike and/or pedestrian facility
- The top 3 bicycle/pedestrian related activities respondents currently participate in are walking, running/jogging, and bicycling
- The top 3 bicycle/pedestrian related activities that respondents

would like to participate in are walking, running/jogging, and bicycling

- The top 3 most important benefits of bicycle and pedestrian facilities of respondents are recreation/exercise/health, connecting neighborhoods, and alternate form of transportation
- The top 5 destinations that respondents would like to see connected by bicycle/pedestrian facilities are Harrisburg Park, Town Center, existing greenways/trails, neighborhoods, and shopping centers
- The top 3 biggest factors that discourage bicycle/pedestrian facility use are narrow road widths/rights of ways, high traffic volumes, and unsafe road crossings
- 55% of respondents feel that bicycle/pedestrian facilities should be funded by current taxes, with 48% supportive of fundraising and donations
- 35% of respondents are somewhat willing to pay some increase in taxes to fund bicycle/pedestrian facilities, and 20% are unwilling
- If a bond referendum was held to fund the implementation of bicycle/pedestrian facilities, 60% of respondents would vote in favor, 20% might vote in favor, 12% are not sure, and 8% would vote against
- 71% of respondents live within the town of Harrisburg, 24% do not live within the town limits, and 5% are not sure





- A. Overview
- B. Site Familiarization and Feasibility
- C. Bicycle Recommendations
- D. Pedestrian Recommendations
- E. Greenway Recommendations
- F. Pedestrian Crossings

5

COMPREHENSIVE BICYCLE, PEDESTRIAN, AND GREENWAY PLAN

A. OVERVIEW

The Comprehensive Bicycle, Pedestrian, and Greenway Plan for the Town of Harrisburg focuses on developing a system of bike facilities, sidewalks, greenways, and trails that will connect amenities and destinations in and around Harrisburg. Destinations include the Town Center, parks, neighborhoods, schools, and shopping areas. In developing this Comprehensive Bicycle, Pedestrian, and Greenway Plan for the Town of Harrisburg, the following factors were taken into consideration:

- Location of amenities
- Existing and proposed sidewalks
- Existing and proposed roadways
- Proposed greenway/trail corridors through existing planning documents
- Current city and county-owned properties
- Geographic features (streams, overhead power easements, sewer easements, etc.)

These factors guided the design team to develop a bicycle, pedestrian, and greenway system that provides connectivity between Harrisburg's Town Center, schools, parks, and commercial areas. This comprehensive plan is comprised of multiple bicycle, pedestrian, and greenway facilities that are illustrated within this section.



B. SITE FAMILIARIZATION AND FEASIBILITY

During the site familiarization and feasibility phase, several elements were reviewed and researched. These elements included:

- Following and analyzing proposed connectivity projects, as identified in the 2006 Harrisburg Bicycle-Pedestrian Connectivity Study, with respect to stream corridors, utility easements, road right-of-ways, existing topography, property boundaries and ownership
- Identifying boundaries along potential alignments not owned or controlled by the Town of Harrisburg or Cabarrus County
- Determining proposed projects, public and private, scheduled to occur along potential alignments
- Identifying the existing sidewalk network
- Identifying potential routing alternatives
- Identifying the location and use of amenities, parks, and destinations
- Identifying potential connections and linkages to adjacent areas
- Identifying utility corridors for possible routings
- Identifying stream corridors for possible routings
- Identifying railway corridors for possible routings
- Identifying potential streetscapes for widened sidewalks
- Reviewing state and local thoroughfare plans
- Reviewing existing ordinances dealing with open space and land dedications
- Identifying existing and potential open space for acquisition and/or dedication for bicycle, pedestrian, and/or greenway facility use

C. BICYCLE RECOMMENDATIONS

Bicycle facility recommendations include the addition of signage, paved shoulders, and/or dedicated bike lanes on the following streets in Harrisburg:

School Circle
Patricia Avenue
Parallel Drive
Stallings Road
Roberta Road
Rocky River Crossing Road
Lower Rocky River Road
Pharr Mill Road
Tom Query Road
Hickory Ridge Road
Main Street
Caldwell Road
Morehead Road
NC 49
Robinson Church Road
Plaza Road Extension
Rocky River Road
Blackwelder Road

For more detailed information, including phasing of projects, please refer to Table 1: Harrisburg Bicycle Facility Recommendations and Funding Opportunities.

D. PEDESTRIAN RECOMMENDATIONS

The construction of sidewalks is recommended along the following streets in Harrisburg. Some may be along the street in its entirety, while others will be filling in gaps in the existing sidewalk network.

School Circle
Patricia Avenue
Stallings Road
Tom Query Road
Caldwell Road
Roberta Road
Robinson Church Road
Town Center Road
Morehead Road
School Avenue
Hickory Ridge Road
Valhalla Drive
Parallel Drive
Rocky River Crossing Road
Rocky River Road
Plaza Road Extension
Morris Drive
Oakley Drive
Autumn Lane
Hudson Drive
Lakeview Drive
NC 49
Caldwell Road Extension
Pharr Mill Road
Hickory Ridge Road
Main Street
Bovine Lane
Ayrshire Court

For more detailed information, including phasing of projects, please refer to Table 2: Harrisburg Pedestrian Facility Recommendations and Funding Opportunities.

E. GREENWAY RECOMMENDATIONS

Before identifying the greenway recommendations, it may be beneficial to clarify what a greenway really is. Since there is no single definition of a greenway, the following combinations of descriptions serve as a comprehensive definition. A greenway can exist in almost every environment and can be used for multiple purposes. For most, a greenway is a recreational asset; a linear park with multiple access points, a trail system with open space, a connector between neighborhoods, parks, schools and other uses. In other locations, it can be a path through the woods that provides an alternative transportation route for pedestrians and bicyclists, separating them from the dangers of automobile traffic. A greenway can also serve as an important ecological tool for the protection of the natural environment. Greenways can serve as educational assets like a linear corridor of land left in a natural, undeveloped state that provides public access to unique, scenic and native lands and waters.

Additionally, a greenway can be an amenity in urban areas that fosters the kind of community spirit, activism and bonding between local citizens that is presently being lost as metropolitan areas grow larger and larger. For municipalities, it can be a land use planning tool that helps to reduce the impact of flood damage by providing an alternative type of development within the floodplain, an economic asset that increases the real estate value of adjacent properties, thereby increasing municipal tax revenues.

Types of Greenway Facilities

There are multiple types of greenway facilities that can be developed in various corridors throughout the proposed bicycle, pedestrian, and greenway system. A single corridor can be comprised of multiple types of facilities. The following types of greenway facilities represent different scenarios that the town may encounter as they develop the bicycle, pedestrian, and greenway system in Harrisburg. Detailed analysis and design will have to be completed for each segment of the plan in order to determine the best solution. To have a comprehensive understanding of greenways, details and cross-sections of the various facility types can be found in Appendix 1: Design Guidelines. Appendix 1 also includes design guidelines for trail structures and amenities, including signage.

Natural Surface Trails - Most users will associate natural surface trails with hiking trails often found in natural park settings. These types of trails typically serve hikers more so than cyclists. Minimal site preparation or construction is needed.

Multi-Use Trails (Paved) - Multi-use trails are the most common type of greenways within municipal park systems and trail networks. These trails can be used by hikers, walkers, joggers, cyclists, users in wheelchairs, and parents with strollers, accommodating all levels and abilities of users.

Multi-Use Trails (Unpaved) - Unpaved multi-use trails are often found in upland areas. With proper compaction, these trails can also be used by hikers, walkers, cyclists, users in wheelchairs, and parents with strollers, accommodating all levels and abilities of users. Unpaved trails are often less expensive to construct, but can cost more to maintain depending on trail location, soil compaction, topography, and weather patterns. Joggers, runners, and some cyclists prefer unpaved trails.

Equestrian Trails - Equestrians prefer separate trails for their use, not only for the types of rides they do, but for safety concerns of the riders and their horses. Horses can be easily startled by hikers and cyclists. Equestrians can use a wide area of space depending on whether they ride individually or in groups.

Multi-use Trails with Equestrian Use - There are many multi-use trails across the country that also include equestrian use. It is important to install appropriate signage indicating trail protocol, especially noting that hikers and cyclists yield to equestrians at all times.

The following greenway corridors are recommended for development in Harrisburg:

Back Creek Greenway
Fuda Creek Greenway
Mallard Creek Greenway
Reedy Creek Greenway
Rocky River Greenway

For more detailed information, including phasing of projects, please refer to Table 3: Harrisburg Greenway Facility Recommendations and Funding Opportunities.

F. PEDESTRIAN CROSSINGS

A priority for the Town of Harrisburg should be to examine the pedestrian connections and vehicular controls at existing major intersections, intersections that connect major points of interest and proposed roadways. These roadways, along with the planned roadway connectors, have the potential to interrupt pedestrian circulation throughout Harrisburg. It is imperative that Harrisburg plan for pedestrian connections at major intersections along these planned bicycle, pedestrian, and greenway routes.

For more detailed information, please refer to Table 4: Harrisburg Crossing Recommendations.



Traffic Table in Charlotte, NC

Table 1: Harrisburg Bicycle Facility Recommendations and Funding Opportunities

Phase Priority	Project Description	Feasibility Ranking	Cost Ranking	Perceived Resident Demand	Street Name	Notes	Design Comments	Funding Opportunities
1	Shared lanes along School from NC 49 to Robinson Church Rd	High	High	High	School	25 mph speed limit	Install "Share the Road" signs	Town Budget
1	Shared lanes along Patricia from Morehead to NC 49	High	High	Med	Patricia	25 mph speed limit	Install "Share the Road" signs	Town Budget
1	Shared lanes along Parallel from Morehead to Roberta Rd	High	High	Med	Parallel	25 mph speed limit	Install "Share the Road" signs	Town Budget
1	Bike lanes along Stallings from Robinson Church to Entrance to Harrisburg Elementary School	Med	High	High	Stallings	35 mph speed limit; current width ~ 24 ft.; 6,100 AADT (2012); Pending NCDOT approval and shared improvement	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
1	Bike lanes along Stallings from Elementary School to Rocky River Road	Med	High	High	Stallings	45 mph speed limit; current width ~22-24 ft.	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
2	Bike Lanes along Roberta from Blackwelder to Town Center	Med	High	High	Roberta	35 mph speed limit; current width ~24 ft.; Pending NCDOT approval and shared improvement	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
2	Bike Lanes along Roberta from Town Center to future connection with Stallings	Med	High	High	Roberta	35 mph speed limit; current width ~24 ft.; 13,000 AADT (2012); Pending NCDOT approval and shared improvement	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
2	Bike Lanes along Rocky River Crossing from Morehead to Roberta Road	Med	High	High	Rocky River Crossing	Pending that road width supports bike lanes (min. 30 ft)	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
2	Lower Rocky River from Rocky River to Town limits	High	High	Med	Lower Rocky River	45 mph speed limit; 3,500 to 1,500 AADT (2012)	Install "Share the Road" signs	Town Budget
2	Paved shoulders along Pharr Mill from NC 49 to Rocky River Road	High	Med	High	Pharr Mill	45 mph speed limit; current width ~22-24 ft.; 1,700 to 2,400 AADT (2012)	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
3	Paved shoulders along Tom Query from Meck. Co. line to Robinson Church Rd	High	High	Low	Tom Query	45 mph speed limit; current width ~ 20 ft.; 4,500 AADT (2012)	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
3	Paved shoulders on Hickory Ridge from entrance to Harrisburg Elementary south to Town Limits	Med	High	Med	Hickory Ridge	45 mph speed limit; pavement width varies; 5,900 AADT at Stallings; 1,200 AADT south of Reedy Creek; Pending NCDOT approval and shared improvement	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
3	Bike lanes along Main from Town Center to future connection with Roberta	High	Med	Med	Main	25 mph speed limit; opportunity with new road to add bike lanes at a lower cost	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	NCDOT
3	Bike lanes along Caldwell and future Caldwell Road Extension	Med	Med	Low	Caldwell	Existing road has 25 mph speed limit; width of ~24 ft.; 7,300 AADT (2012); opportunity with new road to add bike lanes at a lower cost	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Developer NCDOT
4	Bike Lanes along Morehead from Rocky River Crossing to NC 49	Med	Low	High	Morehead	35 mph speed limit; current width ~24 ft.; 10,000 AADT (2012); Pending NCDOT approval and shared improvement	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
4	Bike Lanes along Morehead from Town limits to Rocky River Crossing	Med	Low	Med	Morehead	45 mph speed limit	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ

4	Bike Lanes along NC 49 from Meck. Co. line to Roberta Road	Med	Low	Med	NC 49	35 mph speed limit; 30,000 AADT (2012); Ample ROW existing, but would need to reduce lane widths to accommodate bike lanes on both sides	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
4	Bike Lanes along NC 49 from Roberta to Coddle Creek	Med	Low	Med	NC 49	50 mph speed limit; 26,000 AADT (2012); Ample ROW existing, but would need to reduce lane widths to accommodate bike lanes on both sides	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
4	Bike Lanes along Robinson Church from NC 49 to Harrisburg Park	Med	Med	Med	Robinson Church	35 mph speed limit; 12,000 AADT (2012); 45 mph speed limit; 9,600 to 7,000 AADT (2012); Pending NCDOT approval and shared improvements	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
4	Bike lanes along Robinson Church from Stallings to Rocky River Rd	Med	Low	Med	Robinson Church	45 mph speed limit; current width ~20ft.; 4,900 AADT (2012); Pending NCDOT approval and shared improvements	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Powell Bill CMAQ
4	Paved Shoulders on Robinson Church from Rocky River to Town Limits	Med	Med	Low	Robinson Church	Opportunity with new road to add bike lanes at a lower cost	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
4	Bike Lanes along future Plaza Road Extension	Med	Med	Low	Plaza Rd. Extension	45 mph speed limit; current width ~24 ft.; 13,000 to 9,200 AADT (2012)	5 feet wide, both sides of the street, not including gutter; To be milled flush with gutter and grates; Bike lane symbol and edges striped white	Developer
4	Paved shoulders along Rocky River Rd. from Robinson Church to Hickory Ridge	Med	Low	Med	Rocky River Road	45 mph speed limit; 6,500 AADT (2012)	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
4	Paved shoulders along Rocky River Rd. from Hickory Ridge to Rocky River	Med	Low	Med	Rocky River Road	45 mph speed limit; current width ~24 ft.; 7,200 to 6,500 AADT (2012)	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ
4	Paved shoulders along Blackweilder from Roberta to NC 49	High	Med	Low	Blackweilder	45 mph speed limit	Repave with min. 4 ft. wide wide shoulders on both sides of street; Install "Share the Road" signs	Powell Bill CMAQ

COLOR LEGEND

Project Not Funded

CMAQ (2010)

NCDOT TIP Project

CMAQ II (2014)



Table 2: Harrisburg Pedestrian Facility Recommendations and Funding Opportunities

Phase Priority	Project Description	Feasibility Ranking	Cost Ranking	Perceived Resident Demand	Street Name	Notes	Design Comments	Funding Opportunities
1	Sidewalks along School from NC 49 to Roberson Church Rd	High	Med	High	School	Partially Complete	5 foot minimum width with 6 foot landscape buffer, both sides of the street	CMAQ
1	Sidewalks along Patricia from Morris Drive to School Circle	High	Med	High	Patricia	2014 CMAQ Project	5 foot minimum width with 6 foot landscape buffer, both sides of the street	CMAQ
1	Sidewalks along Stallings from Stallings Road Park to Back Creek crossing	Med	High	High	Stallings	2014 CMAQ Project	5 foot minimum width with 6 foot landscape buffer, both sides of the street	CMAQ
1	Sidewalks along Tom Query from Meck. Co. line to Caldwell	High	High	High	Tom Query	2014 CMAQ Project	5 foot minimum width with 6 foot landscape buffer, both sides of the street	CMAQ
1	Sidewalks along Caldwell from NC 49 to Caldwell Park	High	High	High	Caldwell	2014 CMAQ Project	5 foot minimum width with 6 foot landscape buffer, west side of the street	CMAQ
1	Sidewalks along Roberta from rail corridor to Stallings	High	High	High	Roberta	Built by Rail	5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NC DOT
1	Sidewalks along Roberta from Rocky River Crossing to School Circle	High	High	High	Roberta	Sidewalks existing along west side and a small portion along the east side at Town Center	5 foot minimum width with 6 foot landscape buffer, east side of the street	NC DOT CMAQ Powell Bill
1	Sidewalks along Roberson Church from Railroad Ave. to School	Med	Low	High	Roberson Church	Partially Complete	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill
1	Sidewalks within Town Center to fill gaps	High	High	High	Town Center	Will be built by developer	5 foot minimum width with 6 foot landscape buffer, both sides of the street	Developer NC DOT
1	Sidewalks along Morehead from Rocky River Crossing to Hwy 49	High	High	High	Morehead	Sidewalks existing on east side	5 foot minimum width with 6 foot landscape buffer, west side of the street	CMAQ Powell Bill
1	Sidewalks along School Ave. from Parallel to School Circle	High	High	High	School Ave.		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NC DOT CMAQ Powell Bill
1	Sidewalks along Stallings from Roberson Church to Stallings Road Park	High	High	High	Stallings	Sidewalk existing along north side at Stallings Road Park	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill
2	Sidewalks along Hickory Ridge from Stallings to Rocky River Road	High	Med	High	Hickory Ridge	Sidewalk existing along northeast side at middle school	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill
2	Sidewalks along Hickory Ridge from School to Railroad Ave.	Med	Med	High	Hickory Ridge	Pending NCDOT approval and shared improvement	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill
2	Sidewalks along Valhalla/Parallel from Lakeview (east) to Roberta Rd	High	Med	High	Valhalla		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill
2	Sidewalks along Rocky River Crossing Rd. from Morehead to Roberta	Med	Med	High	Rocky River Crossing	Sidewalks existing on south side	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NC DOT CMAQ Powell Bill

2	Sidewalks along Roberta from Blackwelder to Rocky River Crossing	Med	Med	Med	Med	Roberta		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
2	Sidewalks along Rocky River Road from Hickory Ridge to Stallings	High	Low	Med	Med	Rocky River Road		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
2	Sidewalks along Stallings from Back Creek crossing to Rocky River Road	High	High	High	High	Stallings		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
2	Sidewalks along proposed Plaza Road Extension	High	High	Low	Low	Plaza Rd. Extension	Will be built by developer	5 foot minimum width with 6 foot landscape buffer, both sides of the street	Developer NCDOT CMAQ Powell Bill
2	Sidewalks along Morris from Patricia to School	High	High	Med	Med	Morris	Sidewalks existing on south side	5 foot minimum on north side of the street	NCDOT CMAQ Powell Bill
2	Sidewalks along Oakley	High	Med	High	High	Oakley		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along Robinson Church from Tom Query to Stallings	Med	Low	High	High	Robinson Church		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Tom Query from Caldwell to Robinson Church Rd	High	Med	High	High	Tom Query		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Autumn	High	Med	Med	Med	Autumn		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along Hudson	High	Med	Med	Med	Hudson		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along Lakeview	High	Med	Med	Med	Lakeview		5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along remaining portions of NC 49 within Corridor District	Med	Low	High	High	NC 49	Pending NCDOT approval; Must be paid for by Town	5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along the proposed Caldwell Road Extension from NC 49 to Concord Parkway	High	Med	Low	Low	Caldwell Road Extension		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Morehead from Concord Parkway to Rocky River Crossing	High	Low	Low	Low	Morehead		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Pharr Mill from NC 49 to Rocky River Rd.	Med	Low	High	High	Pharr Mill	Proposed location includes future straightening of Pharr Mill at NC 49	5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Rocky River Road from Hickory Ridge to Robinson Church	Med	Low	Low	Low	Rocky River Road		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill

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3	Sidewalks along Rocky River Road from Robinson Church to Hickory Ridge	High	Low	Med	Rocky River Road		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Hickory Ridge from Rocky River Road to planning area boundary	Med	Low	Med	Hickory Ridge		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Robinson Church from Tom Query to Rocky River Road	Med	Low	Med	Robinson Church		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Robinson Church from Rocky River to planning area boundary	Med	Low	Med	Robinson Church		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Main Street Road Extension	High	Med	Low	Main		5 foot minimum width with 6 foot landscape buffer, both sides of the street	NCDOT CMAQ Powell Bill
3	Sidewalks along Bovine from Charolais (northern connection) to Stallings	High	High	Low	Bovine	Needed to complete neighborhood internal sidewalk connection to school	5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill
3	Sidewalks along Ayrshire from Bovine to school connection	High	High	Low	Ayrshire	Needed to complete neighborhood internal sidewalk connection to school	5 foot minimum width with landscape buffer, both sides of the street. Width of landscape buffer will vary depending on ROW limitations	NCDOT CMAQ Powell Bill

COLOR LEGEND

- Project Not Funded
- CMAQ (2010)
- NC DOT TIP Project
- CMAQ II (2014)



Table 3: Harrisburg Greenway Facility Recommendations and Funding Opportunities

Phase Priority	Project Description	Feasibility Ranking	Cost Ranking	Perceived Resident Demand	Segment Name	Notes	Funding Opportunities
1	Back Creek Greenway from Robinson Church to Stallings	High	Med	High	Back Creek Greenway	Opportunity for land acquisition from schools; Needs further study	CWMTF NCDOT RTP Local Bonds Cabarrus Comm. Found.
1	Back Creek Greenway from Meck Co. Line to Robinson Church	Med	Med	High	Back Creek Greenway	Anticipated resistance by neighbors; Some town-owned easements existing; Needs further study	CWMTF NCDOT CMAAQ Local Bonds
1	Reedy Creek Greenway from the Meck. Co. line to Robinson Church	High	Med	High	Reedy Creek Greenway	Developer easement contributions along this segment; Needs further study	CWMTF NCDOT Local Bonds
1	Rocky River Greenway from Pharr Mill to Rocky River Road	High	Med	Med	Rocky River Greenway	Segment already existing at Pharr Mill Park; Town/Carolina Thread Trail (CTT) working with Canterfield HOA to get trail easement; Catawba Lands Conservancy (CLC) has secured other easements along this corridor; Needs further study	CWMTF Carolina Thread Trail NCDOT Local Bonds
2	Rocky River Greenway from Morehead to Roberta Rd	High	Med	Med	Rocky River Greenway	Segment already existing within Rocky River Crossing Neighborhood, but currently private; Needs further study	CWMTF Carolina Thread Trail
2	Rocky River Greenway from Rocky River Road to Reedy Creek	High	Med	Med	Rocky River Greenway	CLC has secured an easement at the Mills at Rocky River for this segment; Needs further study	CWMTF Carolina Thread Trail
2	Rocky River Greenway from Roberta to Pharr Mill Road	High	Low	Med	Rocky River Greenway	Site of Historic Pharr Mill would make a great canoe/kayak launch point for the blueway; Needs further study	CWMTF Duke Energy Water Fund Carolina Thread Trail
2	Rocky River Greenway from Charlotte Motor Speedway south to Mallard Creek	Med	Med	Med	Rocky River Greenway	Opportunity for land acquisition from Charlotte Motor Speedway; Needs further study	CWMTF Carolina Thread Trail
2	Fuda Creek Greenway from Meck. Co. line to Robinson Church Road	Med	Med	Med	Fuda Creek Greenway	Developer easement contributions along this segment; Needs further study	CWMTF Private Developers
3	Mallard Creek Greenway from Meck. Co. line to Morehead	High	Low	Med	Mallard Creek Greenway	Needs further study	CWMTF Carolina Thread Trail
3	Rocky River Greenway from Canterfield Neighborhood north to town planning boundary	High	Low	Low	Rocky River Greenway	Needs further study	CWMTF Carolina Thread Trail

3	Greenway Connection from Rocky River to Coddle Creek	Med	Med	Low	Greenway Connection	Passes through one large parcel; Needs further study	CWMTF
3	Greenway Connection from Back Creek to Rocky River	Med	Med	Low	Greenway Connection	Passes through two parcels, one being Pharr Mill Park; Needs further study	CWMTF PARTF RTP
3	Back Creek Greenway from Stallings to confluence with Rocky River	Low	Low	Med	Back Creek Greenway	Strongly anticipated resistance by property owners; Needs further study	CWMTF
4	Fuda Creek Greenway from Robinson Church to Back Creek	Med	Low	Low	Fuda Creek Greenway	Potential developer easement contributions; Needs further study	CWMTF Private Developers
4	Coddle Creek Greenway from Rocky River to town planning boundary	High	Low	Low	Coddle Creek Greenway	Needs further study	CWMTF
4	Reedy Creek Greenway from Robinson Church to Hickory Ridge	Med	Low	Low	Reedy Creek Greenway	Needs further study	CWMTF
4	Reedy Creek Greenway from Hickory Ridge to Lower Rocky River Road	Med	Low	Low	Reedy Creek Greenway	Developer easement contributions along this segment; Needs further study	CWMTF Private Developers
4	Fuda Creek Greenway Neighborhood Connection	Med	Med	Med	Neighborhood Connection	Utility easement could be used to connect the Abbington Neighborhood to Fuda Creek; Needs further study	Town Budget
4	Reedy Creek Greenway from Lower Rocky River to confluence with Rocky River	Low	Low	Low	Reedy Creek Greenway	Needs further study	CWMTF

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Project Not Funded

CMAQ (2010)

NCDOT TIP Project

CMAQ II (2014)



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Table 4: Harrisburg Crossing Recommendations

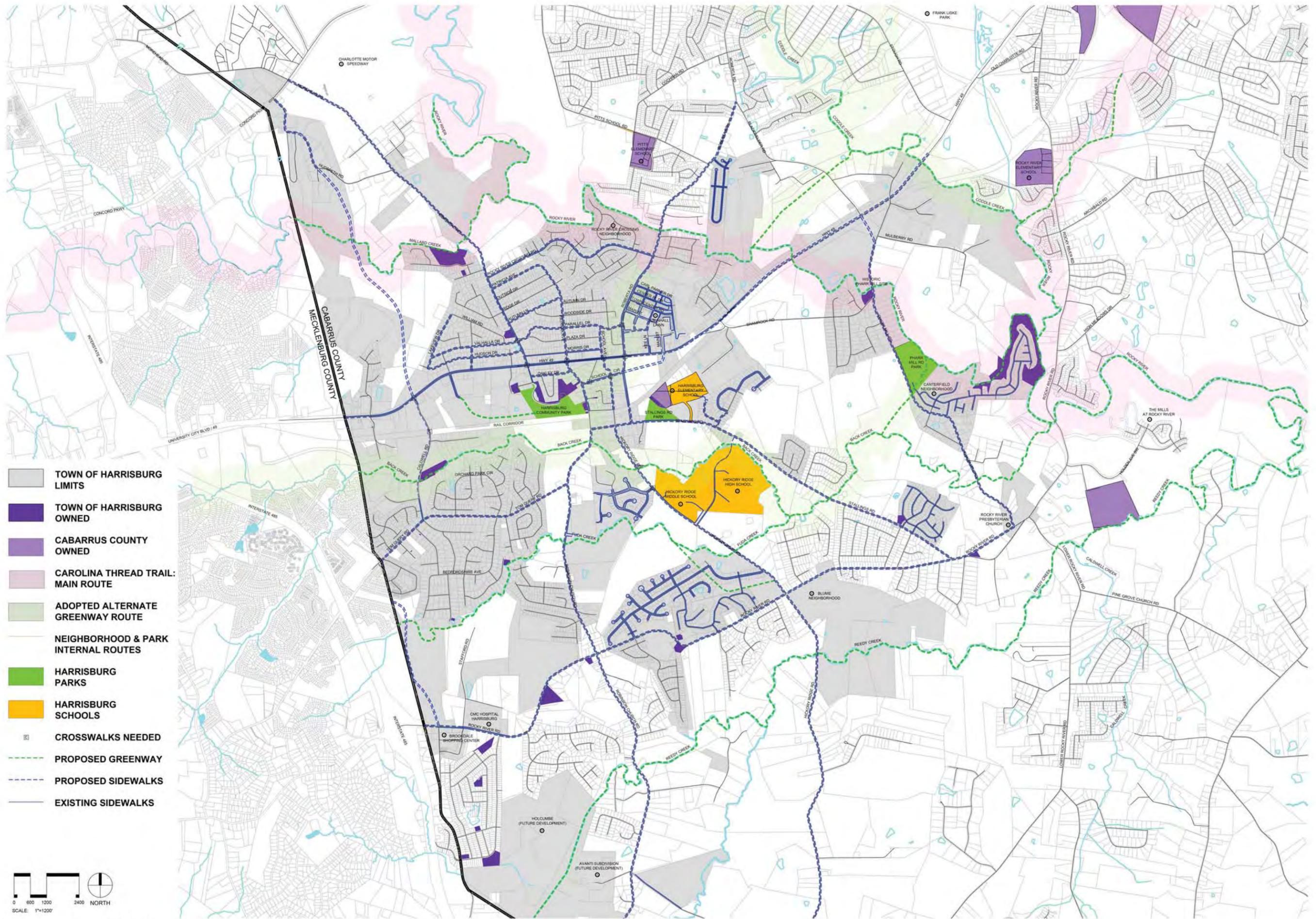
Phase Priority	Project Description	Feasibility Ranking	Cost Ranking	Perceived Resident Demand	Street Name	Notes	Design Comments
1	Crossing Morehead at Parallel/Valhalla	High	High	High	Morehead		Ped Crossing sign 100 feet in advance of crosswalk in either direction; striped crosswalk with arrows
1	Signal/Crossing Roberta at Parallel	High	High	High	Roberta		Timed Pedestrian Signals on either side of crossing; Textured/Painted crossing; State Law sign 25 feet in advance of crosswalk
1	Crossing Hickory Ridge at School	High	High	Med	Hickory Ridge		State Law sign 25 feet in advance of textured/painted crosswalk in either direction
1	Crossing Railroad at Caldwell	High	Med	Med	Caldwell	Approved	Crossing will be incorporated into new bridge
2	Crossing NC 49 at Morehead/Sims	Med	Med	High	NC 49	Pending NCDOT Approval; Needs Streetscape Plan	Needs further study to determine design
2	Intersection Improvements (curb extensions or bulb-outs) along NC 49 between Caldwell and Roberta Rd	Low	Med	High	NC 49		Needs further study to determine design
2	Median-pedestrian refuges mid block along NC 49 between Caldwell and Roberta Rd	Low	Med	High	NC 49		Needs further study to determine design
3	Signal/Crossing NC 49 at Caldwell	Med	Med	High	NC 49	Pending NCDOT Approval; Needs Streetscape Plan	Needs further study to determine design
3	Signal/Crossing NC 49 at Hickory Ridge	Med	Med	High	NC 49	Pending NCDOT Approval; Needs Streetscape Plan	Needs further study to determine design
3	Signal/Crossing NC 49 at Patricia/Robinson Church	Med	Med	High	NC 49	Pending NCDOT Approval; Needs Streetscape Plan	Needs further study to determine design
3	Signal/Crossing NC 49 at Roberta/School	Med	Med	High	NC 49	Pending NCDOT Approval; Needs Streetscape Plan	Needs further study to determine design

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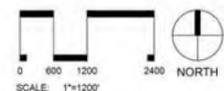
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- CMAQ (2010)
- NCDOT TIP Project
- CMAQ II (2014)



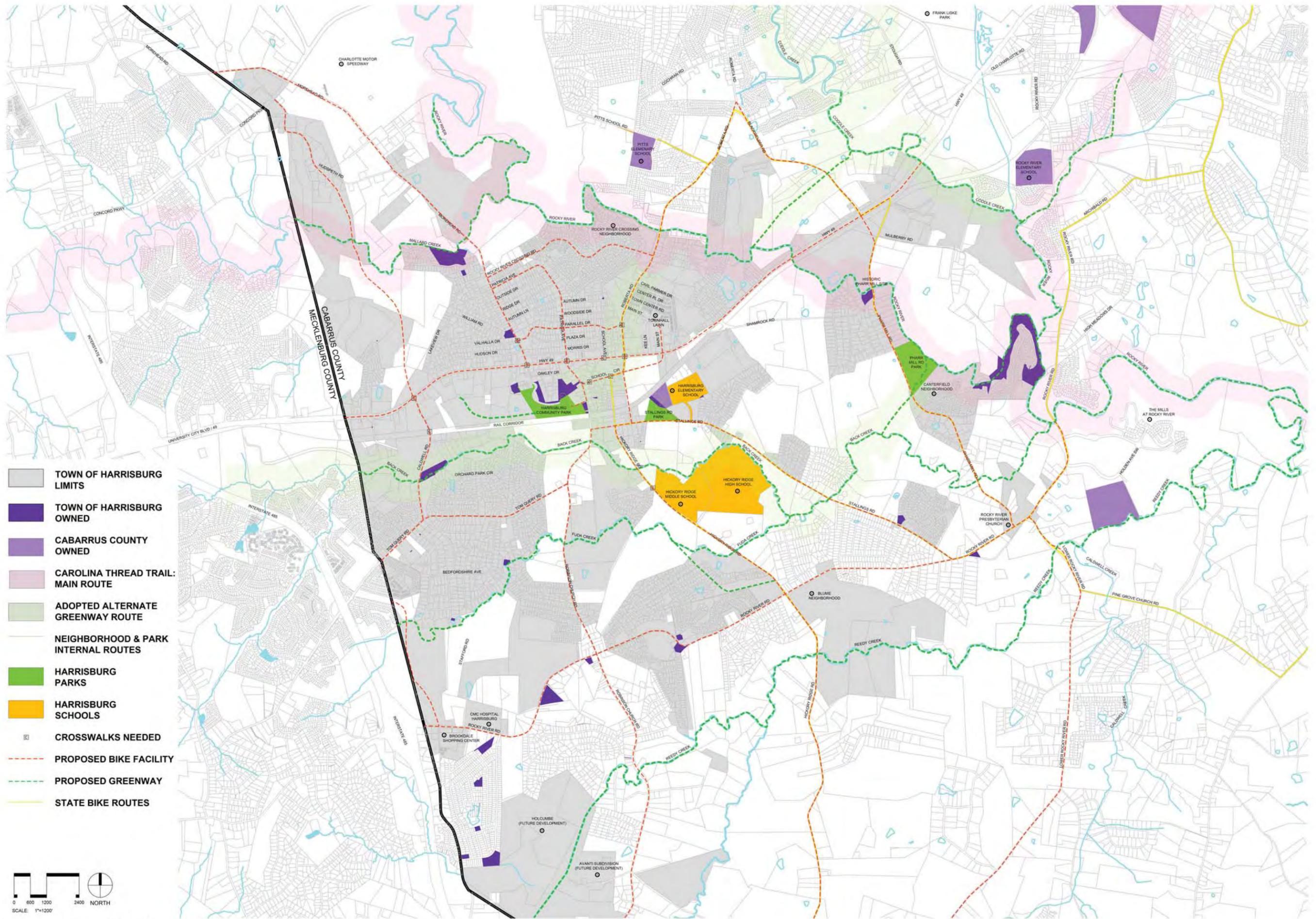
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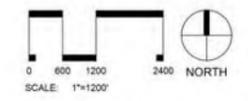
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- TOWN OF HARRISBURG OWNED
- CABARRUS COUNTY OWNED
- CAROLINA THREAD TRAIL: MAIN ROUTE
- ADOPTED ALTERNATE GREENWAY ROUTE
- NEIGHBORHOOD & PARK INTERNAL ROUTES
- HARRISBURG PARKS
- HARRISBURG SCHOOLS
- CROSSWALKS NEEDED
- PROPOSED GREENWAY
- PROPOSED SIDEWALKS
- EXISTING SIDEWALKS



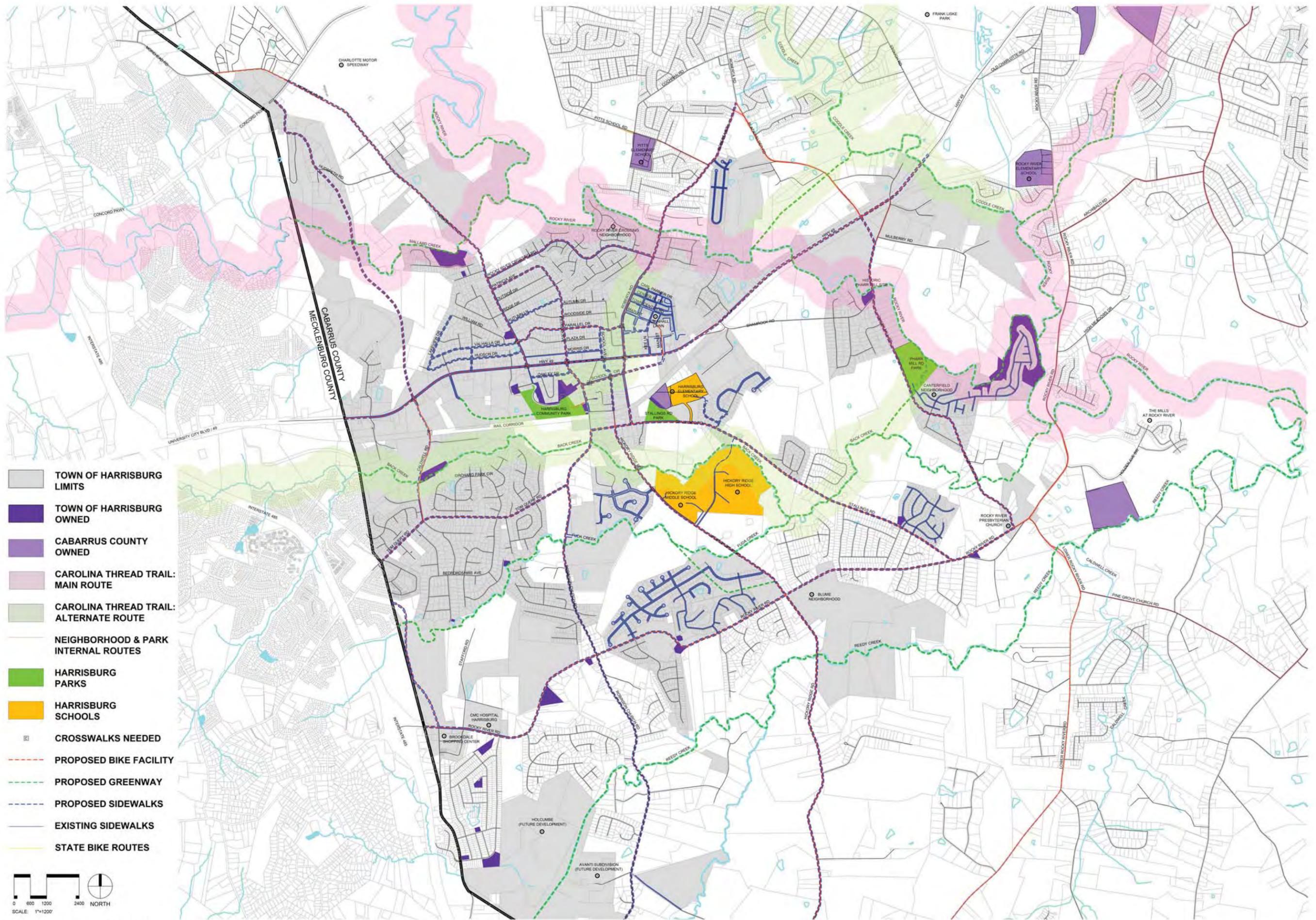
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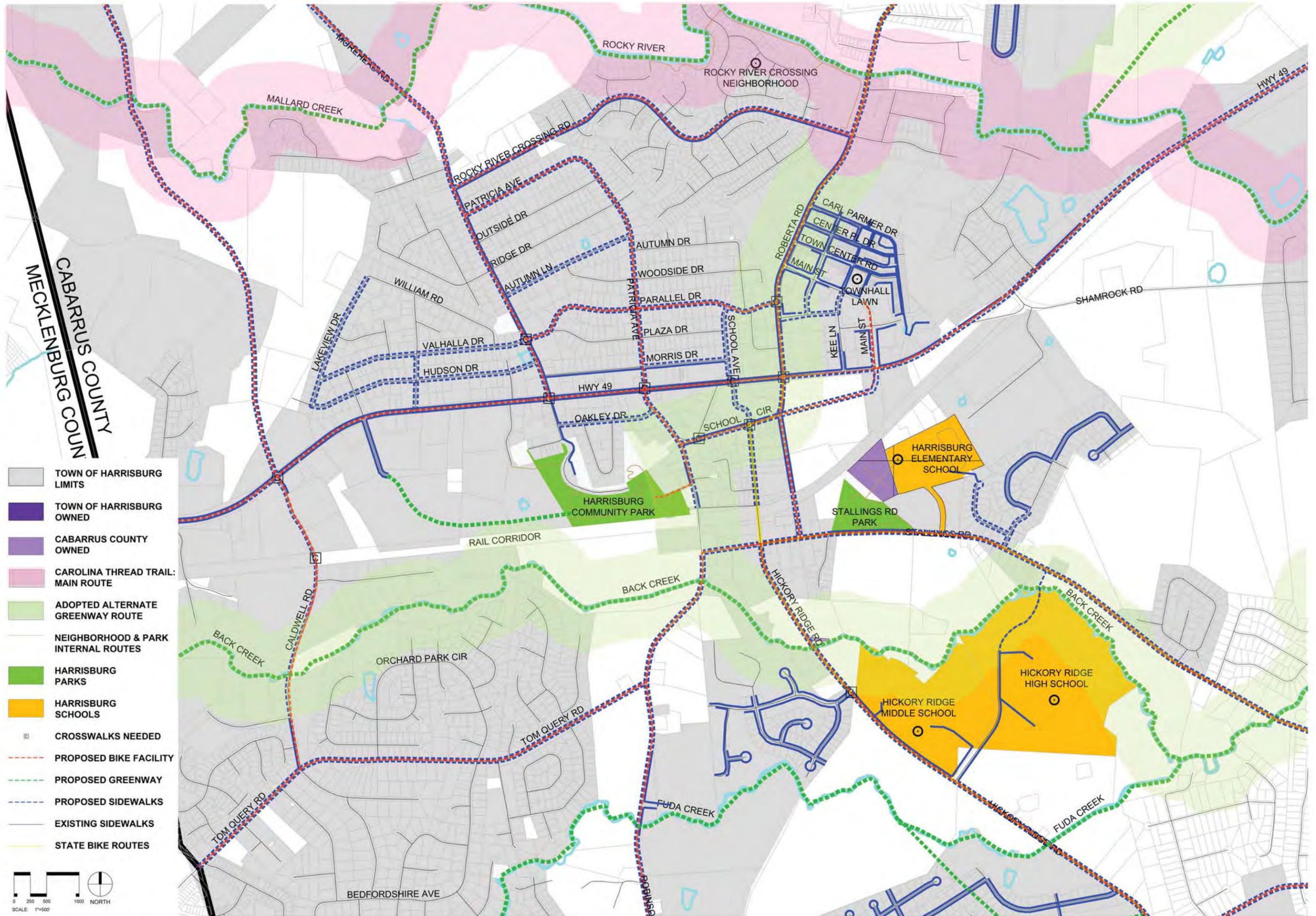
- TOWN OF HARRISBURG LIMITS
- TOWN OF HARRISBURG OWNED
- CABARRUS COUNTY OWNED
- CAROLINA THREAD TRAIL: MAIN ROUTE
- ADOPTED ALTERNATE GREENWAY ROUTE
- NEIGHBORHOOD & PARK INTERNAL ROUTES
- HARRISBURG PARKS
- HARRISBURG SCHOOLS
- CROSSWALKS NEEDED
- PROPOSED BIKE FACILITY
- PROPOSED GREENWAY
- STATE BIKE ROUTES



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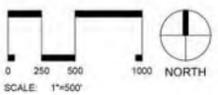


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MECKLENBURG COUNTY
 CABARRUS COUNTY

- TOWN OF HARRISBURG LIMITS
- TOWN OF HARRISBURG OWNED
- CABARRUS COUNTY OWNED
- CAROLINA THREAD TRAIL: MAIN ROUTE
- ADOPTED ALTERNATE GREENWAY ROUTE
- NEIGHBORHOOD & PARK INTERNAL ROUTES
- HARRISBURG PARKS
- HARRISBURG SCHOOLS
- CROSSWALKS NEEDED
- PROPOSED BIKE FACILITY
- PROPOSED GREENWAY
- PROPOSED SIDEWALKS
- EXISTING SIDEWALKS
- STATE BIKE ROUTES



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- A. Planning and Implementation Process
- B. Implementation Strategy
- C. Criteria for Prioritizing Land Acquisition
- D. Land Acquisition Strategies
- E. Criteria for Prioritizing Bicycle, Pedestrian, and Greenway Facility Development
- F. Budget Estimates
- G. Maintenance Costs
- H. Funding Strategies

6

ACTION PLAN

A. PLANNING AND IMPLEMENTATION PROCESS

The Comprehensive Bicycle, Pedestrian, and Greenway Plan for the Town of Harrisburg identifies a system of bicycle, pedestrian, and greenway facilities throughout the town which fulfill multiple objectives. To realize the vision laid forth in the plan, the following steps will need to be completed for each proposed facility:

Step One – Land Acquisition

Before detailed master planning of an individual facility occurs, it is necessary for the town to have an ownership interest in the land that is required for the implementation of the individual facility. A variety of land acquisition techniques are included in Section D of this chapter to guide both public and private interests. Criteria for prioritizing land acquisition are contained within the next section.

Step Two – Corridor Master Planning/Feasibility Studies

Site specific master planning for individual facilities will determine the feasibility and the appropriate level of use for a facility and its routing. Each master plan or feasibility study, specifically for a greenway corridor or segment of a greenway corridor, should involve residents from surrounding neighborhoods, as well as adjacent property owners and businesses. Criteria for prioritizing bicycle, pedestrian, and greenway development are contained within the next section.

Step Three – Detailed Design and Construction Documentation

After master planning has been completed and a specific facility corridor has been defined, detailed construction documents will then be produced for the project as well as a detailed cost estimation and assignment of responsibilities.

Step Four – Construction and Facility Development

Depending on the level of use that is appropriate for the planned bicycle, pedestrian, and/or greenway facility, actual construction of the facility, such as bike lanes, sidewalks, and trails will take place. Construction and development operations can be phased as necessary to meet budget and time constraints.

Step Five – Maintenance and Management

Once the bicycle, pedestrian, and/or greenways facilities have been completed, maintenance and management should begin immediately. The Harrisburg Parks and Recreation Department should be the lead management agency and should work in partnership with other town and county agencies, as well as private sector groups, to effectively manage and maintain the bicycle, pedestrian, and greenway system.

B. IMPLEMENTATION STRATEGY

Successful implementation of this Comprehensive Bicycle, Pedestrian, and Greenway Plan will require a concerted effort by Harrisburg in partnership with other governments and private sector organizations that have the ability, influence and authority to guide the community toward acceptable multi-objective bicycle, pedestrian, and greenway solutions. Implementation of the bicycle, pedestrian, and greenway system should not be the sole burden of the town. To be truly successful it must become the collective pursuit of the entire community. This comprehensive plan recommends a strategy for implementing and managing bicycle, pedestrian, and greenway facilities.

On the following pages, the roles of town agencies and other public-sector and private-sector organizations are defined.

Role of the Town of Harrisburg

The Town of Harrisburg will be the lead agent, owner, developer and manager of the bicycle, pedestrian, and greenway system throughout the town. It will be necessary for the town to partner with public and private interests throughout the town to build and maintain various segments of the bicycle, pedestrian, and greenway system. Listed below and on the following pages are the key agencies and organizations that will play a role in this implementation.

Role of the Town Council

The Harrisburg Town Council will be called upon to adopt and implement the recommendations of this comprehensive plan. The town council will need to work with the Town Manager to determine the most effective implementation strategy for the town-wide bicycle, pedestrian, and greenway system. This may include engaging in unique public-private partnerships, determining an appropriate financing strategy for bicycle, pedestrian, and greenway facilities and defining appropriate coordinated capital improvement projects that will maximize the use of town resources. The town council will also be viewed as the ultimate “champion” of this comprehensive plan and will need to exhibit appropriate leadership of the goals and objectives herein.

Role of the Town Manager

The Harrisburg Town Manager is vested with management responsibilities for the community’s public resources. As such, the primary role of the Town Manager, with respect to the bicycle, pedestrian, and greenway system,

will be to direct the activities of the various departments of the town as necessary to perform required acquisition, development, stewardship and maintenance activities for the bicycle, pedestrian, and greenway system. The Town Manager will also be called upon to determine an effective coordinated capital improvements program that enables various town departments to share resources in support of bicycle, pedestrian, and greenway facility development.

Role of the Harrisburg Planning and Zoning Department

The Harrisburg Planning and Zoning Department will lead in the preparation of detailed corridor master plans and feasibility studies for implementation of the Comprehensive Bicycle, Pedestrian, and Greenway Plan. The Planning and Zoning Department will work directly with the Parks and Recreation Department to oversee the development of detailed designs and construction drawings for projects and will take the lead in the acquisition of funding for construction. The Planning and Zoning Department will also help with implementation by showing potential bicycle, pedestrian, and greenway facilities in land development plans, notifying the Harrisburg Parks and Recreation Department of proposed developments in a bicycle, pedestrian, and/or greenway facility area, utilizing the rezoning process to encourage dedication of lands and access and/or trail easements, and construction of required facilities for the bicycle, pedestrian, and greenway system, and planning transportation improvements in coordination with proposed facilities.

Role of the Planning and Zoning Advisory Board

The Planning and Zoning Advisory Board will promote and support implementation of the Comprehensive Bicycle, Pedestrian, and Greenway Plan through:

- The education of citizens on the objectives of the master plan and multiple bicycle, pedestrian, and greenway facility needs
- The identification and solicitation of resources to accelerate land acquisition, detailed design and feasibility studies, and construction of bicycle, pedestrian, and greenway facilities
- The development of a comprehensive bicycle, pedestrian, and greenway system in Harrisburg by utilizing the rezoning and development process to encourage dedication of lands and access and/or trail easements, and construction of required facilities

Role of the Parks and Recreation Department

The Harrisburg Parks and Recreation Department will direct acquisition of necessary land and will work with the Planning and Zoning Department on detailed design and construction documents for each bicycle, pedestrian, and greenway segment. The Parks and Recreation Department will become the primary steward for these facilities, overseeing construction and maintenance. However, due to the size and scope of this endeavor, it is strongly encouraged that the Parks and Recreation Department create an Adopt-a-Greenway Facility program. This program will enlist the participation and support of the Parks and Recreation Advisory Board and other public and private sector organizations in managing and maintaining bicycle, pedestrian, and greenway facilities.

Role of the Parks and Recreation Advisory Board

The Parks and Recreation Advisory Board will promote and support implementation of the Comprehensive Bicycle, Pedestrian, and Greenway Plan through:

- The education of citizens on the objectives of the master plan and multiple bicycle, pedestrian, and greenway facility needs
- The coordination with other entities, programs, and departments (including planning and development, public works, engineering, Cabarrus Rowan Metropolitan Planning Organization (CRMPO), and the North Carolina Department of Transportation (NCDOT)) to prioritize bicycle, pedestrian, and greenway facility development and acquisition through a point-based system
- The identification and solicitation of resources to accelerate land acquisition and bicycle, pedestrian, and greenway facility construction
- The development of a regional bicycle, pedestrian, and greenway system by working with surrounding communities to establish linkages to their recreational and natural resources

The Parks and Recreation Advisory Board will establish and utilize a point-based system for prioritizing bicycle, pedestrian, and greenway facility acquisition and development which will be weighed along with staff recommendations when making funding decisions. The Board will be fully informed on a specific, case-by-case basis of how staff recommendations coincide with Board priorities regarding acquisition and facility development.

Role of the Public Works Department

The Harrisburg Public Works Department shall assist the Parks and Recreation Department with the development of specific bicycle, pedestrian, and greenway segments. Public Works can accomplish this through the use of funds obtained from federal and state grants and through a coordinated capital improvement approach to project implementation. The town's system of sanitary sewers offers enormous potential for shared-use with greenway development objectives. For the expansion and development of new sanitary sewer lines, Harrisburg should use a joint-use easement document during right-of-way negotiations to acquire subsurface and surface rights from willing sellers. During facility development, Public Works should partner with other departments to build greenway facilities where feasible.

Other responsibilities and roles are further defined in the following chart:

Parks & Recreation Department	Planning & Zoning Department	Public Works Department
System-Wide Planning	System-Wide Planning	System-Wide Planning
Land Acquisition	Corridor Plans/Feasibility Studies	Land Acquisition
Construction Documents	Ordinance Amendments	Facility Design
Facility Construction	Development Requirements	Facility Construction
Facility Maintenance	Construction Documents	
Adopt-a- Greenway	Funding to Implement	
Community Programs	Public Relations	
Event Programming		
Public Relations		
Fiscal Management		

Role of Local Businesses and Corporations

Harrisburg businesses and corporations might choose to sponsor a bicycle, pedestrian, and/or greenway facility for development or maintenance. Businesses or corporations can work with the Parks and Recreation Department to give money, materials, products and labor toward the development of a bicycle, pedestrian, and/or greenway facility. Businesses can also consider installing facilities, such as bike racks, benches, and signage that link their operations to the bicycle, pedestrian, and greenway system through the Adopt-a-Greenway program.

Role of Civic Organizations

Local civic groups and organizations, including the Junior League, Boy Scouts and Girl Scouts, garden clubs, Civitans, Kiwanis and Rotary clubs, to name a few, can be participants in the Harrisburg Bicycle, Pedestrian, and Greenway System. These organizations can play a vital role in building facilities, maintaining and managing facilities, and co-hosting events that raise money for the bicycle, pedestrian, and greenway system. There are many ways in which civic organizations can participate in the development of the system. The most appropriate involvement can be determined by matching the goals and objectives of each organization to the needs of the bicycle, pedestrian, and greenway program. The involvement of such organizations should be coordinated through the Parks and Recreation Department’s Adopt-a-Greenway program.

Role of Individual Citizens

Local residents who are interested in the development of Harrisburg’s Bicycle, Pedestrian, and Greenway System can participate by agreeing to donate their time, labor and expertise to the Parks and Recreation Department. Residents might choose to partner with a friend or form a local neighborhood group that adopts a section of system for maintenance and management purposes through the Adopt-a-Greenway program. Individuals can volunteer to plant trees, shrubs, and flowers along segments of bicycle, pedestrian, and greenway system. All volunteer efforts will be recognized by the Parks and Recreation Department through a community-wide program.

C. CRITERIA FOR PRIORITIZING LAND ACQUISITION

The following criteria shall be used to guide the town in prioritizing parcels of land to be acquired for the bicycle, pedestrian, and greenway system. Criteria are not provided in order of significance. The criteria are listed in alphabetical order; the ordering does not represent either priority or hierarchy.

Cost of Acquisition – a determination that it is financially feasible to acquire the property.

Cultural Significance – the property contains a unique artifact of history, or is a historically significant parcel of land.

Environmental Significance – the property is an important parcel of land and contains a significant environmental feature(s) that makes it worthy of acquisition (i.e. water quality, plant or animal habitat, floodplain management).

Geographical Equity – the property is located in an area of the town that if acquired will provide a balance to future bicycle, pedestrian, and greenway system development. The property adjacent to or near a recreation facility will encourage connectivity between neighborhoods and the facility.

Maintenance of Property – it has been determined that the property can be maintained in a manner that is consistent with Harrisburg Parks and Recreation Department policies.

Opportunity for Donation – a donor has come forward and has agreed to give the land to the town.

Opportunity for Bicycle, Pedestrian, and/or Greenway Facility Development – the property is ideally suited for bicycle, pedestrian, and/or greenway facility development. Issues of accessibility have been addressed and satisfied.

Population Served – the property is located in an area of the town that is densely populated.

Source of Funding – funds have been identified and are available to purchase the property.

Type of Facility Development – the property can accommodate an appropriate level of bicycle, pedestrian, and/or greenway facility development.

Threat of Loss – the parcel of land is in demand and may not be available for public ownership unless quick action is taken.

D. LAND ACQUISITION STRATEGIES

The acquisition of land for the proposed bicycle, pedestrian, and greenway facilities is an important and necessary step of the development process. Land acquisition provides the land resources necessary for development of sidewalks, bike facilities, and greenways, protects sensitive environmental and natural resources, and preserves historic and cultural treasures. The Town of Harrisburg should utilize a variety of land acquisition methods for the protection and preservation of land for bicycle, pedestrian, and greenway facility development.

Fee-Simple Purchase

The Town of Harrisburg may choose to acquire land by fee-simple purchase. Such acquisitions are common for government entities and ensure control over the level of development and protection of the land. Land that could serve a dual purpose by accommodating both bicycle, pedestrian, and greenway facility development and other public facilities or services would be ideal. This scenario justifies the purchase of the land by using public funds more effectively. Organizations, such as land trusts, can assist government entities in the purchase of land for less than market value (bargain sale) by offering tax deductions to the selling landowner.

Easements

The acquisition of an easement entitles the town to only those rights granted in the easement agreement. Easements are often acquired at the time of final subdivision plat approval and recordation, but can also be solicited independently. There are a number of easement types that would work for the development of a greenway corridor, including Conservation Easements, Public Access Easements, and Trail Easements. Organizations, such as land trusts, can assist government entities in the purchase of Conservation Easements by offering tax deductions to the selling landowner. Refer to Appendix 4 for example easement agreements.

Right of First Refusal

The town can establish an agreement with a property owner to provide the first right of refusal on a parcel of land, scheduled to be put on the market. This means the town would be notified first, prior to the sale to any other agency or person. This type of agreement does not establish a sale price for the property, and the landowner has the right to refuse to sell it for the price offered by the town.

Option to Purchase Agreement

An option is a legal document giving a person or government entity the right to purchase a property. The document outlines the purchase price and applicable period (any duration of time), with a fee (often a small percentage of the total land value). If the property is purchased, the fee is deducted from the purchase price. If the purchase fails to proceed, the fee is nonrefundable.

This option may be a good approach if you are interested in buying land but need to raise funds for the purchase.

Donations

Landowners may wish to donate their property to a local government or land trust. Donations of land may occur if the landowner has no more use for the property, no heirs are present to receive the land, or tax and estate deductions are sought by the landowner. Landowners may prefer to donate an easement on the property. Such easements allow for certain agreed upon uses of the property, but the landowner retains ownership of the property.

Zoning and Development Regulations

Government entities across the United States have developed restrictions and regulations along major rivers, streams, and creeks. These regulations have been developed to protect water quality, limit development activity within close proximity to streams, and preserve habitats along water courses. River, stream, and creek regulations often require buffers of varying widths to be located on either side of a water course. Uses within the buffers are often restricted to passive recreation, public boating and utility uses, and in some cases, preservation, conservation, or agriculture. Other zoning and development regulations that have proven helpful in the acquisition of land include setbacks along streams, floodplain development restrictions, and required dedication of open space. More information regarding current and proposed zoning and development regulation strategies for the Town of Harrisburg can be found in Chapter 7.

Developer Contributions

Government entities have the option to require, request, and/or incentivize developers to contribute land, build trail facilities, or both as part of their development project. The Town of Harrisburg will be provided GIS information of the proposed bicycle, pedestrian, and greenway facilities, so that this can be referenced upon staff technical reviews of proposed developments within the town. Future developments located along segments of the adopted bicycle, pedestrian, and greenway system should be asked or required to incorporate these into their design plans. A review of the incorporation of the bicycle, pedestrian, and greenway facilities into design plans should be conducted during the development plan review process.

Most developers are open to accommodating trails within their developments for two reasons: most people view trails as a wonderful community amenity and most developers can place a premium on lots or housing units located within close proximity to the bicycle, pedestrian, and greenway facility. Paying a fee in lieu is another option, in which case the money could be utilized for land acquisition and development of the bicycle, pedestrian, and greenway system.

Duel Easements

As the town develops the bicycle, pedestrian, and greenway system, it is recommended that development be coordinated with the Public Works Department, as well as other utility companies through duel easements. There are different types of easements, such as sewer and overhead power lines, which typically are already maintained and cleared, so that maintenance personnel can easily access them. Duel use of existing public property can be pursued as a method of acquiring recreational and conservation land. Water, sewer and electrical easements can be used through negotiation and landowner consent to provide an additional easement for public recreation. Refer to Appendix 4 for example easement agreements.

Condemnation

Eminent domain for acquisition of parkland or land for bicycle, pedestrian, and greenway facilities can be exercised when property cannot be obtained through other means. This method is usually a last resort since it is often exercised when a landowner is not in agreement and can involve court proceedings. If this option is exercised, the landowner shall be compensated for their land at full market value.

E. CRITERIA FOR PRIORITIZING BICYCLE, PEDESTRIAN, AND GREENWAY FACILITY DEVELOPMENT

The following criteria are provided in this comprehensive plan to guide the town in determining bicycle, pedestrian, and greenway facility development. The criteria are listed in alphabetical order; the ordering does not represent either priority or hierarchy.

Cost of Facility Development – an estimate for the project has been completed and it has been determined that it is financially feasible to build the bicycle, pedestrian and/or greenway facility.

Cost of Facility Maintenance – an evaluation of the project has been completed and it has been determined that the facility can be maintained in accordance with Harrisburg Parks and Recreation Department policies. Additionally, Adopt-a- Greenway Facility groups have been identified and have been enlisted to support the future operation of the facility.

Expansion of Existing System – the proposed facility is an extension of an existing facility.

Geographical Equity – construction of the facility ensures that there is an equitable balance in bicycle, pedestrian, and/or greenway facility development throughout the town.

Need for Bicycle, Pedestrian, and/or Greenway Segment – residents of an area are presently underserved and require the development of the facility. Additionally, the facility has been identified as an element of other adopted master plans or thoroughfare plans.

Ownership of Land – the town has title or rights of public access to use the property.

Opportunity: Origin and Destination – the facility segment has a logical point of beginning and end.

Population Served – facility development will serve a significant population within a one-mile radius.

Public Support – the surrounding neighborhoods and communities support development of the facility.

Source of Funding – funds have been committed to the project; other agencies or private sector groups have committed funds in support of the project (i.e. partnerships have been established).

Type of Facility – the type and surface of the proposed bicycle, pedestrian, and/or greenway facility can be accommodated within the environmental setting of the project corridor. Additionally, the proposed surface meets the needs of local user groups and will be accessible under appropriate guidelines established by the Harrisburg Parks and Recreation Department.

F. BUDGET ESTIMATES

- 10' wide asphalt – \$130/L.F.
- 5' sidewalk - \$20/L.F.
- Natural surface trail – \$5/L.F. (basic) - \$12/L.F. (hardened for wet or low areas)

The Comprehensive Bicycle, Pedestrian, and Greenway Plan projects several different types of corridors and situations throughout Harrisburg. Based on current local and regional averages, greenway construction costs range from around \$5 a linear foot for natural surface trails to \$130 a linear foot for asphalt paved trails. These costs for paved trail are for a ten-foot wide greenway trail with a two-foot gravel shoulder on each side. The unit costs reflect minimal clearing and grading, paving, and mobilization. Land acquisition costs are not included in these unit costs. Furnishings, signage, bridges, boardwalks, retaining walls, fencing, traffic control, etc. would be on a case by case basis and are not included in these costs. Design and engineering costs typically range from 8-12 percent of the construction costs.

G. MAINTENANCE COSTS

The following maintenance costs, derived from national industry standards, are provided as a guide to establishing a budget for the operation, maintenance and management of a one mile greenway trail segment within a paved greenway system.

Drainage/storm channel maintenance (4 times a year)	\$1,500
Sweeping/blowing debris off trail tread (20 times a year)	\$2,750
Pick-up and removal of trash (20 times a year)	\$2,750
Weed control and vegetation management (10 times a year)	\$2,500
Mowing of 3 foot grass safe zone along trail (20 times a year)	\$3,500
<u>Minor repairs to trail furniture/safety features</u>	<u>\$1,500</u>
Total maintenance costs per mile of paved trail	\$14,500

It may be possible to lower the cost of maintaining one mile of paved greenway trail with savings of at least 50 percent through the establishment of a well-coordinated, well-run Adopt-a-Greenway program. The maintenance of natural surface trails is significantly lower than paved trails if the natural surface trail is properly built to be sustainable. Maintenance costs per mile of natural surface trail can range from \$1,200 to \$1,500 a year. This would include mowing of grassy shoulders along the trail 5 to 10 times a year, spraying the trail tread for weeds 2 times a year and any minor maintenance of the trail tread.

H. FUNDING STRATEGIES

The Town of Harrisburg should pursue a variety of funding sources for the development of the Harrisburg Bicycle, Pedestrian, and Greenway System, including funding for land acquisition, design, construction, and maintenance. Many government entities are unable to fully fund the development of every mile of bicycle, pedestrian, and greenway facilities within a network using in-house funds. It is recommended that the Town of Harrisburg develop a multi-tiered approach for funding facility development using a variety of financing options, including both public funding and private funding.

Federal Funding Options

Federal funding programs for bicycle, pedestrian, and greenway facility development are typically provided through two methods. The first federal funding method involves federal appropriations of funds to specific state agencies. These state agencies are charged with distributing, managing, and overseeing the expenditure of the funds. The second federal funding method provides local or county agencies direct funding for bicycle, pedestrian, and greenway facility development. Congressional earmarks have been used in the past to fund certain bicycle and pedestrian projects, but recent scrutiny of this practice may limit or cease such funding. Appendix 2 provides information on specific federal funding programs that may be used for bicycle, pedestrian, and greenway facility development.

State Funding Options

Most statewide funding that can be used for bicycle, pedestrian, and greenway facility development comes through NCDOT and the following sources: Land and Water Conservation Fund, North Carolina Parks and Recreation Trust Fund, Clean Water Management Trust Fund, National Heritage Trust Fund, Recreational Trails Program, and North Carolina Division of Water Resources. Most state appropriated funding is limited to specific types of projects and requires matching funds of varying percentages of the grant request. Harrisburg will need to carefully review all state grant programs and plan appropriately for providing matching funds when required. Appendix 2 provides information on specific state funding programs that may be used for bicycle, pedestrian, and greenway facility development.

Local Funding Options

Traditionally, local governments have utilized the following sources for funding bicycle, pedestrian, and greenway facility development. Appendix 2 provides additional information on the various local funding options that may be used for bicycle, pedestrian, and greenway facility development.

Discretionary annual spending - typically referred to as a “General Fund”, refers to spending that must be agreed upon on an annual basis. Bicycle, pedestrian, and greenway facility development funds would need to be appropriated within the town’s annual budget to a specific department’s annual operating budget and would range in value annually.

Debt financing - refers to the government agency borrowing funds for the development of bicycle, pedestrian, and greenway facilities through loans or bonds. Such funding sources require repayment of funds over a specified period of time.

Bond referendums - A bond referendum can be placed on a ballot to finance land acquisition and design and construction costs for bicycle, pedestrian, and greenway facilities. In most cases, voters must approve a bond. Because of this fact, it is critical to educate the public on the mission and intent of the bond in order to gain support. Based on survey results, if a bond referendum was held to fund the implementation of bicycle/pedestrian facilities, 60% of respondents would vote in favor, 20% might vote in favor, 12% were not sure, and 8% would vote against.

Impact fees - Impact fees are monetary one-time charges levied by a local government on new development. Unlike dedication fees required through development, one-time impact fees can be applied to finance nearby bicycle, pedestrian, and greenway facilities.

Payment in Lieu of Fees - Where land dedication does not occur through the development process, the town can require a payment in lieu of dedication. These fees can be applied to finance acquisition of land or development of nearby bicycle, pedestrian, and greenway facilities.

Taxation - Communities can vote to raise tax money in support of bicycle and pedestrian efforts. Based on survey results, 35% of respondents are somewhat willing to pay some increase in taxes to fund bicycle/pedestrian facilities, and 20% are unwilling.

Powell Bill Funding - Powell Bill funds, coming from NCDOT, shall be expended only for the purposes of maintaining, repairing, constructing, reconstructing or widening of any street or public thoroughfare within the municipal limits or for planning, construction, and maintenance of bikeways, greenways or sidewalks.

Adopt-a-Greenway Program - Provides opportunities for making contributions of time, materials and funding to keep bicycle, pedestrian, and greenway facilities and open space needs available and enjoyable for the residents of Harrisburg.

The sources used to fund bicycle, pedestrian, and greenway facility development in Harrisburg will be tied to the Town's budgetary resources, taxing capacity, political will, and voter preference.

Private Funding

The development of the Harrisburg Bicycle, Pedestrian, and Greenway System may be funded by private sources that support the bicycle and pedestrian initiative, understand the benefits of bicycle, pedestrian, and greenway facilities, and understand the need for additional transportation and recreation facilities within the Town of Harrisburg. Private funding sources may include individual donors, non-profit organizations, foundations, philanthropic organizations, and businesses. Harrisburg has many local businesses and regional offices and industries located within the town limits. Harrisburg should establish a list of business owners through the Chamber of Commerce to seek financial and volunteer support for land acquisition and bicycle, pedestrian, and greenway facility construction. Appendix 2 provides additional information on the various private funding options that may be used for bicycle, pedestrian, and greenway facility development.

It is recommended that the Town of Harrisburg develop additional fund raising programs. Funds gathered through donations of personalized bricks to be displayed at greenway trailheads or along prominent bicycle and pedestrian corridors can fund portions of facility construction. "Buy a Foot" programs allow local businesses and citizens to provide private funding for the construction of bicycle, pedestrian, and greenway facilities.

The most effective method for funding the Harrisburg Bicycle, Pedestrian, and Greenway System will involve a combination of public and private funding sources.



A. Text Amendment Recommendations

7

POLICY RECOMMENDATIONS

A. TEXT AMENDMENT RECOMMENDATIONS

Existing planning documents and ordinances for the Town of Harrisburg were reviewed and compared with the processes necessary for the successful implementation of a comprehensive bicycle, pedestrian, and greenway system. The following text amendment recommendations are proposed to enhance the language already present in the town's various plans and ordinances.

Town of Harrisburg Unified Development Ordinance

Article 4: Zoning Districts and Dimensional Regulations

Table 4.6-1: Principal Uses Permitted in Zoning Districts

Recommendation: Allow Greenways/Trails in all zoning and overlay districts

Article 6: Subdivision Regulations

6.5.3.2. Greenways. - Greenways connecting residences, schools and recreational areas is encouraged. Maintenance is limited to a minimum removal and avoidance of hazards, nuisances, or unhealthy conditions.

Recommendation: None

6.5.3.2.1. If a subdivision occurs along a corridor that has been identified by the adopted Bicycle, Pedestrian, and Greenway Plan as having a future greenway, the subdivider shall be responsible for developing the greenway as part of the subdivision process. The greenway shall, as a minimum, meet the standards set forth in Section 6.5.3.7.4 of this Ordinance. The acreage associated with the 25' easement may count toward the acreage required for Public Open Space in Section 6.5.5.

Recommendation: None

6.5.3.7.4. All proposed trails shall be a minimum width of 8' and shall be paved. In addition, a 25' easement shall be provided to the Town of Harrisburg for any trail systems that are part of the proposed Town greenway system.

Recommendation: All proposed trails shall be a minimum width of 10' and shall be paved.

6.5.5.1.1. All major residential subdivision proposals shall, prior to final approval of the preliminary plat, dedicate a portion of such land, as set forth in this Ordinance, for the purpose of public parks, recreation, greenways and open space sites to serve the residents of the neighborhood in which the subdivision is located as well as the Town of Harrisburg.

Recommendation: None

6.5.5.2.1.4. Access: Public Access to the dedicated land shall be provided either by adjoining street frontage or public easement of at least thirty (30) feet in width.

Recommendation: None

6.5.5.2.1.5. No more than one quarter of the gross land dedicated may be comprised of land deemed to be inaccessible per Table 6.5-1 or within the 100-year floodplain.

Recommendation: None

6.5.5.3.1.1. Recommended improvements in the Parks and Recreation Master Plan

Recommendation: In addition to the Parks and Recreation Master Plan, add the Comprehensive Bicycle, Pedestrian, and Greenway Plan.

6.5.5.7.3. Fees collected in lieu of dedications and any proceeds from such transactions or sales shall be held in a special fund by the Town, and the funds shall be used by the Town for the purpose of acquiring or developing recreation, park, or open space areas as shown in the Parks and Recreation Master Plan and for no other purposes.

Recommendation: Add greenways to the list of amenities. Also add as shown in the Comprehensive Bicycle, Pedestrian, and Greenway Master Plan.

Article 8: Off-Street Parking and Private Driveway Standards

Recommendation: Bicycle parking should be considered as a part of this section to require the addition of long term and short term bicycle parking facilities for non-residential uses. Encouragement of the use of bicycles and greenways can be enhanced through the accommodation of bicycle parking facilities throughout the Town of Harrisburg. Specific text recommendations are not provided within this report, however, it is recommended that a committee be formed to study and recommend a proposed text amendment for the inclusion of bicycle parking facilities.

Article 10: Street Improvement Standards

10.1.2.3. The subdivider shall be responsible for installing utilities and infrastructure along these public streets, including but not limited to water, sewer, sidewalks, curb and gutter, and bike lanes. The requirement for bike lanes shall be determined by the adopted Bicycle, Pedestrian, and Greenway Plan; if shown on the plan, the developer is responsible for improving the street with a bike lane for the entire frontage of the property being subdivided.

Recommendation: This section only addresses subdivisions along public streets. The installation of utilities and infrastructure should be required of all development types (residential, commercial, industrial, mixed, etc.). Also, “bike lane” should be broadened to “bike lane/bike facility” since the plan includes various types of bike facilities.

Article 11: Site Design Standards

11.2. Multi-Family Residential Design Standards

Recommendation: It is recommended that the same requirement for major subdivisions (6.5.3.2.1) also be for multi-family residential design. The ordinance should state that if a multi-family residential development occurs along a corridor that has been identified by the adopted Bicycle, Pedestrian, and Greenway Plan as having a future greenway, the developer shall be responsible for developing the greenway as part of the development process. The greenway shall, as a minimum, meet the standards set forth in Section 6.5.3.7.4 of this Ordinance. All proposed trails shall be a minimum width of 10' and shall be paved. In addition, a 25' easement shall be provided to the Town of Harrisburg for any trail systems that are part of the proposed Town greenway system.

11.2.7.2. Sidewalks, in combination with curb and gutter, shall be required adjacent to all public streets which provide access to the development.

Recommendation: None

11.3. Commercial Design Standards

Recommendation: It is recommended that the same requirement for major subdivisions (6.5.3.2.1) also be for commercial design. The ordinance should state that if a commercial development occurs along a corridor that has been identified by the adopted Bicycle, Pedestrian, and Greenway Plan as having a future greenway, the developer shall be responsible for developing the greenway as part of the development process. The greenway shall, as a minimum, meet the standards set forth in Section 6.5.3.7.4 of this Ordinance. All proposed trails shall be a minimum width of 10' and shall be paved. In addition, a 25' easement shall be provided to the Town of Harrisburg for any trail systems that are part of the proposed Town greenway system.

Recommendation: It is recommended that sidewalks, in combination with curb and gutter, shall be required adjacent to all public streets which provide access to the commercial development.

11.6. Supplemental Design Standards for Campus Development (CD) District

Recommendation: It is recommended that the same requirement for major subdivisions (6.5.3.2.1) also be for the Campus Development District. The ordinance should state that if a campus development occurs along a corridor that has been identified by the adopted Bicycle, Pedestrian, and Greenway Plan as having a future greenway, the developer shall be responsible for developing the greenway as part of the development process. The greenway shall, as a minimum, meet the standards set forth in Section 6.5.3.7.4 of this Ordinance. All proposed trails shall be a minimum width of 10' and shall be paved. In addition, a 25' easement shall be provided to the Town of Harrisburg for any trail systems that are part of the proposed Town greenway system.

Recommendation: It is recommended that sidewalks, in combination with curb and gutter, shall be required adjacent to all public streets which provide access to the campus development.

11.7. Supplemental Design Standards for Light Industrial (I-1) District

Recommendation: It is recommended that the same requirement for major subdivisions (6.5.3.2.1) also be for the Light Industrial Development District. The ordinance should state that if an industrial development occurs along a corridor that has been identified by the adopted Bicycle, Pedestrian, and Greenway Plan as having a future greenway, the developer shall be responsible for developing the greenway as part of the development process. The greenway shall, as a minimum, meet the standards set forth in Section 6.5.3.7.4 of this Ordinance. All proposed trails shall be a minimum width of 10' and shall be paved. In addition, a 25' easement shall be provided to the Town of Harrisburg for any trail systems that are part of the proposed Town greenway system.

Recommendation: It is recommended that sidewalks, in combination with curb and gutter, shall be required adjacent to all public streets which provide access to the light industrial development.

Appendix C: Design Standards for Streets and Utilities

Recommendation: It is recommended that a section be added to Appendix C regarding greenway and bicycle facility design and construction with a statement that when a greenway or bicycle facility is part of a development, all greenways and bicycle facilities should be constructed in accordance with the design and construction standards in the adopted Bicycle, Pedestrian, and Greenway Plan, and shall be maintained for public access whether by easement or by public dedication.





McEachern Greenway, Concord, NC

- A. Overview
- B. Types of Greenways/Trails
- C. Trail Environments
- D. Accessible Design
- E. Trail Structures
- F. Trail Amenities

Appendix 1

DESIGN GUIDELINES

A. OVERVIEW

The following design guidelines have been established to assist the Town of Harrisburg and other stakeholders in constructing bicycle, pedestrian, and greenway facilities and amenities that will provide safe and sustainable non-motorized transportation corridors in Harrisburg. These guidelines allow facility construction and character to be developed uniformly throughout the town. The design guidelines are to be used as a toolkit with the understanding that actual site conditions may dictate adjustments in final facility design. These design guidelines have been organized into the following sections:

Types of Bicycle, Pedestrian, and Greenway Facilities

Bicycle, pedestrian, and greenway facilities include many different facility types. The facility types that may be constructed in Harrisburg may include natural surface trails, paved or unpaved multi-use trails, sidewalks, paved shoulders, bicycle boulevards, shared lanes, bike lanes, shared use paths (sidepaths), equestrian trails, or multi-use trails with equestrian use.

Trail Environments

The greenway corridors designated in Harrisburg occur in many different environments, each providing a unique experience. When constructing trails, it is important to be mindful of the environment for that specific trail corridor, so that those environments are not damaged during construction or as a result of future trail use. Likewise, the long term sustainability of trails should be considered based on the environments in which they are being constructed. Trail environments to be discussed include creekside trails, trails within floodways or floodplains, underpasses, utility easements, rail crossings, and rails with trails.

Accessible Design

It is important to consider accessibility when designing bicycle, pedestrian, and greenway facilities, not only relating to alternate transportation, but from a recreation standpoint as well. Standards for accessibility have been established by the U.S. Department of Justice through the Americans with Disabilities Act, U.S. Department of Transportation, Federal Highway Administration, AASHTO, and the U.S. Access Board with Accessibility Guidelines for Outdoor Developed Areas. This section will address trail design to meet the needs of users with varied mobility requirements.

Trail Structures

Development of trails within certain environments will create the need for additional facilities or structures including boardwalks, pedestrian/bicycle bridges, railings, and drainage and erosion control measures. These structural elements support trail use, help provide a safe trail experience, reduce a trail's impact on the environment, and reduce trail maintenance when designed and maintained properly.

Trail Amenities

Greenway users will need accommodations or support facilities along the greenway corridors. Inclusion of these support facilities will provide points of access to trails, encourage continued trail use, and create local character for trails. Typical amenities within a trail environment include trailheads and parking, seating, overlooks, signage/wayfinding, tables, trash receptacles, pet waste stations, opportunities for public art, and in some areas, restroom facilities.



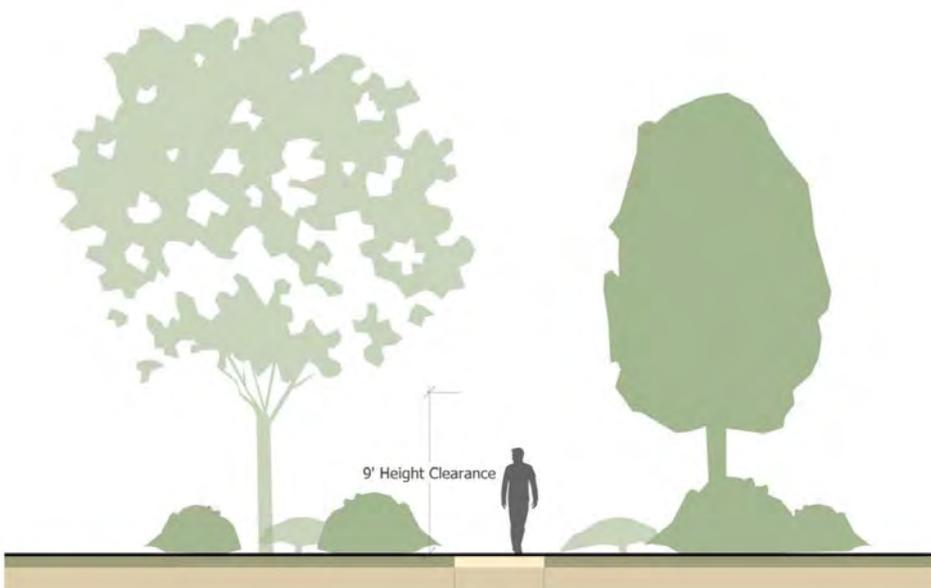
Neuse River Greenway, Raleigh, NC

B. TYPES OF GREENWAYS/ TRAILS

Natural Surface Trails

Most users will associate natural surface trails with hiking trails often found in natural park settings. These types of trails typically serve hikers more so than cyclists. Minimal site preparation or construction is needed. Recommended guidelines include:

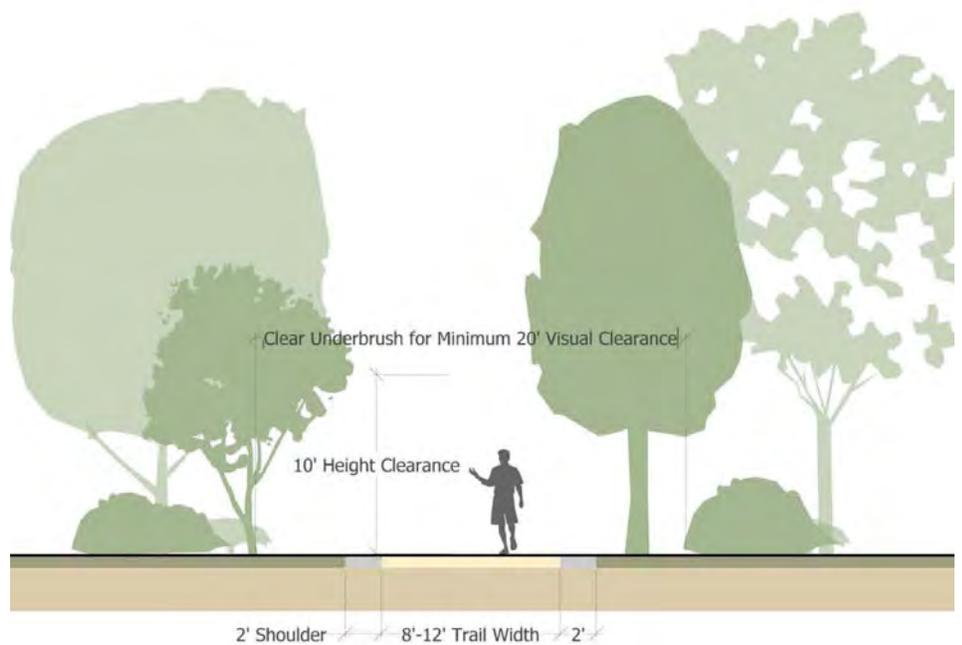
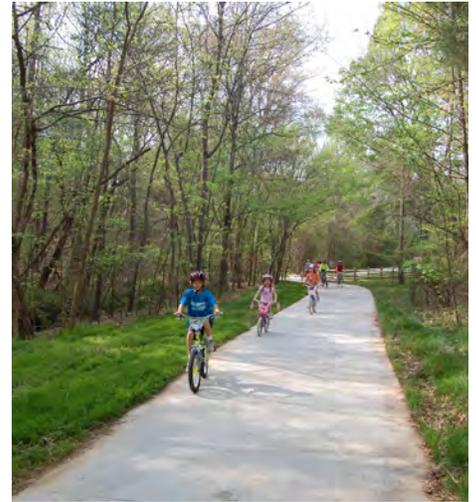
- Maintain a trail width of 2 to 5 feet
- Maintain a vertical clearance of at least 9 feet
- Trail surface is typically native materials such as dirt, rock, soil, forest litter, or mulch
- Be mindful of grade change; trail should follow contours to avoid steeper slopes
- Route trail around trees and other site features wherever possible
- Provide positive drainage for trail surface, but minimize extensive removal of existing vegetation or adjacent surfaces



Multi-Use Trails – Paved

Multi-use trails are the most common type of greenways within municipal park systems and trail networks. These trails can be used by hikers, walkers, joggers, cyclists, users in wheelchairs, and parents with strollers, accommodating all levels and abilities of users. Recommended guidelines include:

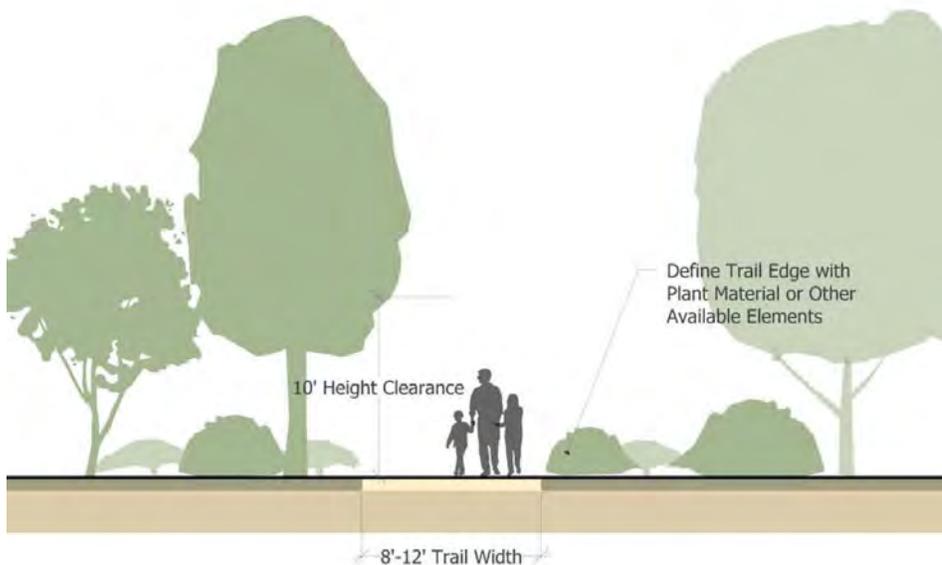
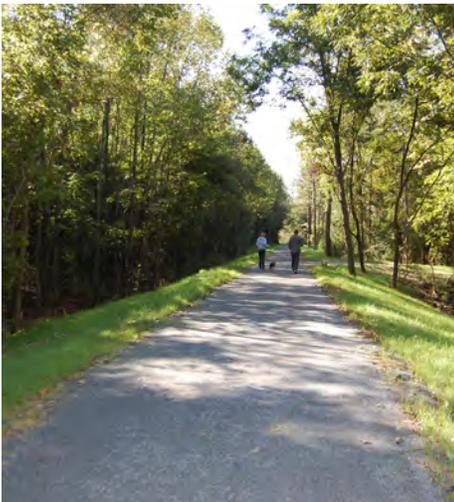
- Maintain a paved trail width of 8 to 12 feet; 10 feet is the most common
- Maintain a vertical clearance of at least 10 feet
- Provide a 2 foot graded (gravel) shoulder on each side of the trail
- Use asphalt or concrete pavement
- Consider pervious pavement in less clay-like soils
- Provide an aggregate base course (ABC) under the asphalt
- Consider using geotextile fabric under the ABC in softer soil conditions
- Specify concrete for use in highly floodprone areas
- Provide centerline stripes on trails with high volumes of users and around curves



Multi-Use Trails – Unpaved

Unpaved multi-use trails are often found in upland areas. With proper compaction, these trails can also be used by hikers, walkers, cyclists, users in wheelchairs, and parents with strollers, accommodating all levels and abilities of users. Unpaved trails are often less expensive to construct, but can cost more to maintain depending on trail location, soil compaction, topography, and weather patterns. Joggers, runners, and some cyclists prefer unpaved trails. Recommended guidelines include:

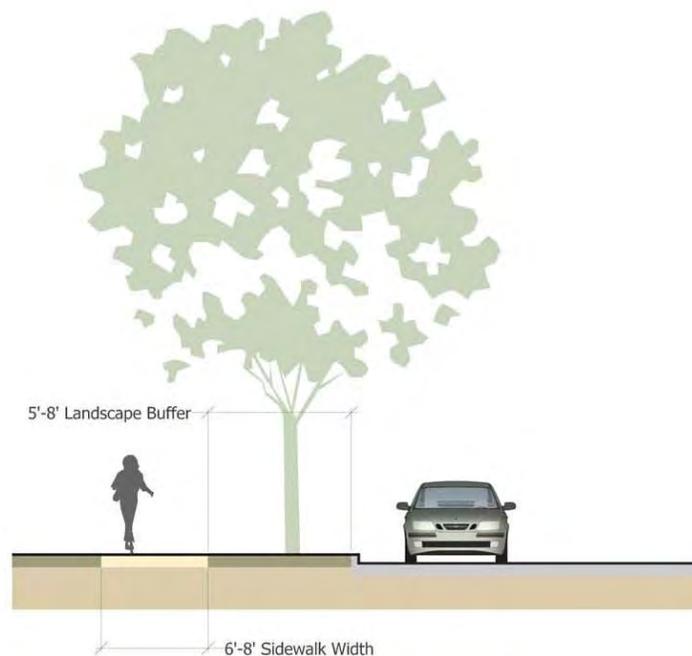
- Maintain a paved trail width of 8 to 12 feet; 10 feet is the most common
- Maintain a vertical clearance of at least 10 feet
- Soft surface trail materials may include graded aggregate stone (crusher run, decomposed granite, soil cement)
- Provide an aggregate base course (ABC) under the surface course
- Consider using geotextile fabric under the ABC in softer soil conditions
- Consider providing edging along both sides of the trail to maintain trail surface materials
- Monitor trail surfacing after rain events to minimize ruts and drainage channels



Sidewalks

This Comprehensive Bicycle, Pedestrian, and Greenway Plan makes use of existing sidewalks in many areas of the town. Sidewalks typically serve pedestrians, but do not always accommodate cyclists. For new sidewalks, recommended guidelines include:

- Minimum sidewalk width of 5 feet; 8 to 10 feet preferred, especially if an extension is allowed
- Provide a 5 to 8 foot landscaped buffer between the roadway and the sidewalk if room is available
- Use a light broom finish perpendicular to the direction of travel
- Provide accessible ramps and crosswalks at all intersections or street crossings
- Install pedestrian signaling at intersections, especially those with heavy traffic volumes and/or rapid traffic speeds



Paved Shoulders

Paved shoulders are most often used on rural roadways that connect town centers and other major attractions.

- Paved shoulders should be at least 4 feet wide, with a width of 5 feet wide recommended if there are barriers (i.e. guardrail, curb, etc.)
- Wide shoulders should have a smooth riding surface
- Drain grate openings should be perpendicular to the direction of travel

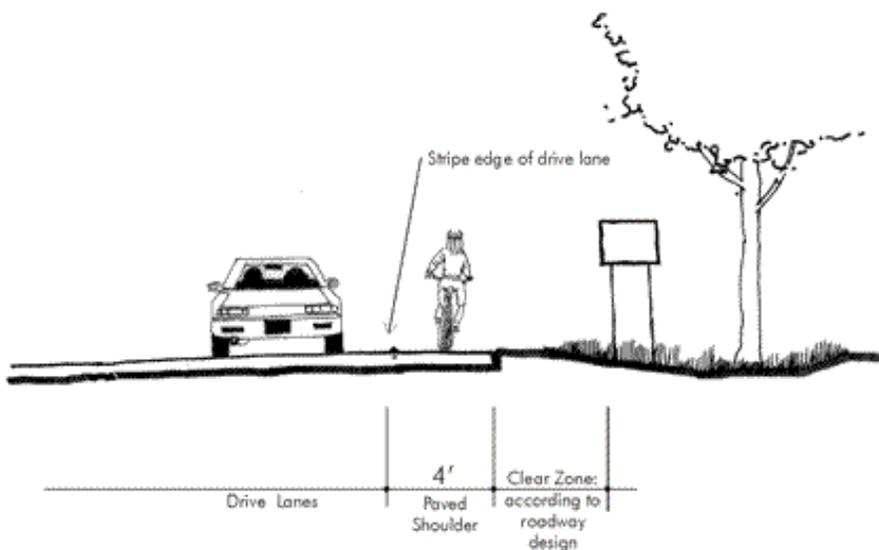


Image source: iowadot.gov

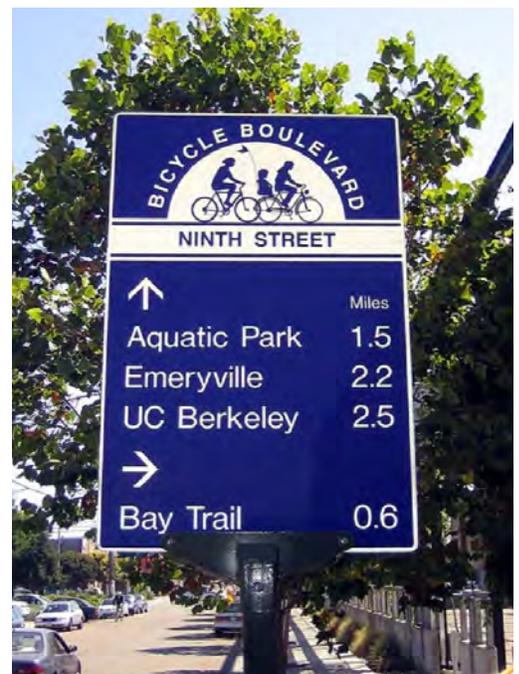
Bicycle Boulevards

On local roads, often residential streets, with low volumes (less than 3,000 vehicles per day) and speeds (25 mph or less), and where the speed differential between motorists and bicyclists is typically 15 mph or less, bicycle boulevards may be used. A bicycle boulevard is a local street or series of contiguous street segments that have been modified to function as a through street for bicyclists, while discouraging through automobile traffic.



Image Source (above):
www.columbusunderground.com

Image Source (right):
www.bikepedingo.org



Shared Lanes (Marked and Unmarked)

On roadways where vehicle traffic volumes are generally greater than 3,000 cars per day or where travel lanes are 14 to 18 feet wide, it may be possible to create shared roadway usage for cyclists either as a signed use or a wide outside lane.

- Shared lanes exist everywhere; on local neighborhood streets, on city streets, and on urban, suburban, and rural highways
- There are no bicycle-specific designs or dimensions for shared lanes or roadways
- Shared lanes should have a smooth riding surface
- Drain grate openings should be perpendicular to the direction of travel



Image Source: fabb-bikes.org

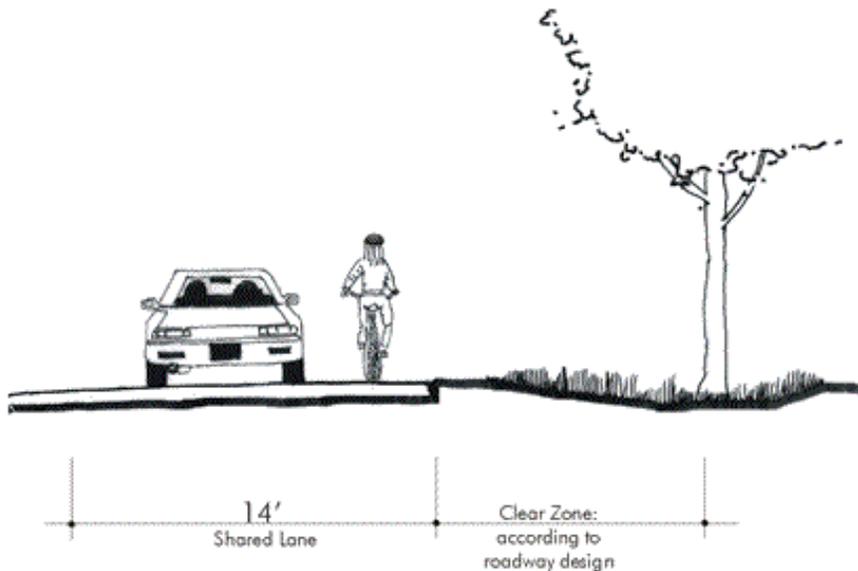


Image Source: iowadot.gov

Bike Lanes

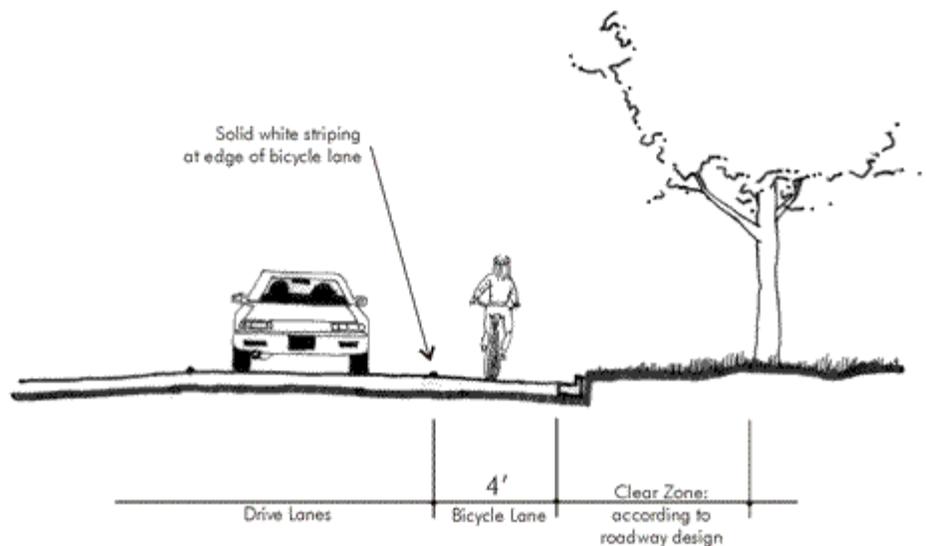
On major roads that provide direct, convenient, quick access to major land uses, bike lanes are recommended. Bike lanes can also be used on collector roads and busy urban streets that have lower speeds. Generally, bike lanes can be used along any road where the traffic volume is greater than 3,000 vehicles per day and the design speed for the motor vehicle is more than 25 mph. These types of facilities are generally provided for more skilled cyclists and not for most families or children. Recommended guidelines for bike lanes include:

- In most cases, bike lanes should be provided on both sides of two-way streets
- Bike lanes should have a smooth riding surface
- Recommended width for bike lanes is 5 feet, but wider lanes may be desirable under certain conditions, and in extremely rare conditions, may need to be less than 5 feet in width
- Drain grate openings should be perpendicular to the direction of travel
- Regulatory signage should be used in conjunction with painted signage on the surface (see signage section)



Image Source
(right): carolina
publicpress.org

Image Source
(below: iowadot.gov)



Shared Use Paths (i.e. Sidepaths)

When the primary trail is street based and has limited driveway/intersection crossings, a sidepath is recommended along one side of the roadway. This might occur along some of the more rural two lane roads. Recommended guidelines for sidepaths include:

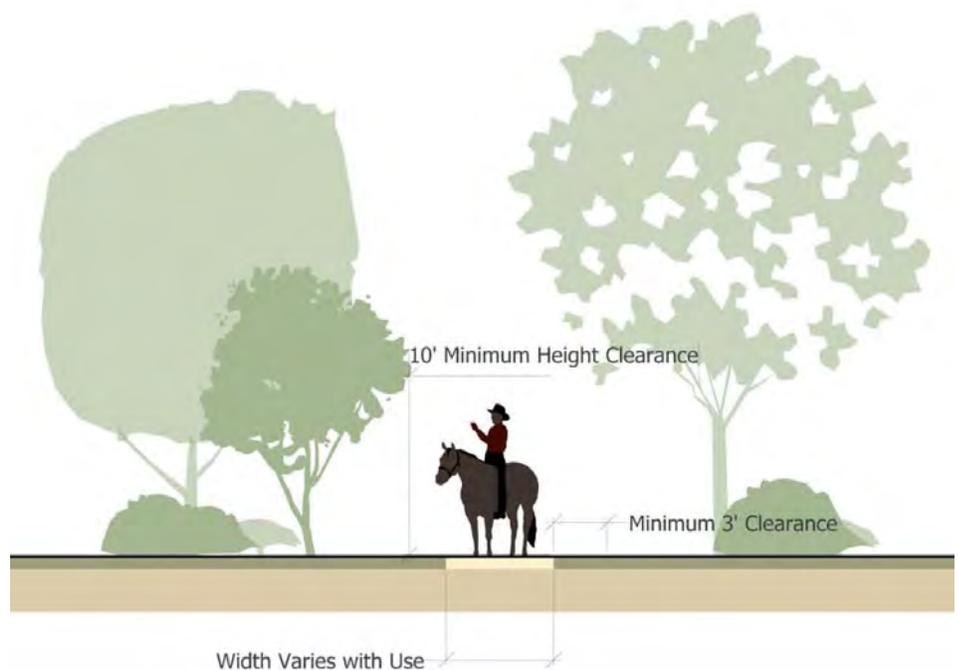
- Sidepaths should be 10 to 12 feet wide
- Sidepaths should be set back at least 5 feet from the edge of the roadway with a vegetated buffer wherever possible
- Provide concrete or asphalt surfacing
- Provide accessible ramps from sidepaths to roadway
- Install bollards at intersections/roadways to prevent vehicles on the sidepath



Equestrian Trails

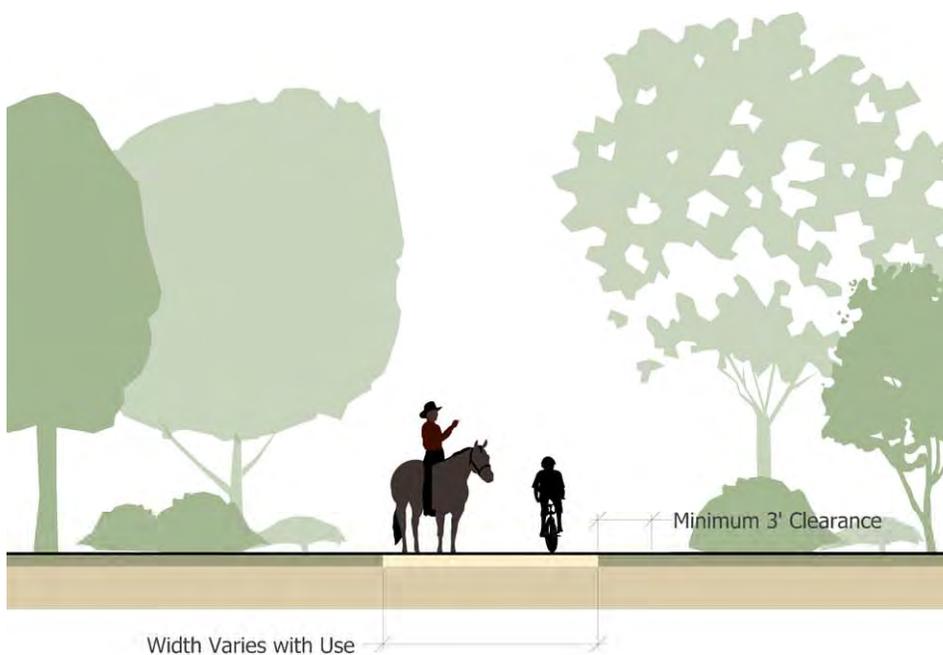
Equestrians prefer separate trails for their use not only for the types of rides they do, but for safety concerns of the riders and their horses. Horses can be easily startled by hikers and cyclists. Equestrians can use a wide area of space depending on whether they ride individually or in groups. Horses can be hard on trails, making trails more difficult to use for hikers and cyclists after rain events or during continued wet conditions. Equestrian facilities need to provide enough space for horses and their riders to feel at ease, allow horses to ride away from trail edges, offer good visibility, avoid natural hazards, and provide safe interaction with other trail users. Dirt or stabilized dirt is the preferred trail surface, though crushed stone like granite screenings is also acceptable. Water crossings are preferred over bridge or boardwalk crossings which would require hoof mats on the treads. Based on USDA/FHWA guidelines there are suggested widths and clearance tolerances for standard single and double track (side by side riding/passing) equestrian trails as follows:

- Trail width for single track ranges from 1.5 to 2 feet for low development; 3 to 6 feet for moderate development; 8 to 12 feet for high development
- Horizontal clearing width which is equal to the trail width, plus 3 feet each side ranges from 5.5 to 8 feet for low development; 9 to 12 feet for moderate development; 14 to 18 feet for high development
- Trail width for double track ranges from 5 to 6 feet for low development; 8 to 12 feet for moderate and high development
- Horizontal clearing width, which is equal to the trail width, plus 3 feet each, side ranges from 10 to 12 feet for low development; 14 to 18 feet for moderate and high development
- Vertical clearance should be 10 to 12 feet



Multi-use Trails with Equestrian Use

There are many multi-use trails across the country that also include equestrian use. It is important to install appropriate signage indicating trail protocol, especially noting that hikers and cyclists yield to equestrians at all times. Trail sub-base and sub-grade need to be firm and prepared properly. Maintenance of shared trails should be a priority due to the multiple uses during wet conditions and the need for more constant manure removal.

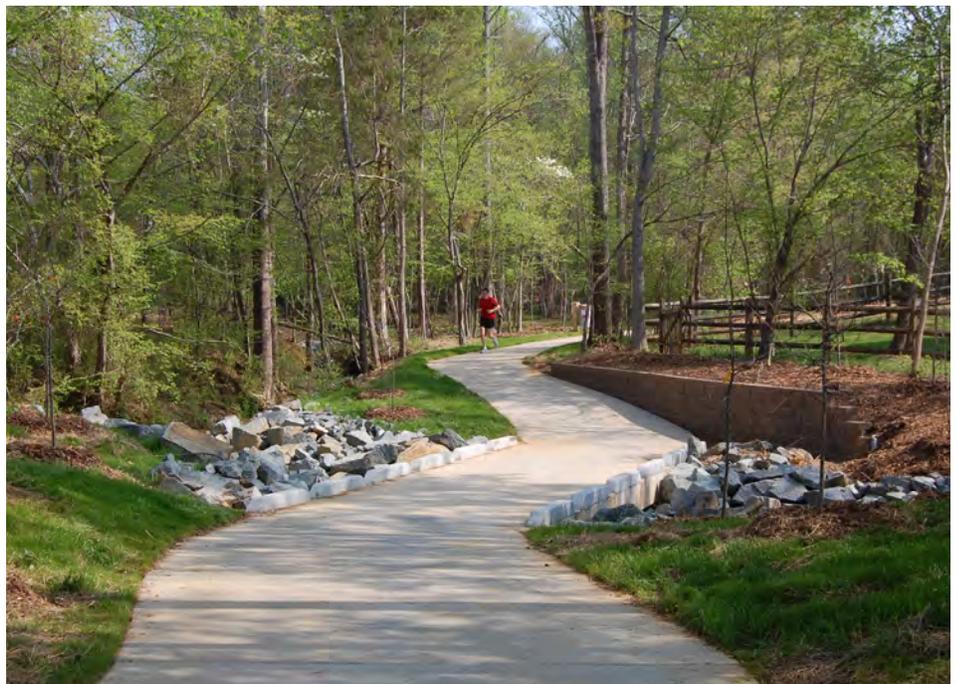


C. TRAIL ENVIRONMENTS

Creekside Trails

Creekside trails occur more often in more populated or developed areas. Road ROWs and density may warrant a shift in trail development to the rear of lots if stream channels are present and can provide a connectivity link. Trails are located immediately adjacent to the stream channel, thus flooding frequency needs to be considered. Retaining walls and gabion walls may be required due to the potential tightness of this type of trail corridor. Walls also help to protect the trail from erosion and flooding. Recommended guidelines for creekside trails include:

- Minimum trail width should be 10 feet with no shoulders
- Provide concrete surfacing to withstand prolonged flooding and high-velocity stream flow
- Trail amenities should be minimized along creekside trails; retaining walls could also serve as seatwalls



Trails within Floodways

These trails are similar to creekside trails, but the trail is not located immediately adjacent to the stream channel. A vegetative buffer or streamside zone is established between the stream channel and trail. Potential flooding is infrequent and more periodic. Recommended guidelines for trails within floodways include:

- Minimum trail width should be 10 feet with no shoulders
- Provide asphalt or concrete surfacing to withstand flooding and stream flow dependant on frequency of flooding
- Provide a proper sub-base to increase longevity and sustainability of trail

Trails within Floodplains

This type of trail is located outside of the floodways. A vegetative buffer between the stream channel and trail is left intact. Occasional flooding may occur during major rain events. Recommended guidelines for trails within floodplains include:

- Minimum trail width should be 10 feet with 2 foot graded shoulders on each side
- Provide asphalt surfacing; aggregate stone surface can be used in upland situations
- Provide a proper sub-base to increase longevity and sustainability of trail; a geotextile fabric may need to be installed in softer soils



Underpasses

Opportunities may arise when trail corridors can be routed under existing bridges or through culverts to avoid on road or at-grade crossings. This will typically occur when the trail follows a stream channel or river. Recommended guidelines for underpasses include:

- Underpass width should be at least 12 feet
- Vertical clearance of the underpass should be at least 8 feet; 10 feet preferred
- Ensure proper drainage is designed to avoid pooling of water
- Lighting is recommended for safety within the underpass



Utility Easements

Utility easements can often be used for trail construction as long as dual easements are created with the utility company and property owner(s). Most common use of easements involves sewer and electric utilities where trails can be developed along edges of the ROWs. Gas easements are more stringent and typically only allow trail crossings within their ROWs. Utility companies should be notified early in the planning and design process, so that easements and agreements can be completed in a timely manner and all parties are well informed. All utility ROW guidelines and restrictions should be reviewed and adhered to. Recommended guidelines for utility easements include:

- Trails within utility easements shall meander as necessary to accommodate elevation change and provide positive drainage
- For electric transmission ROWs, the trail width shall not exceed 5 feet in width, not including graded shoulders; trail surfacing shall be soft surface
- Trails should be located at least 25 feet away for transmission tower pads
- In most sewer ROWs, the trail can parallel the ROW as long as the trail is not located over the actual sewer line (except for trails that cross the ROW)



Road ROWs

While it is generally preferable to select trail alignments in independent rights-of-way, there are situations where existing roads provide the only corridors available. Both sidewalks and sidepaths can be located within road ROWs. The North Carolina Department of Transportation (NCDOT) has an adopted Pedestrian Policy with guidelines as to how sidewalks can be located within NCDOT ROWs. In addition to this, the Bicycle & Bikeway Act of 1974 directs the NCDOT to assist local governments with the development of bicycle programs and the construction of bicycle facilities.

Rail Crossings

Where trails may have to cross rail lines at-grade, efforts should be made to ensure visibility and safety for all users. Ideally, at-grade rail crossings should occur in conjunction with existing sidewalk or vehicular crossings, but this is not always the case. It is imperative to notify the railroad company/owner early in the planning and design process. Recommended guidelines for rail crossings include:

- Trails should cross rail lines as close to a 90 degree angle as possible
- Proper rail warning signage and pavement markings shall be installed along the trail on both sides of the rail crossing
- Crossing materials should be skid resistant; concrete and rubber crossing materials should be used to provide longevity and less maintenance
- If trail crossing is not in conjunction with an existing vehicular crossing additional vegetative clearing should occur to increase visibility for both the trail user and the rail line

Rails with Trails

Some railroads will allow trails to be constructed within their ROWs or within an easement within the ROWs. Railroads should be included in planning and design discussions early in the trail process which in turn could help reduce time needed for approvals from railroads. Most railroads or regulators such as Public Utility Commissions or the Federal Railroad Administration have guidelines and policies that trail designs must adhere to before approvals can be gained. Recommended guidelines for rails with trails* include:

- Trail width should be at least 12 feet with a 2 foot graded shoulder each side
- Setbacks will vary with train type, speed, frequency and separation technique; edge of trail should be no closer than 15 feet from centerline of nearest rail line for rails that see minimal use or commuter use; trails should be set back a minimum of 25 feet or more from the centerline of the nearest rail on more active lines
- Fencing at 5-6 feet high should be installed between the trail and the rail at least 3 feet off the trail shoulder
- The trail should be graded to drain away from the rail line
- *More information can be found at: www.railswithtrails.com and www.railstotrails.org



D. ACCESSIBLE DESIGN

All attempts should be made to design trails for accessibility for all users. Guidelines have been created in response to the Americans with Disabilities Act (ADA) for trail accessibility. However, meeting ADA guidelines may be difficult in some outdoor situations. Meeting ADA guidelines might cause conflict with trail sites having significant cultural or natural resources such as tree canopies or stream channels causing a significant grade change in the intended purpose of the trail or steep topography/terrain characteristics may prevent compliance. The following standards are to be used in accessible trail design:

- Surface materials should be firm and stable through the use of asphalt, concrete, wood, or compacted gravel
- Trail gradient should be less than 5% without landings; trail gradient can be less than 8.33% with landings
- Trail cross slope should be 2% maximum to provide positive drainage
- Trail width should be 8 feet minimum to allow the variety of users and the passage of 2 wheelchairs
- Resting areas or widened areas should be provided about every 300 feet
- Detectable pavement changes should be placed at curb ramps and top of ramp locations before entering roadways
- Concrete pads should be provided adjacent to one side of each bench location for wheelchairs



E. TRAIL STRUCTURES

Boardwalks

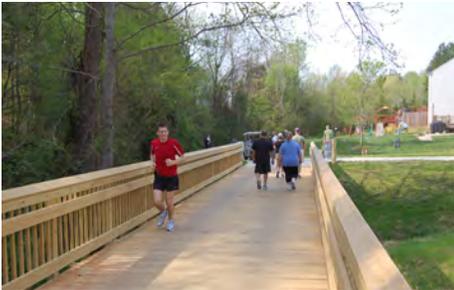
In general, trail routing should avoid wetlands if at all possible. If unavoidable, boardwalks should be used where trails need to be constructed through wetlands, areas where grading must be minimized or fill soil is not an option (floodplain), or other environmentally sensitive areas. Recommended guidelines for boardwalks include:

- Clear width of boardwalks should be 10 feet minimum on main trails
- If the height of the boardwalk exceeds 30 inches, railings are required; toe rails should be used where rails are not required
- Pressure treated wood posts, concrete footers or auger piers should be used for foundation materials
- Decking should be pressure treated (non-toxic) wood or recycled plastic
- Thickness of deck planking should be 2 inches minimum
- Boardwalks with a length more than 300 feet should have a seating/resting area every 150 feet

Pedestrian/Bicycle Bridges

Bridges should be used where trails cross streams or rivers, steeper drainage channels or roadways. There are many good options available for prefabricated wood or steel bridges that can be manufactured off site, delivered to the site, and easily installed with a crane. There may be opportunities to re-use abandoned railroad bridges that are either existing on site or can be relocated to the trail crossing location. The structural integrity should be assessed before reusing these types of bridges. A trail bridge should support a minimum H-5 loading (10,000 Lbs./5 tons). Other recommended guidelines for pedestrian/bicycle bridges include:

- Clear width of bridges should be 10 feet minimum
- Provide a reinforced concrete abutment on each side of the bridge
- Top of bridge rail should be 54 inches with a rub rail set at 36 inches maximum
- Decking should be pressure treated (non-toxic) wood
- Thickness of deck planking should be 2 inches minimum



Railings

As mentioned in both the boardwalks and bridges sections, railings are needed when the deck height is over 30 inches from finished grade of trail to existing grade below. Local, state, and/or federal regulations and codes should be consulted for final rail design, but in general recommendations for railings include:

- Railings should consist of a horizontal top, bottom, and middle rail
- The top rail should be 54 inches from the bridge or boardwalk deck
- The middle rail should be set between 33 and 36 inches and serve as a rub rail for cyclists
- Pickets should be placed no further than 4 inches on center



Drainage and Erosion Control Measures

Erosion control measures need to be incorporated into drainage design along greenway corridors to reduce erosion problems, minimize maintenance (and costs), and extend the longevity of the trail. Overall, trails should be designed with rolling grades using a series of dips, crests, climbs, and drainage crossings to respond to the existing terrain. In flatter situations, grade reversals may need to be constructed to create drainage flow. Both design methods lead to a more sustainable trail. In addition, recommended guidelines for drainage and erosion control measures include:

- Provide a maximum 2% cross slope on paved trail surfaces and graded shoulders
- Provide a drainage pipe under the trail where uphill water is collected in swales and/or directed to inlets/basins, so concentrated flow is directed under trail through a properly sized culvert
- Trail treads on natural surface or soft surface trails should be sloped away from high side of trail, so water sheets across the trail, not down the trail
- Refer to local and state sedimentation and erosion control regulations and practices when designing trails

F. TRAIL AMENITIES

Trailheads and Parking

Access points for the trails can occur in a variety of locations. Major trailheads should be developed where trails can be accessed from prominent heavily used nodes such as commercial developments, transportation nodes, or regional parks. Minor trailheads or neighborhood access points should be developed within parks and residential developments. Recommended amenities to be located at trailheads include:

Minor Trailhead

- Information kiosk/signage
- Benches
- Trash receptacles
- Pet waste stations
- Parking area for a minimum of 5 vehicles

Major Trailhead, all of the above, plus

- Picnic facilities
- Bicycle racks
- Shelters
- Restrooms with drinking fountain
- Landscape improvements
- Public art
- Informal gathering space
- Parking area for 25-35 vehicles

Seating

Benches/seating comes in a wide variety of styles and materials. Bench selection should be based on design theme and cost. Seating opportunities should be created at regular intervals along the trail ensuring there are places to rest. Ideally, these seating areas should be located in shade. Recommended guidelines for seating include:

- Benches should be 16-20 inches high; seating depth should be 18-20 inches
- Benches should have backrests
- Locate benches every quarter mile along the trail, at trail intersections, at trailheads, and at overlook opportunities
- Length of bench should not exceed 5 feet
- Provide wheelchair access (30 x 48 inch area) adjacent to benches
- When locating more than one bench in a seating area allow a minimum 4 feet separation between benches



Tables

As with seating, tables can vary from a standard wooden picnic table to a concrete or recycled plastic table. Tables should be located primarily at trailheads, but there may be opportunities to place tables in shaded settings along a trail, especially in areas that afford nice views. Tables should be located within view of a trail and be easily accessible for trail users or picnickers.



Trash Receptacles

Trash receptacles should be located in close proximity to seating and table areas both at the trailheads and along the trail. Receptacle materials should be durable and be able to withstand the exterior conditions and constant use. It is important that the receptacles are secured or contained in such a manner that trash does not spill easily. All receptacles should have tight fitting lids to keep rain out. Lids with latching mechanisms are good in keeping wildlife out of the receptacles. Some communities have started installing recycling receptacles next to trash receptacles for cans and bottles. Trash receptacles are to be used for trash only. Pet waste should be disposed of at pet waste stations (see next section).

Pet Waste Stations

To keep pet waste out of trash receptacles it is recommended that separate pet waste stations be installed at trailheads and regular intervals along a trail. The best type of station should have 3 components installed on one steel post. Identification signage should be located at the top of the post. A bag dispenser should be located below the sign. A ventilated mesh aluminum can should be located at the bottom of the post. The can should be 10 gallon and have a secure lid. Green is a uniformly recognized color.

Overlooks

There may be opportunities along a trail for users to enjoy a distant view or vista. These locations become favorable for the creation of an overlook. Overlooks can be designed as resting areas along a trail or as a destination point. Overlooks should contain the following elements:

- Benches
- Picnic table (at destination points only)
- Trash receptacles
- Railings, if significant elevation change occurs at the overlook area
- Informational signage
- Bike racks

Signage/Wayfinding

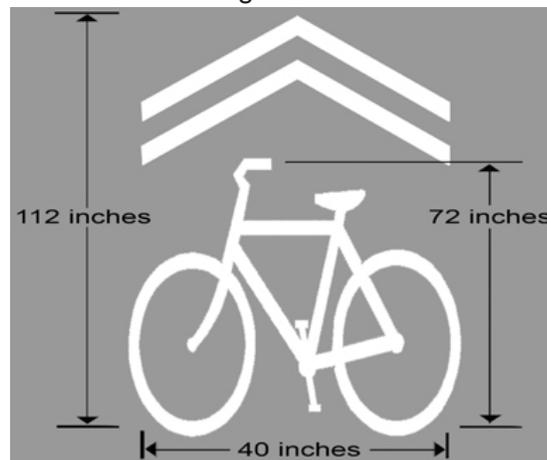
A signage system is important for users for the safe and appropriate use of all facilities. Additional signage along the system may provide reference mileage, directional information or interpretive information. The greenway system signage should be consistent with Monroe's Parks and Recreation design criteria. NCDOT approved regulatory signage should be installed at all pedestrian crossings. Likewise, warning signage should be installed at the proper vehicular distances on both sides of a greenway crossing. For the Monroe Greenway System, signage can be grouped as follows:

Bicycle Facility Signage

Street Signs:



Pavement Markings:



Trailhead/Vehicular Identification Signage

The trailhead/vehicular identification signage is designed to mark all major trailheads/access points or trail crossings. These signs are designed for easy recognition from a distance to aid trail users who drive to a major trailhead area. The signs are to be placed within the immediate vicinity of each major trailhead, preferably at the driveway or access road for the trailhead parking lot. These signs have a low, wide stance to the ground allowing easy identification with as little obtrusiveness as possible.



Secondary Entrance/Secondary Trail Identification Signage

Secondary Entrance/Secondary Trail Identification Signage serves to mark entrances from non-trailhead areas and other area trails. The signage is similar to trailhead/vehicular identification signage, but smaller in scale.

Trail Information/Directional/Trail Rules Signage

Trail information/directional and trail rules signs will be frequently located at trailheads and along trail corridors. This particular signage serves three distinct purposes. First, the signage provides users with the rules and regulations of the trail. Second, the signage serves to provide trail users with any helpful information related to the trail. Lastly, this signage provides directional guidance. Directional signage can be placed at many roadway and trail intersections and will serve to direct trail users to areas and destinations away from the immediate trail corridor. These signs should stand tall for ease of visibility, but be thin in order to reduce intrusion of the surroundings.

Informational Kiosks

Kiosks will be located primarily at trailheads and/or parking areas to provide trail maps, mileage and other important information to trail users.



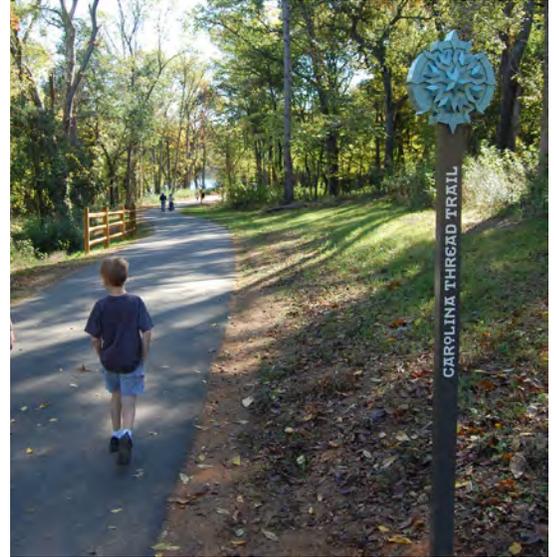
Interpretive Signage

Interpretive signage serves to locate specific sites or areas along the trail that warrant attention from a historic aspect. The signs may also describe environmental education features. Signage should stand tall and clearly mark a trail user's arrival to the specified destination.



Mileage/Boundary Markers

Mileage and boundary markers should be provided throughout the greenway system to aid the trail user in identifying destination points and allow users to track their mileage. These markers should be located a minimum of every mile along the trail. Quarter mile markers can be identified as a painted designation directly on the trail surface. Boundary markers enable trail users to remain on the trail and reduces the risk of a trail user getting lost or wandering onto private property. Due to the frequency of mileage and boundary markers, they should be visible while blending in with the surroundings.



Regulatory/Warning Signage

Regulatory or warning signage may be warranted along some areas where trails are in close proximity to roadways or populated areas. These types of signs may warn trail users of upcoming roadway crossings, changes in trail direction (if the trail is using a sidewalk system), speed limits, underpasses, or rail crossings. NCDOT, MUTCD, FHA, and AASHTO can provide more information on guidelines and standards for regulatory and warning signage.



Opportunities for Public Art

Trails and trailheads provide good opportunities to add interest and character to the trail corridor through public art. Art can help to depict local history or unique events. Art can be functional or aesthetic. Public art can occur along the trail in the form of seating or other furnishings.

Restroom Facilities

Restrooms are nice amenities to provide if feasible. There are many types of facilities that can be constructed from pre-fabricated units that can be delivered to a site and connected to public utilities to small pump and haul or vault toilet systems. There are also a variety of composting toilet systems available. Restroom facilities should be located at major trailheads. This allows for easy maintenance and service of the restrooms. All restrooms should be visible from parking and access points, easily accessible and ADA compliant with a drinking fountain(s) or water bottle filler.



Shelter/Restroom in Cornelius, NC



Restroom building at McEachern Greenway, Concord, NC



- A. Federal Funding Sources
- B. State Funding Sources
- C. Private Funding Sources
- D. Local Funding Options

Appendix 2

ALTERNATIVE FUNDING SOURCES

A. FEDERAL FUNDING SOURCES

State Transportation Improvement Program (STIP)

The North Carolina Department of Transportation has established a multi-year schedule for all its transportation projects – including bicycle and pedestrian related projects – called the STIP. Once projects have been adopted by the Division of Bicycle and Pedestrian Transportation (DBPT) and the North Carolina Board of Transportation, they are incorporated into the STIP. In its efforts to increase the safety of bicyclists and pedestrians in North Carolina, the department has undertaken many types of bicycle and pedestrian projects including:

- Construction of shared-use facilities and on-road highway improvements
- Safety and education programs
- Bicycle route designation and signing
- Other projects to facilitate bicycle and pedestrian transportation

According to the NCDOT website, DBPT utilizes a project prioritization methodology to rank all projects. Projects are evaluated based on local prioritization, estimated cost, right-of-way availability, connectivity, inclusion in a bike/pedestrian plan, population of region served, and statewide equality. Bicycle and pedestrian projects are divided into two categories, which determine the types of funds that may be available.

1. *Independent Projects* are those which are not related to a scheduled highway project.

2. *Incidental Projects* are those related to a scheduled highway project.

It will be important for the Town of Harrisburg to work with the Cabarrus Rowan Metropolitan Planning Organization (CRMPO) to submit bicycle and pedestrian projects to be ranked and added to the CRMPO's Transportation Improvement Program (MTIP), which will in turn be prioritized by the state.

Congestion Mitigation and Air Quality Program (CMAQ)

CMAQ is a federal program begun in 1991 under the Intermodal Surface Transportation Efficiency Act (ISTEA) and continued under the current transportation funding legislation. The program's purpose is to fund projects that help achieve compliance with the national air quality standards established under the Clean Air Act. CRMPO's planning area was designated as "nonattainment" for ozone by the Environmental Protection Agency. Any project proposed for CMAQ funding must be able to demonstrate that its implementation will contribute to a reduction in harmful emissions. It is important for the Town of Harrisburg to work with CRMPO for future CMAQ funding.

Recreational Trails Program (RTP)

The RTP is a federal grant program authorized by Congress in 2012 as Moving Ahead for Progress in the 21st Century (MAP-21). The intent of the RTP is to help fund trails and trail-related recreational needs at the State level. Funding for the RTP comes from federal gas taxes paid on non-highway fuel used in off-highway vehicles, and the program is administered at the Federal level by the Federal Highway Administration. Since this funding is awarded at the state level, more information is provided in the next section.

B. STATE FUNDING SOURCES

NC Clean Water Management Trust Fund (CWMTF)

To carry out the mandate set by legislation, CWMTF provides grant funds for the following purposes: (1) enhance or restore degraded waters, (2) protect unpolluted waters, (3) contribute toward a network of riparian buffers and greenways for environmental, educational, and recreational benefits, (4) provide buffers around military bases, (5) acquire land that represents the ecological diversity of North Carolina, and (6) acquire land that contributes to the development of a balanced State program of historic properties. This funding agency provides the following grants that can be utilized for greenways:

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
Acquisition Grant	None	None	Yearly	Acquisition of land for riparian buffers for the purposes of providing environmental protection for surface waters and urban drinking water supplies and establishing a network of riparian greenways for environmental, educational, and recreational uses.
Restoration Grant	None	None	Yearly	Restoration projects, including:
Stream Restoration, Enhancement, or Stabilization,				
Wetland Restoration, Creation, or Enhancement, and/or other projects that would promote the quality of receiving surface waters.				
Donation MiniGrant	\$25,000	None	Accepted on a rolling basis	Transaction costs associated with the donation of land for conservation or preservation purposes.

More information can be found at:
<http://www.cwmtf.net/#appmain.htm>
217 W. Jones Street
Raleigh, NC 27603
Tel: 919-707-9120

NC Parks and Recreation Trust Fund Grant

The North Carolina Parks and Recreation Trust Fund Grant (PARTF) is the primary source of funding to build and renovate facilities in the state parks as well as to buy land for new and existing parks. The PARTF program also provides dollar-for-dollar matching grants to local governments for parks and recreational projects to serve the public. Recipients use the grants to acquire land and/or to develop parks and recreational projects that serve the general public.

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
Land acquisition, design, and/or construction	\$500,000	50% dollar-for-dollar local match; this can be cash or appraised value of donated land	Yearly	Purchase of land for recreational projects or to protect natural and scenic resources. Construction or renovation of recreational and support facilities.

More information can be found at:

http://www.ncparks.gov/About/grants/partf_main.php

217 W. Jones Street

Raleigh, NC 27603

Tel: 919-707-9300

NC Department of Parks and Recreation Grants

The North Carolina Department of Parks and Recreation was established to conserve and protect representative examples of the natural beauty, ecological features and recreational resources of statewide significance; to provide outdoor recreational opportunities in a safe and healthy environment; and to provide environmental education opportunities that promote stewardship of the state's natural heritage. This funding agency provides the following grants for greenways through the federal Recreational Trails Program (RTP):

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
RTP Trail Project Grant (Pending Federal Re-Authorization)	\$10,000 to \$100,000	25%	Yearly	Development of urban trail linkages, maintenance of existing trails, restoration of areas damaged by usage of recreational trails, development of trailhead facilities, development of canoe/kayak access facilities, and construction of new trails.
RTP Educational Grant Reimbursement Grant Program)	\$5,000	25%	Accepted on a rolling basis.	Payment of speaker/educator fees, rental of space to provide training or conference opportunities, transportation to off-site training locations, electronic copying and/or printing of training materials, travel expenses for approved speakers, and lodging/food for speakers.

More information can be found at:

http://www.ncparks.gov/About/trails_grants.php
 121 W. Jones Street
 Raleigh, NC 27603
 Tel: 919-707-9325
 Email: jan.trask@ncparks.gov

NC Division of Water Resources

The Water Resources Development Project Grant is run through NCDENR's Division of Water Resources and is designed to provide cost-share grants and technical assistance to local governments throughout the State. Applications for grants are accepted for seven purposes: General Navigation, Recreational Navigation, Water Management, Stream Restoration, Beach Protection, Land Acquisition and Facility Development for Water-Based Recreation, and Aquatic Weed Control. There are two grant cycles per year; the application deadlines are January 1st and July 1st.

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
Water Resources Development Project Grant	None	50%	2x per year (January 1 and July 1)	General Navigation, Recreational Navigation, Water Management, Stream Restoration, Beach Protection, Land Acquisition and Facility Development for Water-Based Recreation, and Aquatic Weed Control

More information can be found at:

<http://www.ncwater.org/?page=7/>

1611 Mail Service Center

Raleigh, NC 27699-1611

Tel: 919-707-9000

NCDOT Grants

The North Carolina General Assembly authorized NCDOT to spend available e of bicycle use are a “bona fide highway purpose, subject to the same rights and responsibilities, and eligible for the same considerations” as other highways. In North Carolina, all bicycle and pedestrian projects are prioritized and scheduled into the State Transportation Improvement Program

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
Bicycle and Pedestrian Planning Grant (NCDOT Division of Bicycle & Pedestrian Transportation)	Funding levels are dependent upon the type of plan & the size of the municipal population	20% to 50% match requirement, dependent on the size of the municipal population	Yearly	Development of comprehensive local plans for bicycle and pedestrian transportation.

<https://connect.ncdot.gov/municipalities/PlanningGrant/Pages/default.aspx>

1 South Wilmington Street
 Raleigh, NC 27601
 Tel: 919-707-2600

Land and Water Conservation Fund (LWCF)

In North Carolina, the Land and Water Conservation Fund is administered by the Department of Environment and Natural Resources. States receive individual allocations of LWCF grant funds based on a national formula, with state population being the most influential factor. To be eligible for LWCF assistance, every state must prepare and regularly update a statewide comprehensive outdoor recreation plan (SCORP).

Funding Type	Max Funding Level	Funding Match Requirements	Funding Cycle	Approved Uses
Land Acquisition or Facility Development for Public Outdoor Recreation	\$250,000	50%	Yearly	Can be used for acquisition or development of land for public outdoor recreational uses purposes.

More information can be found at:

http://www.ncparks.gov/About/grants/lwcf_grant.php

1615 Mail Service Center

Raleigh, NC 27699-1615

Tel: 919-515-7118

C. PRIVATE FUNDING SOURCES

Cabarrus County Community Foundation

The mission of the Cabarrus County Community Foundation is to inspire philanthropy and strengthen our community by supporting initiatives that address local needs and providing quality services to donors and constituents. The Foundation is an investor in the community and is interested in creating the highest possible levels of community gain, focused on improving the lives of Cabarrus County citizens.

More information can be found at:

<http://www.fftc.org/page.aspx?pid=1372>

C/O Foundation For The Carolinas

220 N. Tryon Street

Charlotte, NC 28202

Tel: 704-973-4500

Email: kcoppadge@fftc.org

The Cannon Foundation, Inc.

The Cannon Foundation is an independent foundation established in 1943 by Charles A. Cannon, President and Chairman of Cannon Mills Company for more than 50 years. Focused predominantly on North Carolina, this endowed Foundation accepts unsolicited requests for grants, primarily for capital projects and equipment. Community is an area of focus, and a small number of grants are made to organizations in arts and culture, historical preservation and environmental concerns.

More information can be found at:

<http://www.cannonfoundation.org/Resources/How-To-Apply>

C/O The Cannon Charitable Interests

PO Box 548

Concord, NC 28026-0548

Tel: 704-786-8216

American Hiking Society National Trails Fund

The American Hiking Society National Trails Fund, created in 1998, is the only privately supported national grants program providing funding to grassroots organizations working toward establishing, protecting and maintaining foot trails in America.

The National Trails Fund grants (ranging from \$500 - \$5,000) help give local organizations (must be registered as a 501(c)3) the resources they need to secure access, volunteers, tools, and materials to protect America's cherished hiking trails.

More information can be found at:

<http://www.americanhiking.org/national-trails-fund/>

American Hiking Society

1422 Fenwick Lane

Silver Spring, MD 20910

Tel: 1-800-972-8608

Fax: 301-565-6714

Email: info@AmericanHiking.org

PeopleForBikes

Launched in 1999 as Bikes Belong, PeopleForBikes includes both an industry coalition of bicycling suppliers and retailers, as well as a charitable foundation. Our foundation is where we house our major programs and engage individual members, affiliate organizations, and corporate sponsors. The PeopleForBikes Community Grant Program provides funding for important and influential projects that leverage federal funding and build momentum for bicycling in communities across the U.S. These projects include bike paths and rail trails, as well as mountain bike trails, bike parks, BMX facilities, and large-scale bicycle advocacy initiatives. Grant applications are accepted on-line, two times per year (April and October) for up to \$10,000 to assist local non-profit organizations in bicycle facility development. A letter of interested is required prior to a full application submittal.

More information can be found at:

www.peopleforbikes.org

People for Bikes

P.O. Box 2359

Boulder, CO 80306

Tel: 303-449-4893

Email: grants@peopleforbikes.org

Carolina Thread Trail

Carolina Thread Trail offers implementation grants for segments of the Carolina Thread Trail on system-wide Carolina Thread Trail master plans that have been adopted. There are three types of implementation grants awarded on a quarterly cycle with deadlines in January, April, August, and October.

- Corridor Design Grants: up to \$20,000 towards identification of trail alignment(s) on a specific parcel(s) along the Carolina Thread Trail.
- Land Acquisition Grants: up to \$150,000 towards land or easement acquisition for trail segments and open space for viewsheds, riparian buffers, wildlife habitats or recreation along the trail segments of the Carolina Thread Trail.
- Construction Grants: up to \$150,000 towards completion of construction design and building of trail segments of the Carolina Thread Trail.

More information can be found at:

www.carolinathreadtrail.org/resources/funding-sources/

Carolina Thread Trail
4530 Park Rd, Suite 420
Charlotte, NC 28209
Tel: 704-376-2556
Fax: 704-342-3340

Conservation Alliance

The Conservation Alliance is a group of outdoor businesses that supports efforts to protect specific wild lands and waterways for their habitat and recreation values. Applicants (must be registered as a 501(c)3) must be nominated by a member of the Alliance. There are two funding cycles annually in the summer and winter with a maximum grant request of \$35,000.

More information can be found at:

www.conservationalliance.com/grants

The Conservation Alliance
PO Box 1275
Bend, OR 97709
Tel: 541-389-2424
Email: info@conservationalliance.com

Kodak American Greenways Awards Program

Eastman Kodak Company, The Conservation Fund and the National Geographic Society team up each year to present the Kodak American Greenways Awards Program. One major element of the Program involves “seed” grant awards to organizations (must registered as a 501(c)3s get preference)that are growing the nation’s network of greenways, blueways, trails and natural areas that demonstrate the convergence of economic prosperity and the environment. Eligible projects can include elements such as greenway, blueway or trail mapping, ecological assessments, surveying, conferences, and design; developing brochures, interpretative displays, audio-visual productions or public opinion surveys; building a foot bridge, signage or other physical improvement or addition to a greenway, blueway; planning a bike path; and many other creative projects. In general, grants can be used for any appropriate expense needed to complete, expand or

improve a greenway including planning, technical assistance, legal and other costs. Grant applications are accepted on-line, annually in June for up to \$2,500.

More information can be found at:

www.conservationfund.org/kodak_awards
The Conservation Fund National Office
1655 N. Fort Myer Drive, Suite 1300
Arlington, VA 22209-3199
Tel: 703-525-6300
Fax: 703-525-4610
Email: kodakawards@conservationfund.org

Duke Energy Foundation

The Duke Energy Foundation is the core of Duke Energy's support and development of sustainable communities and actively works to improve the quality of life in its communities, lending expertise in the form of leadership and financial support through grants to charitable organizations. At the core of The Duke Energy Foundation is its commitment to the community, with a focus in four areas:

Environment:

- Programs that support conservation, training and research around environmental initiatives
- Initiatives that support the efficient use of energy, but that also do not create a conflict with the programs approved in the regulated jurisdictions (reducing cost of utility service)

Economic Development:

- Initiatives that support the company's economic development strategies (may vary by region)
- Skills and workforce development

Education:

- Pre K-12 education focused on science, technology, engineering and math (STEM)
- Higher education, focused on (STEM) and environment related programs

Community Vitality:

- Human services, arts, cultural, and community safety
- Community leadership development

More information can be found at:

<http://www.duke-energy.com/community/foundation/online-grant-application.asp>
Duke Energy Foundation
526 South Church Street
Charlotte, NC 28202

Duke Energy Water Resources Fund

Duke Energy is committed to protecting, improving and restoring waterways in the Carolinas and promoting environmental education and conservation. Duke Energy is dedicated to being good stewards of the environment and good neighbors to the communities they serve and is investing \$10 million in a fund for projects benefiting waterways in the Carolinas and waterways downstream from its Carolinas operations that flow into Virginia, Tennessee and Georgia. Grants are reviewed twice a year (May and November) and awards will range from \$10,000 to \$100,000.

Eligibility:

- 501(c)(3) nonprofit organizations or local governmental organizations that:
- Demonstrate collaboration on environmental issues with state and local governments and industry stakeholders
- Serve the Duke Energy service area in the Carolinas or immediately downstream of our operational facilities in Virginia, Tennessee and Georgia

Priority Programs and Projects:

- Efforts to address water quality and quantity issues in streams or watersheds that are identified as priorities in state or local watershed action plans
- Encourage education and awareness of water quality, quantity and conservation issues preferably focused on helping individuals understand how their actions impact the overall health of a river basin
- Research focused on improving water quality, quantity and conservation issues
- River management plans
- Watershed studies
- Purchase of conservation easements
- Public use and access to waterways

More information can be found at:

<http://www.duke-energy.com/community/foundation/water-resources-fund.asp>

The NC Community Foundation
4601 Six Forks Road, Suite 524
Raleigh, NC 27609

Tel: 919-828-4387

F: 919-828-5495

Email: lajackson@nccommunityfoundation.org

New Belgium Brewery

The purpose of New Belgium's Environmental Stewardship Grants Program is to serve and connect with the communities where New Belgium beer is sold. The goal of the grants program is to improve the health of the planet and inspire others to joyously embrace sustainable choices. New Belgium's grants program includes a category of Sensible Transportation and Bicycle Advocacy and supports projects that:

- Strengthen and or create infrastructure with all users in mind- including bicyclists, public transportation vehicles and riders, and pedestrians of all ages and abilities
- Break down barriers and fosters support for young cyclists
- Integrates land use planning with transportation planning and promotes energy efficiency

More information can be found at:

<http://www.newbelgium.com/sustainability/Community/Philanthropy.aspx>

New Belgium Brewing Company

500 Linden

Fort Collins, Colorado 80524

Tel: 1-888-622-4044

Email: kfletcher@newbelgium.com

D. LOCAL FUNDING OPTIONS

Discretionary annual spending

Typically referred to as a “General Fund”, refers to spending that must be agreed upon on an annual basis. Greenway development funds would need to be appropriated within the Town of Harrisburg’s annual budget to a specific department’s annual operating budget and would range in value annually.

Debt Financing

Debt Financing refers to the government agency borrowing funds for the development of greenway facilities through loans or bonds. Such funding sources require repayment of funds over a specified period of time.

Bond Referendums

A bond referendum can be placed on a county or municipal ballot to finance land acquisition and site development costs for bicycle facilities, sidewalks, and greenways. Bonds come in many forms such as revenue bonds, general obligation bonds, and special assessment bonds. Since voters must approve bonds, it is critical to educate the public on the mission and intent of the bond in order to gain support and approval. XX% of citizens that responded to the project’s online survey indicated.....

Impact Fees – check to see if this is in the ordinance

Impact fees are one-time charges levied by a local government on new development. Unlike dedication fees that might be required through the development process, one time impact fees can be applied to finance nearby public services such as parks, recreation facilities, and bicycle, pedestrian, and greenway facilities made necessary by the introduction of new residents in an area.

Payment in Lieu of Fees– check to see if this is in the ordinance

Where land dedication does not occur through the development process, Harrisburg could require a payment in lieu of dedication. These fees can be applied to finance acquisition of land or development of nearby greenways and trails. Text adding payment in lieu of fees needs to be incorporated into a zoning ordinance before it can be implemented.

Taxation

Communities can vote to raise tax money in support of greenway efforts. XX% of citizens that responded to the project's online survey indicated.....

Powell Bill Funding

Annually, State Street-Aid (Powell Bill) allocations are made to incorporated municipalities which establish their eligibility and qualify as provided by G.S. 136-41.1 through 136-41.4. Powell Bill funds shall be expended only for the purposes of maintaining, repairing, constructing, reconstructing or widening of any street or public thoroughfare within the municipal limits or for planning, construction, and maintenance of bikeways, greenways or sidewalks.

Foundations and Friends Groups

Foundations and/or Friends Groups serve a useful purpose as these support groups fill a void that cannot be filled by government entities. Due to the nature of government, many potential donors who may be supportive of greenways and trails are more likely to donate to a non-governmental entity rather than the government itself. Therefore, interested citizens often recognize this void and organize themselves as either a Friends Group or a Foundation. Some Friends Groups or Foundations will even seek a 501(c)3 status allowing for further grant opportunities. Examples of successful trails Friends Groups can be viewed at:

Kings Mountain Gateway Trails, Inc.: www.kmgatewaytrails.org/

Little Tennessee River Greenway: www.littletennessee.org/

Mecklenburg County, NC: www.partnersforparks.org/

Friends of the High Line: www.thehighline.org/

Sponsorships

“Adopt-A” Series: The Town of Harrisburg can promote greenways and trails while generating interest by developing a local Adopt- A-Greenway program that identifies the organization for providing walk through clean up, litter removal and environmental awareness programs, two to four times a year. This helps offset maintenance costs in municipal budgets. Organizations are recognized with markers or signs.



- A. Community Meetings and Survey Results
- B. Survey Results

Appendix 3

COMMUNITY ENGAGEMENT SUMMARY

A. COMMUNITY MEETINGS AND SURVEY

Public involvement and the analysis of community wants and needs is critical to any successful public planning process. For this plan, two community engagement sessions were held during the spring of 2015. Each session was designed to educate and gather input from residents, with the input received being used to directly influence the development of the Comprehensive Bicycle, Pedestrian, and Greenway Plan for the Town of Harrisburg.

Approximately 50 individuals participated in the two community engagement sessions. The location and attendance for each session is included below:

Saturday, April 11, 2015	Tuesday, May 12, 2015
8:00 – 11:00 am	5:00 – 7:00 pm
Harrisburg 5k, Town Center	Harrisburg Town Hall
Approx. Attendance: 25	Approx. Attendance: 25

In addition to the two community engagement sessions, an online survey was conducted with a total of **1,002** responses. The following is a copy of the survey and all survey responses, including comments from the open-ended questions.

Harrisburg Comprehensive Bicycle, Pedestrian, and Greenway Master Plan

The goal of the Harrisburg Comprehensive Bicycle, Pedestrian, and Greenway Master Plan is to identify the future locations and routes of sidewalks, greenways, bike facilities, and other local trails throughout Harrisburg. The information gathered through this survey will be used to directly influence the location of bicycle and pedestrian facilities throughout the town.

1) Bicycle and pedestrian facilities can include sidewalks, paths, greenways, trails, wide shoulders, bike lanes, etc. dedicated for the use of non-motorized transportation, such as walking, jogging, hiking, cycling, and even horseback riding. In your opinion, how important is the need for (more) bicycle and pedestrian facilities within the Town of Harrisburg?

(Please Circle ONE)

Not Important			Important				Very Important		
1	2	3	4	5	6	7	8	9	10

2) How often do you currently use a bicycle or pedestrian facility?

- | | |
|----------------------------------|---------------------------------|
| <input type="checkbox"/> Daily | <input type="checkbox"/> Yearly |
| <input type="checkbox"/> Weekly | <input type="checkbox"/> Never |
| <input type="checkbox"/> Monthly | |

3) How often would you use a bicycle or pedestrian facility if it were more easily accessible?

- | | |
|----------------------------------|---------------------------------|
| <input type="checkbox"/> Daily | <input type="checkbox"/> Yearly |
| <input type="checkbox"/> Weekly | <input type="checkbox"/> Never |
| <input type="checkbox"/> Monthly | |

4) Which bicycle or pedestrian facilities in and/or near the Town of Harrisburg have you used before? **(CHECK ALL THAT APPLY)**

- | | |
|---|--|
| <input type="checkbox"/> Pedestrian loop around Town Center | <input type="checkbox"/> Existing sidewalks |
| <input type="checkbox"/> Trails at Pharr Mill Park | <input type="checkbox"/> Wide shoulders on roads |
| <input type="checkbox"/> Trails at Harrisburg Park | <input type="checkbox"/> Tracks at school facilities |
| <input type="checkbox"/> Trails at Stallings Park | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Trails at Frank Liske Park | <input type="checkbox"/> None |

5) How far is the closest bike and/or pedestrian facility from your residence?

- 0 - 1 mile
- 2-3 miles
- More than 3 miles
- Don't know

6) What bicycle/pedestrian related activities do you **currently** participate in on a regular basis? **(SELECT YOUR TOP 3 CHOICES)**

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Bicycling | <input type="checkbox"/> Walking |
| <input type="checkbox"/> Hiking (distance) | <input type="checkbox"/> None |
| <input type="checkbox"/> Horse back riding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Mountain biking | _____ |
| <input type="checkbox"/> Running/Jogging | |

7) What activity would you most often **like to participate in** on bicycle and/or pedestrian facilities?

(CHOOSE ONE)

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Bicycling | <input type="checkbox"/> Walking |
| <input type="checkbox"/> Hiking (distance) | <input type="checkbox"/> None |
| <input type="checkbox"/> Horse back riding | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Mountain biking | _____ |
| <input type="checkbox"/> Running/Jogging | |

8) What are the most important benefits of bicycle and pedestrian facilities to you?

(SELECT YOUR TOP 3 CHOICES)

- Recreation/Exercise/Health
- Alternate form of transportation
- Protecting the environment/land conservation
- Creating tourism and economic development
- Connecting neighborhoods and destinations
- Providing environmental education opportunities
- Providing historical education opportunities

9) What important places and destinations should be part of a bicycle and pedestrian system or connected by bike lanes and trails within and near the Town of Harrisburg? **(SELECT YOUR TOP 5 PLACES)**

TOP 5 PLACES)

- | | |
|--|--|
| <input type="checkbox"/> Rocky River | <input type="checkbox"/> Shopping Centers |
| <input type="checkbox"/> Town Center | <input type="checkbox"/> Existing Greenways/Trails |
| <input type="checkbox"/> Pharr Mill Park | <input type="checkbox"/> Historical Destinations |
| <input type="checkbox"/> Stallings Road Park | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Harrisburg Park | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Frank Liske Park | <input type="checkbox"/> What specific schools, parks, neighborhoods, etc: |
| <input type="checkbox"/> Elementary Schools | _____ |
| <input type="checkbox"/> Middle Schools | _____ |
| <input type="checkbox"/> High Schools | _____ |
| <input type="checkbox"/> Neighborhoods | _____ |
| <input type="checkbox"/> Public Library | _____ |

10) What do you think are the biggest factors that discourage bicycle and pedestrian facility use?

(SELECT YOUR TOP 3 CHOICES)

- | | |
|---|---|
| <input type="checkbox"/> Lack of information about local facilities | <input type="checkbox"/> Lack of interest |
| <input type="checkbox"/> Unsafe road crossings | <input type="checkbox"/> Lack of time |
| <input type="checkbox"/> Narrow road widths/right-of-ways | <input type="checkbox"/> Personal safety concerns |
| <input type="checkbox"/> High traffic volumes | <input type="checkbox"/> Aggressive motorist behavior |
| <input type="checkbox"/> Lack of accessible facilities | <input type="checkbox"/> Deficient sidewalks |
| <input type="checkbox"/> Lack of off-road trails | <input type="checkbox"/> Lack of nearby destinations |
| | <input type="checkbox"/> Other: _____ |

11) How should bicycle and pedestrian facilities be funded within Harrisburg?

(CHECK ALL THAT APPLY)

- Current Taxes
- New Taxes
- Fundraising and Donations
- Government Bonds
- Matching Grant Funds
- Usage Fees and Charges
- Don't Know

12) How willing would you be to pay some increase in taxes to fund the types of bicycle and pedestrian facilities that are most important to you and your household?

- _____ Very willing
- _____ Somewhat willing
- _____ Not sure
- _____ Not willing

13) How much would you be willing to pay annually for the construction, improvement, and maintenance of bicycle and pedestrian facilities within Harrisburg?

- \$0
- Up to \$25
- \$26 to \$50
- \$51 to \$100
- Over \$100

14) If a bond referendum was held to fund the acquisition, improvement, and development of the types of parks, trails, green space, and recreation facilities that are most important to you and members of your household, how would you vote in the election?

- _____ Vote in Favor
- _____ Might Vote in Favor
- _____ Not Sure
- _____ Vote Against

Demographics

15) Counting yourself, how many people in your household are?

- _____ Under age 5
- _____ Ages 5-9
- _____ Ages 10-14
- _____ Ages 15-19
- _____ Ages 20-24
- _____ Ages 25-34
- _____ Ages 35-44
- _____ Ages 45-54
- _____ Ages 55-64
- _____ Ages 65-74
- _____ Ages 75+

16) What is your gender?

- Female
- Male

17) What is your race/ethnicity? **(CHECK ALL THAT APPLY)**

- African American/Black
- Asian/Indian
- Caucasian/White
- Hispanic
- Native American
- Asian/Pacific Islander
- Other: _____

18) What is your zip code? _____

19) Do you live within the town limits of the Town of Harrisburg?

- _____ Yes _____ No _____ Not Sure

20) How long have you lived in Harrisburg? _____ years

21) Which of the following BEST describes your home?

- _____ Single family
- _____ Apartment or condominiums
- _____ Other: _____

22) Please add any comments or concerns that you have regarding the Comprehensive Bicycle, Pedestrian, and Greenway Master Plan for the Town of Harrisburg.

For more information on this planning effort, please contact:

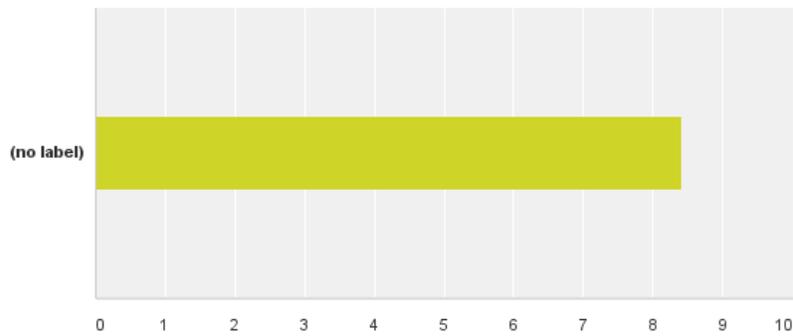
Josh Watkins, Planning Director: 704-455-0709 or jwatkins@harrisburgnc.org

Address to mail survey back - PO Box 100, Harrisburg, NC 28075

B. SURVEY RESULTS

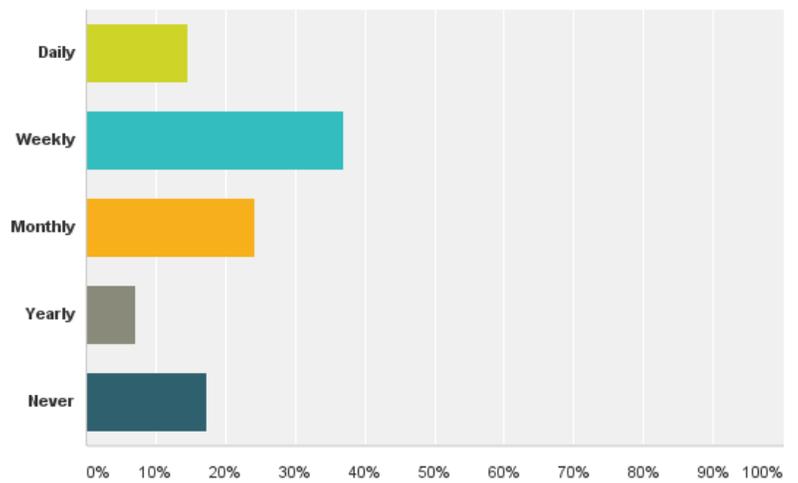
Q1 Bicycle and pedestrian facilities can include sidewalks, paths, greenways, trails, wide shoulders, bike lanes, etc. dedicated for the use of non-motorized transportation, such as walking, jogging, hiking, cycling, and even horseback riding. In your opinion, how important is the need for (more) bicycle and pedestrian facilities within the Town of Harrisburg?

Answered: 906 Skipped: 96



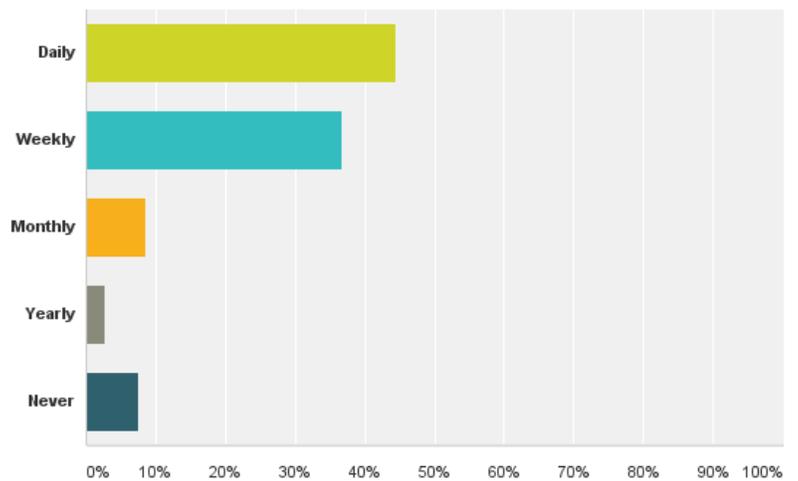
Q2 How often do you currently use a bicycle or pedestrian facility?

Answered: 995 Skipped: 7



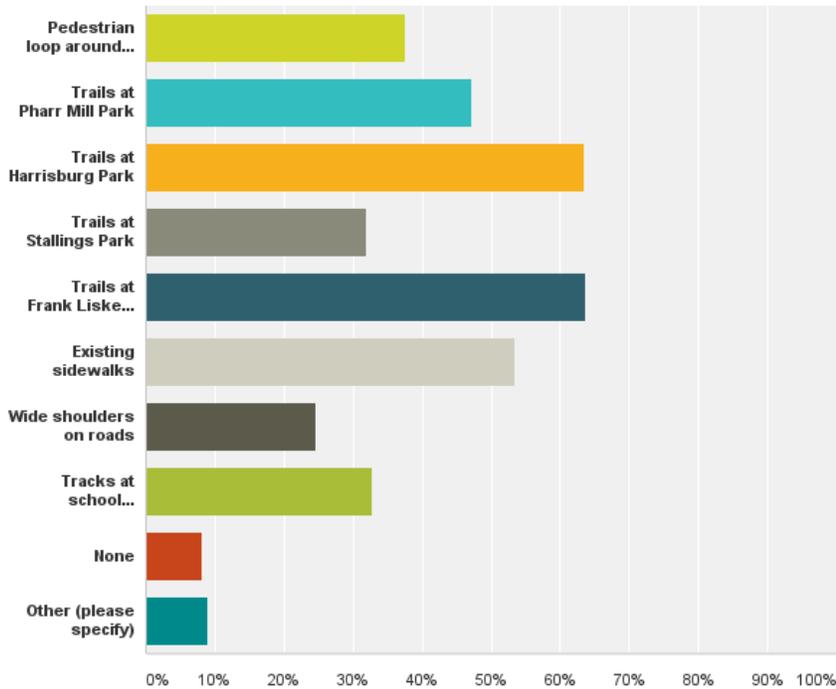
Q3 How often would you use a bicycle or pedestrian facility if it were more easily accessible?

Answered: 995 Skipped: 7



Q4 Which bicycle or pedestrian facilities in and/or near the Town of Harrisburg have you used before? (CHECK ALL THAT APPLY)

Answered: 998 Skipped: 4



Written Responses to Q4

- Reedy Creek park
- 49,morehead and Roberta
- Have walked along many a road with my kids without sidewalks
- Neighborhood streets
- Meck greenway
- Mallard Creek Greenway; Concord Greenway
- Trail at Rocky River Crossing
- usually have to run in the road and there are NO wide shoulders!
- Sidewalk thru Rocky River Crossing to Roberta to 49 to Morehead
- Reedy creek park
- Mallard creek greenway
- mt. morrow, Kings Mt., to hike
- Mallard creek greenway
- Mallard Creek & Hwy 29
- Neighborhoods
- Concord Mills Mall
- neighborhood roads
- We need sidewalks to stallings farm subdivision...no road shoulders exist
- I walk the Valhalla neighborhood roads daily. Would LOVE to have sidewalks in residential neighborhoods so it wouldn't be necessary to stop and step off the road onto someone's yard in order to be safe from oncoming traffic.

Written Responses to Q4 (continued)

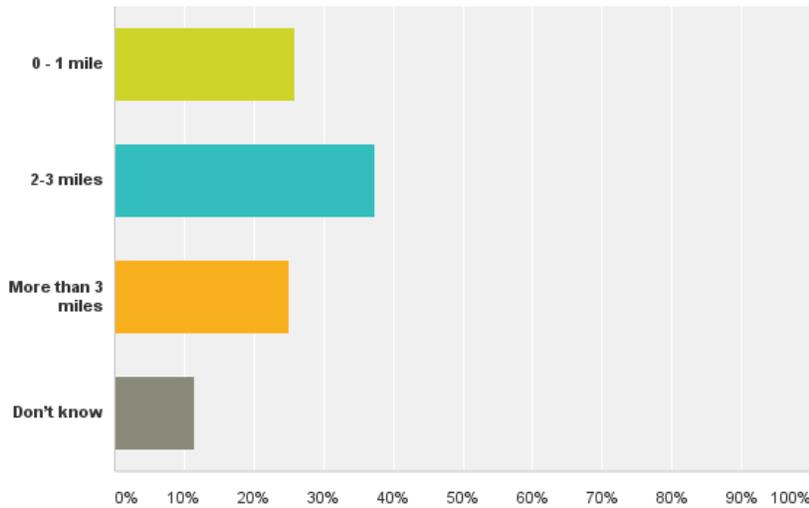
- Reddy Creek Park
- Walk around neighborhood on streets
- Bicycle trails located off of parks laferty and the tails in university off of mallard creek.
- had to ride on regular road - VERY SCARY
- Nature path in Rocky River Crossing development
- More sidewalks needed on Parallel Drive. Dangerous to walk on road.
- University
- Cycling in the road due to no better option...dangerous in this area
- Sherman branch bike trail
- neighborhoods are lacking side walks for kids
- the road
- local streets
- subdivision streets
- neighborhood roads - Orchard Park/Camelot
- Rocky River Crossing Trails
- Reedy creek
- Low volum subdivison roads and sidewakl on thoroughfares
- Charlotte/University
- Toby Creek Greenway
- Running on Stallings Road with a lot of caution
- Streets of Camelot and Huntwick
- Mallard Creek and Clark's Creek Greenways near UNCCCharlotte.
- Charlotte's Mallard Creek Greenway
- Mecklenburg county Greenway by UNCC
- Running on Stallings and Rocky River (cars race by)
- I walk my dogs in Camelot neighborhood. I wish there were sidewalks there!!!
- Mallard Creek Greenway many, many times.
- Mallard Creek Greenway
- Abington to Hickory Ridge Middle
- concord Greenway, university Greenway
- University Greenway; shoulders of Hickory Ridge Rdand nearby neighborhoods
- Mallard Creek Greenway
- Walk on streets and pray not to get hit
- No more sidewalks please.
- parks in Mecklenburg County
- non-existant shoulders on Hickory Ridge
- Regular roads that are now TOO CROWDED
- sherman branch
- Sherman branch
- on street, but scary
- Neighborhood sidewalks
- neighborhood streets/ Stallings Glen
- Mallard Creek Greenway and others nearby
- I would say wide road shoulders but there are none
- Greenway
- I usually drive to areas I feel safe. Roads near Harrisburg are not safe for cycling!
- concord greenway, university greenway

Written Responses to Q4 (continued)

- Mallard creek greenway. Concord greenway
- Greenways near UNCC and Research Park area, Reedy Creek
- Greenway in Mecklenburg
- Mountain bike downhill course
- Reedy Creek Park
- orchard park streets
- We have none in our neighborhood. Must use roadway
- Trails in Rocky River Crossinh
- Sidewalk down Roberta
- Road
- I walked from Orchard Park to Town Center once. The distance was fine, but I felt unsafe due to traffic and have never done it again. I would definitely do that walk regularly if there was a greenway or sidewalk system in place.
- sherman branch and rocky river MTB parks
- on the roads, typically Hickory Ridge Rd, Rocky River, Lower Rocky River, Stallings
- reedy creek park
- Mallard and Clark Creek Greenways
- parking lots
- New sidewalk on Roberta Road
- Other

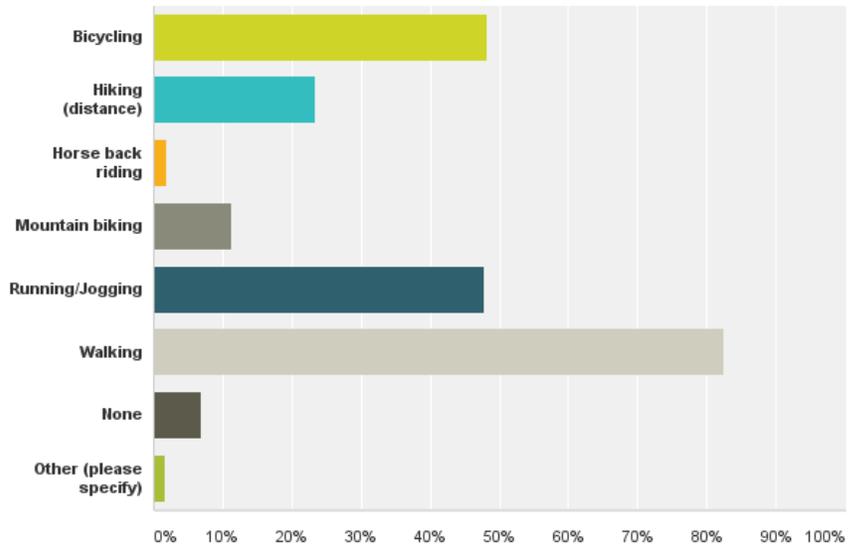
Q5 How far is the closest bike and/or pedestrian facility from your residence?

Answered: 995 Skipped: 7



Q6 What bicycle/pedestrian related activities do you currently participate in on a regular basis?(SELECT YOUR TOP 3 CHOICES)

Answered: 946 Skipped: 56

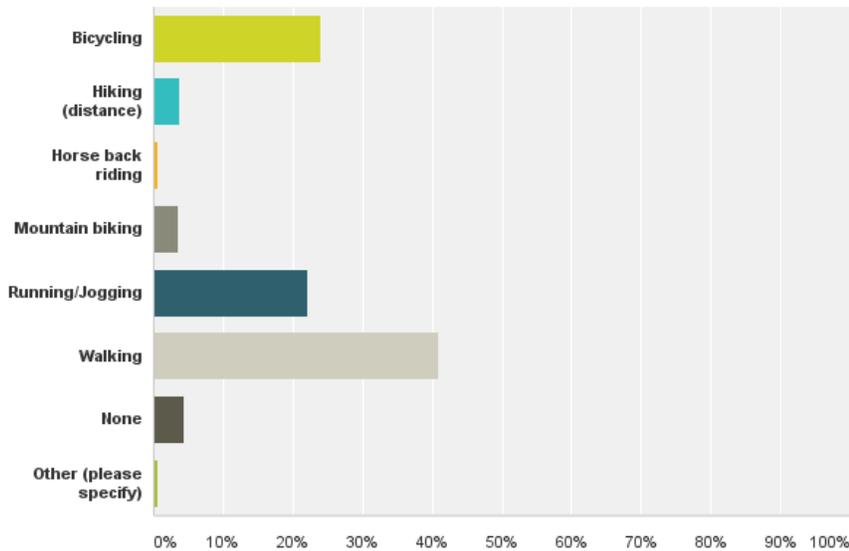


Written Responses to Q6

- Dog walking
- Would do more but due to no sidewalks I have to drive to get to a facility which defeats the purpose.
- Gym
- rip-stick
- Walking my dog
- Long boarding
- Golf cart
- Scooters
- wlaking with the dogs
- my teenagers really want to be able to bike on tom query road and Robinson church rd. I won't let them because its not safe for bikes or walkers
- Walking dogs
- Walking with a stroller
- I picked more than 3!
- F3 workouts at Hickory Ridge High, Harsburg parks
- F3

Q7 What activity would you most often like to participate in on bicycle and/or pedestrian facilities?

Answered: 945 Skipped: 57

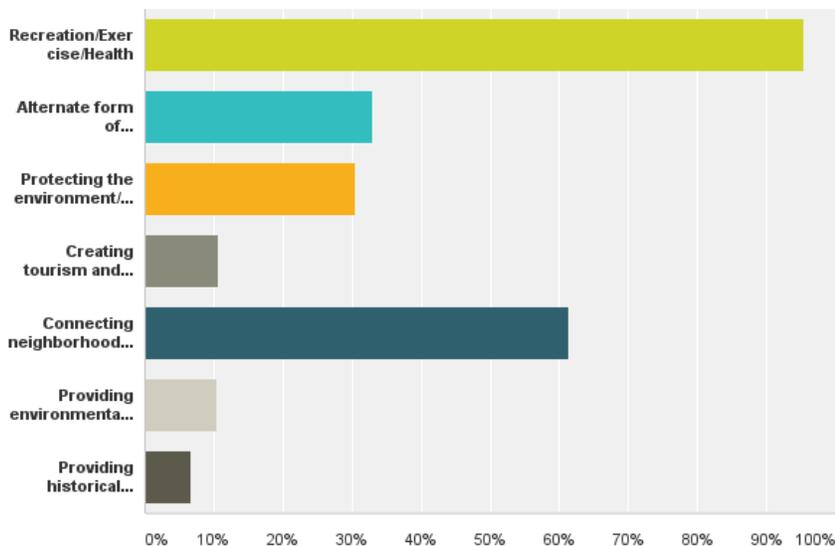


Written Responses to Q7 bike, hike, job, horse

- walking to stores, schools, etc.
- Walking my dog
- Being safe walking with children and animals, walking to local market
- Rollerblading

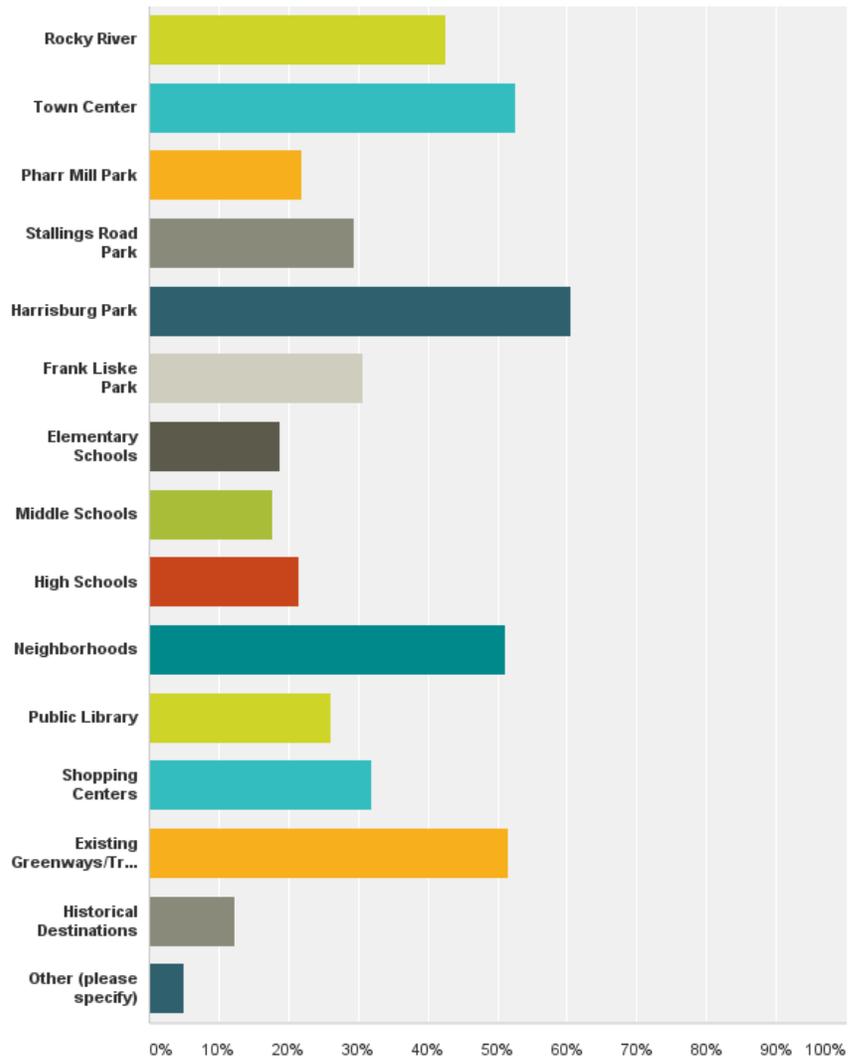
Q8 What are the most important benefits of bicycle and pedestrian facilities to you? (SELECT YOUR TOP 3 CHOICES)

Answered: 924 Skipped: 78



Q9 What important places and destinations should be part of a bicycle and pedestrian system or connected by bike lanes and trails within and near the Town of Harrisburg? (SELECT YOUR TOP 5 PLACES)

Answered: 919 Skipped: 83



Written Responses to Q9

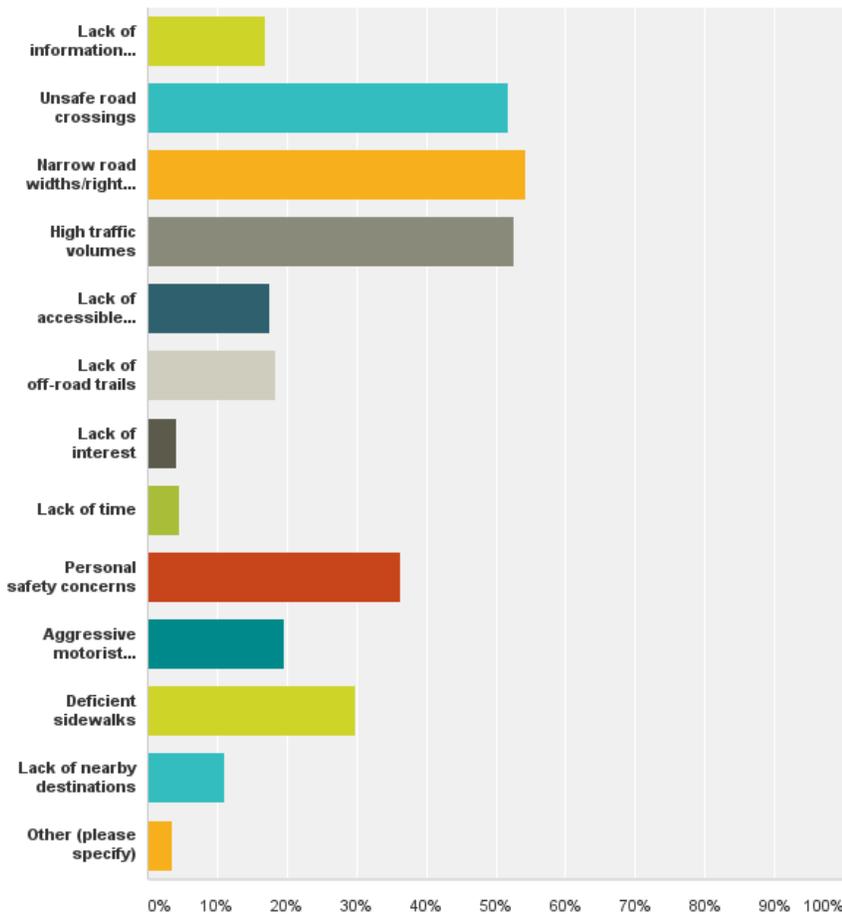
-
- Nothing new needed. Use existing walkways in neighborhood.
- Bicycle lanes are a waste of tax payer money, pedestrian trails should be incorp. with sidewalks another money saving issue.
- should be away from any motor vehicle traffic
- All parks.
- we just need more sidewalks i.e., Stallings road, Rocky River road etc.
- Rocky River ROAD & Hickory Ridge road
- Roberta Road to Pitt School Road connecting to the Town Center Shoppes.
- We need to tie the neighborhoods in with the rest of the town. The roads are so narrow with no shoulder that we can't walk anywhere
- Museums
- None we need to fix our roads to resolve traffic issues!!!!!!
- I respect the desire for bike lanes, other bike & pedestrian systems, trails, etc., but simple sidewalks + safe road-crossing signals would serve the largest portion of our town's population. It would also "pave the way" to more local shopping, event attendance, and a closer knit community.
- Especially Flowers Farm Neighborhood
- farther down Robinson Church Road near Peach Orchard
- we don't need any, because of traffic and narrow roads it is very dangerous.
- Need sidewalks on Parallel Drive. Dangerous to walk on this busy through road.
- I would like to see sidewalks running along the major roads in Harrisburg. Rocky River, Robinson Church, Hickory Ridge, Stallings all leading to the town center.
- Cities. It would be great if we could put in some real mileage.
- Stallings rd to connect Rocky River all the way to town
- I would suggest considering that the Back Creek corridor be the first place to put a greenway. It could easily connect to existing (Harrisburg Park, Stallings Park, Pharr Mill, Town Center, and several schools) pathways and locations. Then branch out from there. I would strongly suggest making Fudda Creek corridor the second greenway developed. Many new neighborhoods have popped up along it between Robinson Church and Hickory Ridge Rds. If the greenway had access to those neighborhoods I think it would get much usage and buy in. I would also suggest putting a sidewalk along the whole length of Hickory Ridge Rd from Stallings to Rocky River on the High School side of the Rd. There is already a portion of sidewalk poured in front of the Middle School. This key sidewalk would provide a route all the way over to the Town Center once the Roberta Rd. overpass is completed.
- Stallings Rd from Rocky River to Town Center allowing all neighborhoods access
- Bovine Ln in Stallings Farm needs sidewalks added
- Stallings Road (from Hickory Ridge to Rocky River)
- Connect to Charlotte Greenways
- Not the Town Center. It has gotten ridiculous with the people.

Written Responses to Q9 (continued)

- Sidewalk from new Saddle Creek entrance to stoplight would be great for bikes. I ride from River Hills up the now closed Shamrock to Saddle Creek. It would be nice to be able to get over into town center.
- The larger greenways in Concord and Charlotte
- Fuda Creek
- UNC Charlotte
- sidewalks on streets close to 49 in town.
- Hickory Ridge - MANY people bike and run that road and there is no shoulder
- Harrisburg's Bicycle shop....Get in Gear Bicycles
- Robinson Church road area near Britney neighborhood
- Hickory Ridge Road, Robinson Church Rd, Stallings rd
- Roberta Rd
- All areas
- Utilize abandoned railroad tracks for nature trails.
- finish the sidewalk to Kings Dr.
- Robinson church
- None
- Neighborhoods off Tom Query
- Connection between Bridge Pointe neighborhood and middle/high schools.
- Fuda creek
- Morehead Rd. to Speedway
- Would like bike paths along all roadways
- Tom Query Road area
- UNCC light rail destination
- A safe biking trail to UNC Charlotte

Q10 What do you think are the biggest factors that discourage bicycle and pedestrian facility use? (SELECT YOUR TOP 3 CHOICES)

Answered: 935 Skipped: 67



Written Responses to Q10

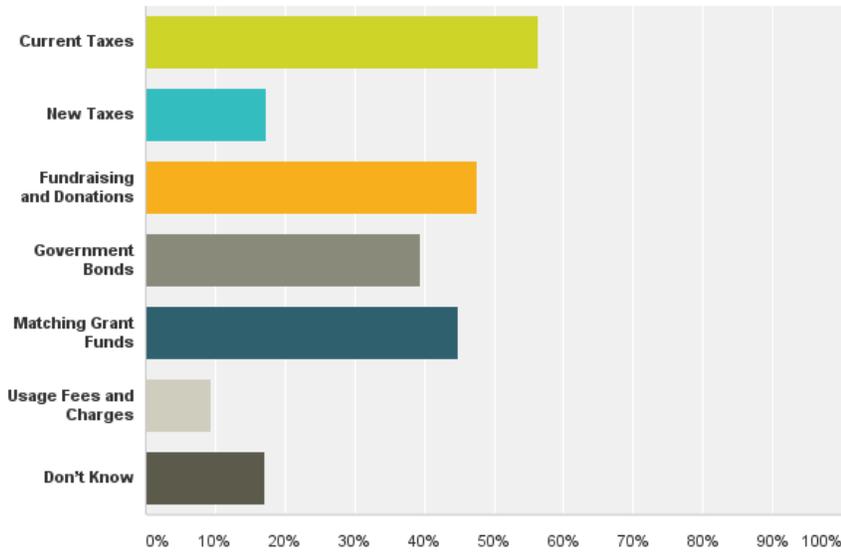
- All of the above!!!!
- there are not many to choose from
- Because there are no local facilities!
- Complete lack of connectivity..trail, sidewalk, bike lane, etc.
- we don't have any!
- Lack of connectivity between the existing trails and the neighborhoods
- We need to fix our roads for increasing houses!!!!
- no sidewalks
- dedicated bike lanes
- crime
- Need sidewalks on Parallel Drive. Dangerous to walk on this busy through road.
- need crosswalk signals at all busy intersections & drivers not signaling when trying to cross 49 from Morehead Rd
- Lack of sidewalks

Written Responses to Q10 (continued)

- All of Harrisburg's pedestrian facilities either make a tiny loop or just end into traffic.
- does not cover enough distance to stay interesting, doesnt go anywhere.
- No connection to neighborhood
- Lack of bicycle/sidewalk connectivity
- There are plenty of places within the town and around for people to access
- Bikes are too dangerous and shoud not be on roads or anywhere else
- Longer trails/tracks are needed, more than .25 mile long. Also a trail with a loop is beneficial.
- CANNOT SAFELY GET TO HARRISBURG PARK.. HWY 49 IS UNSAFE TO CROSS. VERY SAD. NEED A CROSS WALK OFF MOREHEAD ROAD.
- Lack of sidewalks on Rocky River & Stallings Rd
- mostly that few roads in the Harrisburg have room for cars, walkers and bikes
- Where Harrisburg has sidewalks people walk in the road anyways because they think they own it.
- Need more sidewalks or greenways to bridge bike friendly areas together.
- Connectivity. Longer trails/green ways vs running short laps
- So much construction
- Race week traffic
- not interested
- Lack of sidewalks
- The fact that there are none in Harrisburg.
- Laziness
- I picked more than 3!
- Connectivity to Harrisburg neighborhoods

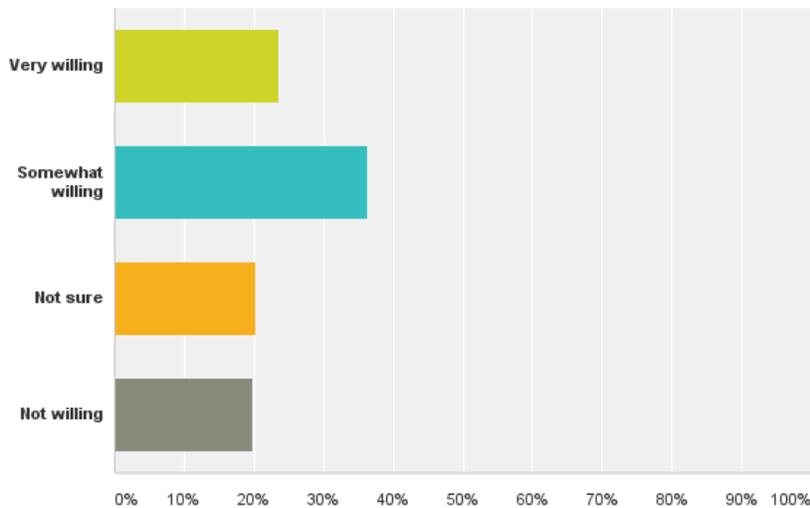
**Q11 How should bicycle and pedestrian facilities be funded within Harrisburg?
(CHECK ALL THAT APPLY)**

Answered: 933 Skipped: 69



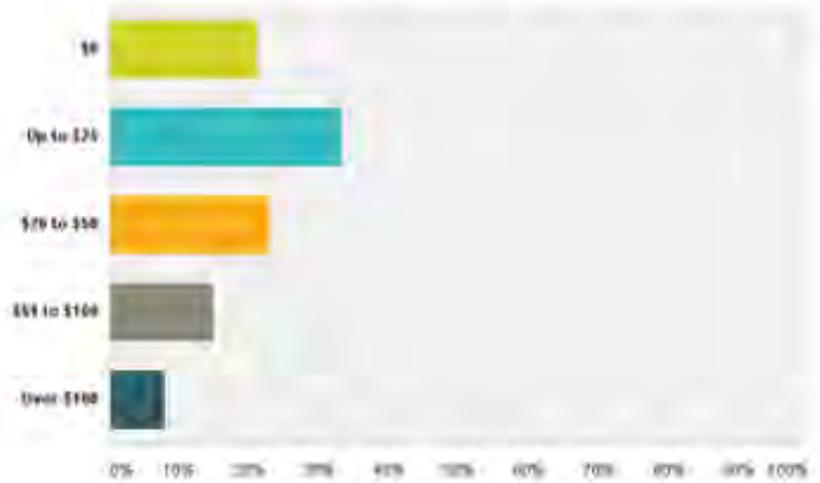
Q12 How willing would you be to pay some increase in taxes to fund the types of bicycle and pedestrian facilities that are most important to you and your household?

Answered: 933 Skipped: 69



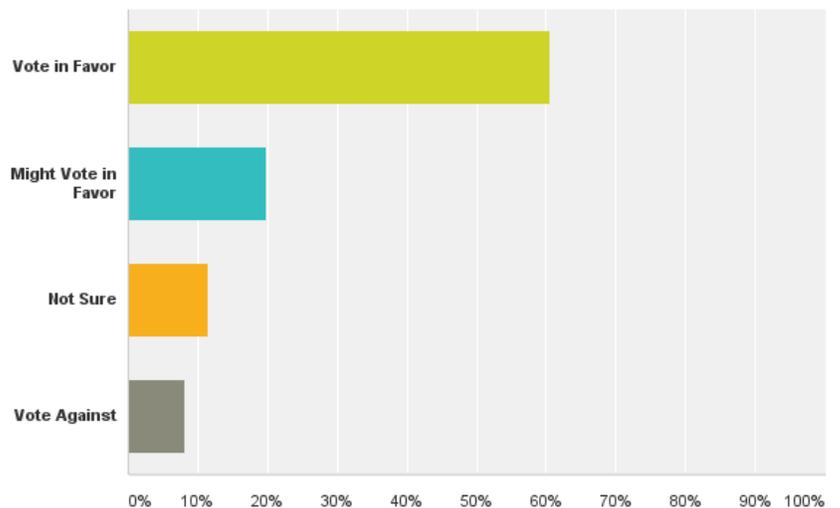
Q13 How much would you be willing to pay annually for the construction, improvement, and maintenance of bicycle and pedestrian facilities within Harrisburg?

Answered: 110 Skipped: 0



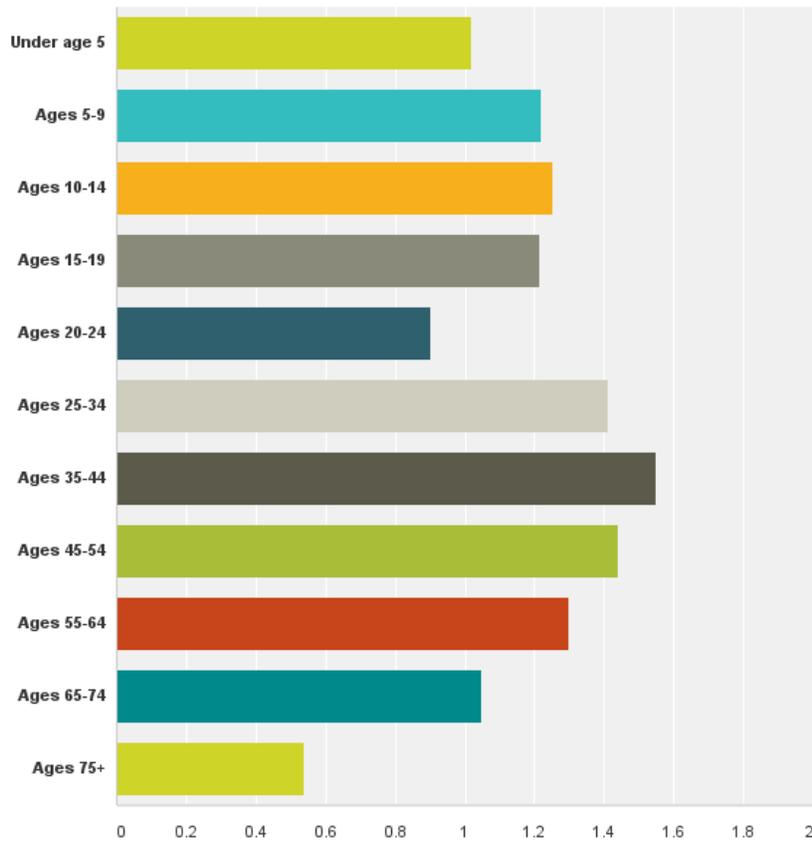
Q14 If a bond referendum was held to fund the acquisition, improvement, and development of the types of parks, trails, green space, and recreation facilities that are most important to you and members of your household, how would you vote in the election?

Answered: 933 Skipped: 69



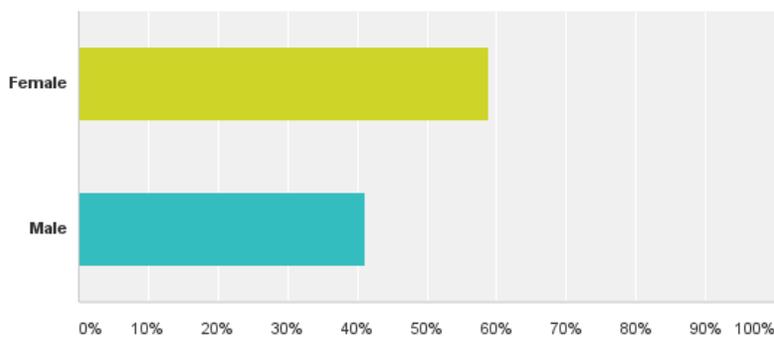
Q15 Counting yourself, how many people in your household are?

Answered: 878 Skipped: 124



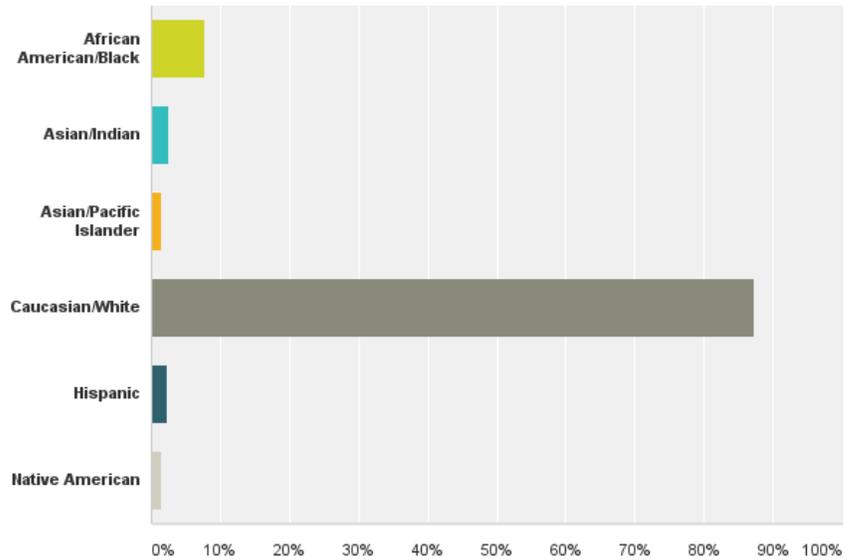
Q16 What is your gender?

Answered: 879 Skipped: 123



Q17 What is your race/ethnicity? (CHECK ALL THAT APPLY)

Answered: 844 Skipped: 158



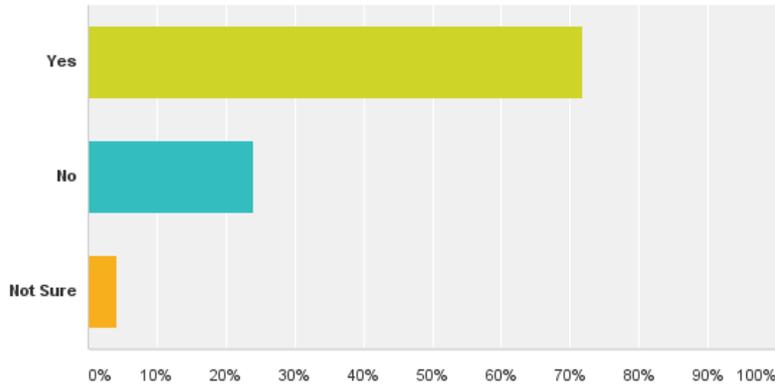
Written Responses to Q18

18: What is your zipcode?

- 28075 - 752 respondents
- 28025 - 31 respondents
- 28027 - 28 respondents
- 28213 - 20 respondents
- 28213 - 12 respondents
- 28107 - 3 respondents
- 2075 - 1 respondent
- 3069 - 1 respondent
- 28036 - 1 respondent
- 28076 - 1 respondent
- 28146 - 1 respondent
- 28202 - 1 respondent
- 28262 - 1 respondent
- 28275 - 1 respondent
- 29075 - 1 respondent
- 39315 - 1 respondent

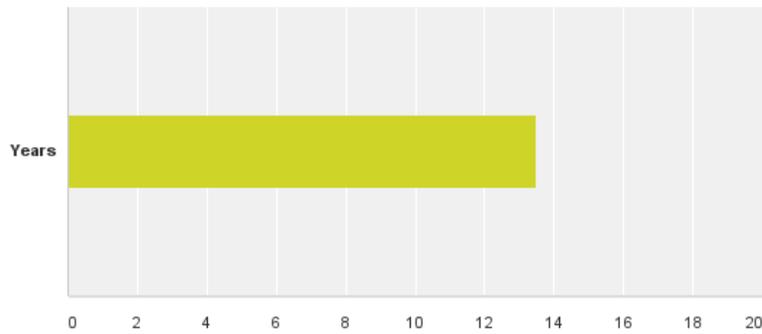
Q19 Do you live within the town limits of the Town of Harrisburg?

Answered: 881 Skipped: 121



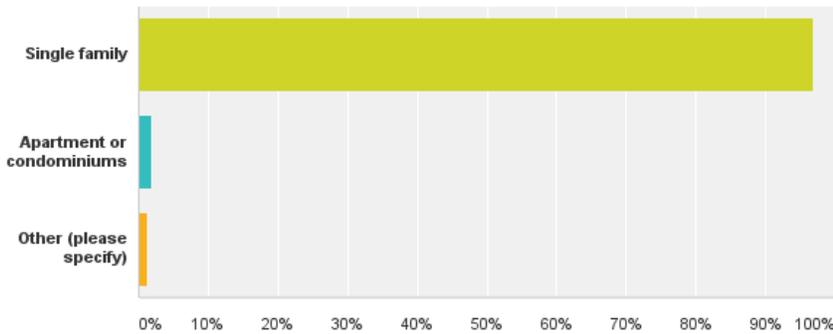
Q20 How long have you lived in Harrisburg?

Answered: 839 Skipped: 163



Q21 Which of the following BEST describes your home?

Answered: 883 Skipped: 119



Written Responses to Q22

- Biking on current roads is too dangerous. It would be wonderful to be able to walk or bike from my neighborhood (Litchfield Village) to the town center.
- I expect a portion of the real estate tax revenue collected from the insane/uncontrolled growth in our town to be used for this project. I am not willing to see my taxes go up for this.
- Not sure I would use greenways. Rarely go to park now to walk.
- Crossing Highway 49 WILL be a big issue even when the bridge is finished to get to any of these parks like Pharr Mill, library and the schools. Too much traffic for bicycles and pedestrians especially when the bridge is finished. Not good planning on that part. Roads too narrow for mommy, daddy and the kids to bike on unless there are sidewalks. And with that said, even with sidewalks traffic is way too busy for safety.
- We don't really need anything new in these respects. Use existing walkways in neighborhood / apartment complexes. Use the funding saved to support other programs.
- I believe that this is an excellent way to bring the community together and promote health, family activities, safer paths to bike on and community activities.
- Although not in town limits, I utilize the parks for walking due to no neighborhood roads where I live. We must address the road congestion 1st and foremost. There is no way our roads can handle cyclists and it is not safe for anyone to walk roadside. The parks are wonderful but the town is bursting at the seams on the roadways.
- Much needed given how narrow the roads are in Harrisburg. I hate riding my bike outside my neighborhood currently. I have to travel to Charlotte to ride their greenways
- None
- Safety
- A well thought out Greenway plan will be huge for keeping a small town feel. When more people are walking and riding their bikes you see crime staying low and a "feel" of small town. People shouldn't feel restricted to their neighborhood due to lack of opportunity to easily and safely go places. We are a growing town and planning now is key to proportional growth.
- Think we really need this
- There are a number of issues in Harrisburg more important than bicycle lanes. How about drainage, water, sewer, traffic, turning our city into a bedroom location. How about not worrying about the Jones and deal with the problems at hand, the real problems. Added roof tops, roads means someone has to suffer because Harrisburg does not now have a thought out drainage system. Our sewage plan and management is crap. Additional people means more water needs and more added problems. I think the bike people can find a place to ride without our help.
- That it gets done. Don't drag it out for years.
- The intersection of Rocky River and Robinson Church needs attention immediately. A turn right hand turn lane coming off of Robinson Church onto Rocky River is needed ASAP. BEFORE all the planned new houses get built. We have already outgrown our roads.

- Good parks and recreation facilities are important to quality of life and improve our town.
- Since bicycles are common on our roads especially the back roads, it is important to have bike lanes. Many times I have had a close call with a cyclist on Rocky River Rd and others.
- overdue
- Lack of interest of residents.
- We need sidewalks on Stallings Road connection the neighborhoods to Harrisburg Elementary school as well as Stallings Road Park as well as connecting to the new bridge to lead people to Hwy 49
- Neutral
- Would love to see more sidewalks, not just for new construction but for existing as well. Just one side of the street is sufficient.
- Get it done
- I've lived in harrisburg for 12 although my home place is 10 mins up street in Concord city limits & husband has lived in harrisburg for 26 yrs. We dont use a lot of the sidewalk/ biking, but I really enjoyed walking the track & the paths at harrisburg park last fall while my son had football practice & games 3x a week. Rocky River & hickory ridge(probably stallings & Pharr mill too) need bikes lanes& pedestrian paths. It has been so unsafe for years & although I don't get to participate in that on those road there have been a lot that do. The hills, curves, blind spots & particularly the evening sun headed south on Rocky river are scary as a motorist when you suddenly come upon a bicyclist or walker/ jogger on these roads. Also, I have had quite many encounters w/ pedestrians over the yrs that are all on the road & do no move off when you are approaching. Maybe I am schooled wrong, but if I am walking or jogging on a road, get off the rd as cars approach(& walk against traffic to see unless there is a sidewalk). If there are no cars in the opposite lane it's not that big of a deal b/c I can safely move over, but when a car is approaching me & I have traffic behind me it is a whole different scenario. I've had to hit brakes or squeeze through before & have had a dirty look or so & one woman flipped me off....she was even where there was part of the turn lane & could have EASILY moved some to side. Even if there is high grass on the road side I stand still in that space & wait until car passes before getting back on road. The ones that walk w/ their backs to traffic are far from smart & act like they are just waiting for something to happen to sue, but definitely not a position I would want to put myself in.
- We would like to see the walking trails from Tom query to Harrisburg park.
- We just need sidewalks that actually connet together. Town just bought a street sweeper. Could have used that money for sidewalks. We get plenty of rain to clean our steets.
- none
- let people that use it pay for it
- The intersection of Kee and Main should be a 4way stop. That is an accident waiting to happen
- Would love more info via the Harrisburg websites about what's currently available. Thanks!
- We travel to char-meck green ways regularly to bike as a family...

Not enough options locally for our family!

- Sidewalks are my top priority. Kids should be able to walk to school!
- Im very excited about this possibility. I drive sometimes 10 miles to a greenway to ride bikes and to walk! This is very needed in our community! With the traffic and narrow roads I'm always very concerned when there is a bicyclist on the roads. Very unsafe!
- If Town Center had more choices for shopping and food then it would be a great destination.
- Traffic is a disaster. Avoiding bikers on rocky river rd and robinson road is a daily stress. They need a safer way to ride.
- It would be a great addition to Harrisburg.
- I feel nature paths and bike paths and parks are essential to Harrisburg, unfortunately the growth of large neighborhoods have inhibited the naturally beauty of Harrisburg. We moved here a year ago for the small town feel and in just a few short months realize that is all going away. My husband and I are already regretting our decision. No we did not build a new home, we bought a resale in a beautiful established neighborhood. I would be willing to pay more in taxes for the parks if Harrisburg remained the small quaint town we wanted to move in to.
- There is too much traffic on Hwy 49 for bicycles anywhere, pedestrians should use the sidewalks not bicycles. Honestly I think the emphasis should be on improving car traffic now.
- PLEASE support this crucial initiative. Country roads in this town are incredibly dangerous for bikers so we never let our kids bike. We would love a greenway to bike/walk. It would be a HUGE attribute and value proposition for Harrisburg
- As the traffic increases in Harrisburg it is unsafe to have so many joggers and runners on the road. We need trails or bike lanes for safety.
- The new road to Hickory Ridge has a sidewalk. Rocky River subdivision received a sidewalk connecting their neighborhood to the Town Centre however the homes and additional subdivisions still are not connected down to Pitt School Road. I have teenage children that would like employment however unless I or their father are home they are not able to walk safely to work at any of the multiple business in Harrisburg Town Centre. The Town is not very friendly to walkers.
- I am glad to see your are attempting to prioritize this. I have lived in six different area across the country and have never seen schools as dis-connected from the the surrounding areas. Sidewalks and bike lanes to these high use public areas would be very beneficial.
- Need bike/sidewalks on Robinson Church Rd & Rocky River Rd so that bikes can be ridden safely for exercise purposes and not having to bring bikes on vehicles to a park to be able to ride safely.
- I would love having sidewalks. It just doesn't seem natural with out them.
- Harrisburg desperately needs greenways that are more than 1 mile to provide safe places to exerciese. Should strive to connect with other greenways. no safe place to run/walk in Harrisburg - certinaly cannot exercise without having to drive somewhere!!!!

- Got to get going on this, before all land is developed.
- When roads were redone, they should have anticipated bike lanes.
- we need to protect and connect the limited green spaces that the town presently owns.
- Something close to peach orchard rd, That you could walk or bike into town or to Harrisburg Park. Walk ways and speed bumps on peach orchard rd.
- Wide sidewalks connecting neighborhoods, schools and shopping would create a feature that can double as a recreation and transportation zone. Connecting trails/sidewalks to the greenways in University would make UNCC, light rail and many corporate offices more accessible by a manageable and safe bike distance.
- Great Idea for recreation
- Tooooo much traffic...unsafe for bikes
- Why is race and ethnicity a question?
- I think we have plenty of opportunities for biking & walking. We desperately need a good restaurant & organic grocery & more schools & road improvements
- This is a major issue for the health and future of this town. People then businesses are attracted to these types of improvements. We are far behind and need to catch up
- There is enough going on in Harrisburg right now.Do not add another obstacle. I live on Robinson Church Rd. I guess that says it all.
- **ABSOLUTELY NEED IT!** Sinful that neighborhoods are not connected by sidewalks/trails. Lack of safe biking is not only dangerous for bikers/walkers, but motorists too. With the increase in housing happening now, the town **NEEDS TO MAKE DEVELOPERS** pay their fair share from here on out to connect/build/pay for trails/greenbelts and trail heads that the town can connect to whatever is built in this master plan. Developers should be held to also paying for whatever their development impact will have on schools, parks, roads, and their maintenance so that the City has funds available to expand and maintain those facilities/structures due to increase in population. **TOWN NEEDS TO DO THIS RIGHT** and connect one side of town to the other and make parks and schools accessible without having to drive while also providing the community a way to connect to its neighboring subdivisions. Where I come from, we had multiple **TOWNS** connected with trails that were over 30 miles long! Avid bikers/walkers would relish it!
- Access is important. Current road conditions are extremely unsafe.
- Would love to see it happen and connect our neighborhood (towards Rocky River and Robinson Church intersection) to a larger network of trails. NC has beautiful nature that we need to preserve and enjoy. It is also essential for maintaining the healthy lifestyle.
- As Harrisburg continues to grow, it is important to increase and improve our parks and exercise trails, as our narrow, busy roads are not a wise choice for walking/running/biking
- It is very hard to walk on these busy roads without sidewalks.

Kids from the middle and high schools are walking up the road very often; but the shoulders are too narrow to walk on, so they have to go through yards. Biking on most roads in Harrisburg is very dangerous.

- Ban them from riding or walking on Robinson Church. Way too narrow and very dangerous for them and other drivers.
- possible negative impacts of neighborhood and personal privacy
- I would love for the Mallard Creek Greenway and UNCC Greenway to connect to Harrisburg.
- Build it now so we can benefit from it before we are too old
- It needs to stop! People can go to our parks to walk and ride bikes. We need to spend money on our roads and not the area beside our roads. That is what parks are for! People are going overboard with sidewalks!
- Today's greenways are tomorrow's liabilities. Maintenance, increased police patrols, vandalism, that just increase taxes and allow politicians to make themselves look good at the expense of the tax payers. Bicycles are dangerous and self-righteous cyclists will be running down pedestrians.
- Our neighborhood is not connected to anything in town, including other neighborhoods. We would walk to town center to shop if we felt safe from traffic.
- Please keep trails from Harrisburg Park to Farmers Market. They need to stay connected.
- We need sidewalks on Stallings road. There are no road shoulders on which to walk.
- Regarding question 10, by checking deficient sidewalks I mean only that there aren't enough of them. Re question 13, any \$ amount I would pay would be very dependent on the specifics of any proposed project, so I left that one blank.
- Traffic volume is a major concern for me. There is no safe way to walk to nearby stores. Also, making new or existing paths blend in with nature (i.e. Adding trees/ shrubbery) would be great for our town.
- I think our development (Flowers Farm) was approved for "side walks" to connect to the park on Stallings Road. Why it stalled I don't know, but it needs to happen so that we feel connected to city living.
- I would love to see a greenway that connects the Mallard Creek/ University area on through Rocky River Crossing over to Pharr Mill Park.
- With all of the growth, and the same 2 lane roads for over 30 years, we have got to get cars off the roads. Off road safe sidewalks and trails would encourage walking to parks, schools, and shopping. Cheaper to add this than to 4 lane all the roads.
- Sidewalks are desperately needed to connect neighborhoods and permit safe bicycling to trails, parks and shopping. The ability to walk/bicycle to those places would greatly improve Harrisburg's livability.
- I would like to see greenway paths along Back Creek and Fuda Creek with sidewalk connections to the local town parks.
- It would be nice to have areas with some distance to walk, ride or run. Paved or natural trails would be awesome. I would love to frequent other facilities but due to having to drive out of my way I

don't as much as I would like. Not saying I would use them daily but I would use them.

- we need safer ways to cross Hwy 49.....pedestrian bridges
- This would be a wonderful addition to our town!
- I would be in favor of trails and improvements only if they connected many of the neighborhoods in the town. I cant walk anywhere safely from my neighborhood (Providence Manor) and would love to be able to travel to Town Center safely. I would shop more locally.
- I'm extremely in favor of this!
- My Mom just bought a condo in Town Center and she LOVES all the facilities she can walk to. I wish I had the same opportunity!
- I am not willing to accept any new costs taxes or otherwise to do this.
- greenways channel crime from Mecklenburg to Cabarrus county.
- Please add sidewalks and bike lanes!!!
- Harrisburg has enough parks, trails, etc. Bring more business here so we don't have to go into Concord to spend our money.
- Would love to see sidewalks along Rocky River Rd and Hickory Ridge Rd.
- HARRISBURG IS NOT THE SAME. TO MUCH TRAFFIC AND NOT ENOUGH POLICE OFFICERS FOR ALL THE TRAFFIC. ALOT OF NEW HOMES
- Maintenance
- Need sidewalks on Parallel Drive. Dangerous to walk on this busy through road. Sidewalks are needed for pedestrian safety. The space needed for sidewalks are usually taken up by the open storm water system.
- I live along Rocky River and they hang out back there now I think that would just increase that.
- Would like to see the major roads in Harrisburg connecting to the city center. Robinson Church, rocky river, stallings, and hickory ridge. Would love to take the family on bike rides to visit city center and have dinner or shop but it is to dangerous with out the proper trails. Would also like to see a Green way trail that runs the length of Harrisburg that we could access from major neighborhoods.
- I think the city has more important things to spend our tax money.
- I think the sidewalks and parks in existence are adequate. Possibly adding sidewalks on one street through Harrisburg Park would help walking distance and safety to the Town Center area.
- Just because I don't live in Harrisburg, doesn't mean I don't matter. I bank, get groceries, get hardware needs, get pharmacy needs, tan, work out, and eat in Harrisburg
- Please improve our city by giving us more ways to be outside in nature, being healthy!
- Looking forward for the above projects
- We are in dire need of bicycle lane/sidewalk on most of our road.
- I would like to be able to walk to shops.
- need crosswalk signals on 49 not active during rush hours
- do it.....
- we would LOVE to have sidewalks on ALL of Stallings road to Rocky River Rd not only for leisure walking/ riding bikes but also to walk to other neighborhoods to school or grocery

- They do not seem to be stream lined or connected very well.
- GREAT IDEA that needs to happen!
- When we initially moved to Harrisburg It was easier to get around the city in a short amount of time. It takes much longer now and feels more like the city trapping we tried to avoid. Green ways and bike routes would give more balance and some of that small town feel would return. It would also help with community fitness and provide alternate forms of transportation.
- I hope plans develop soon so I can take advantage. I'm over 70.
- If a greenway could be constructed comparable to the Mallard Creek Greenway I would be in heaven! Possibly connect it to Concord's greenway one day? I'm not in a position to say how exactly to spend the states money; however, our state taxes are higher than most not to mention the lottery. If there isn't money for the town of Harrisburg to build a greenway with the current income from property taxes, our outrageous fuel tax, income tax, sales tax, or the lottery I don't believe it should be done. It's not a necessity.
- Widening the shoulders on the roads would help. Especially on Rocky River and Robinson Church roads.
- Frankly there is no town as such - just lots of subdivisions, no real town center
- I am amazed that schools are not the top priority in this town, but a bikeway is
- I live off Robinson Church, and would love to be able to bike to Harrisburg park
- I would like to see a pedestrian/bike route that looped (10 to 15 miles) with some cut back for shorter route options. Harrisburg would be very unique to have such a greenway!
- It would be great to connect to existing greenways and greenway plans in Charlotte and Concord. Coordinating would be a great idea,
- Please do something about bicyclists on hickory ridge and rocky river. There needs to be an ordinance as far as these people that ride their bikes at peak times of the day. They think they are a car and have almost caused many accidents. Someone is going to get badly hurt if bike paths are not provided.
- Would be great alternative
- Please connect down Robinson Church
- Include public basketball court or receive center
- My concern is the lack of it and connectivity. The walkable community perspective will bring economic development thus more residents and more importantly, additional TAX REVENUE. It is hard to invest in such modes of transportations but the Federal Government has plenty matching grants for this type of construction. The Town can use CMAQ funding and apply for other TIGER grants to create a better pedestrian and bicycle network. NCDOT will build the sidewalk if the Town pays for half of it. In addition, the Town should request wide planting strips with street trees (small on state maintained roads) providing complete streets.
- Should NOT be built in flood planes. Should NOT be built close to families back yards
- Safety/crime issues with connecting to other areas. The town

has gone downhill in the last 10 years, why bring in/attract more trash? I won't pay for it. This is why our neighborhood hasn't gotten enough votes to sell our land to the "Greenway". Not enough people want it.

- Build a sidewalk along Hickory Ridge Road, from Raging Ridge Road to Rocky River Road. You could connect hundreds of students (Abbingdon & Magnolia Springs & new Blume development) to the school and they could walk or ride bikes!!! Kids are walking along the berm, which isn't safe with the narrow road and speed limit.
- Connections from the main sidewalks in Harrisburg. We can get to those pretty easily.
- Would love it. We now have to go to the Greenway at University in Charlotte.
- Need more sidewalks so kids/parent can ride their bikes to parks, school, etc....
- We've traveled to many places to ride our bikes and run. Having a greenway in Harrisburg will make it more convenient but I'm not willing to pay for it in my taxes.
- Before this gets started, the traffic nightmare needs to be resolved. Also, we don't need anymore neighborhoods. Already too many and there is no infrastructure to support. If green space is important to the town, perhaps the council should stop approving all the construction and save the trees, etc.
- Greenways are awesome! There is zero downside to them that I have encountered. Use the UNCTV video that was posted the mayors facebook page to explain their importance to people. Use best practices from communities near us that we would aspire to be like. I would suggest that Harrisburg build a relationship with Huntersville and learn from them. We've lived there and they do everything wisely. Harrisburg has the potential (at this stage) to become the Huntersville of Cabarrus County if planned well.
- We live just outside the city limits of Harrisburg and would be willing to fundraiser and participate in this extremely important project.
- Build on/expand what we already have; create plans with an eye for the future/that will help development a sense of *community* thru designs that encourage interaction - not in isolation-separate entities (ex: connect bike-pedestrian paths with different neighborhoods)
- I believe Harrisburg is a small enough community for residents to be able to walk to schools and shopping
- If a pathway, walkway or extension within rocky river crossing is attempted, I will do everything possible to petition against it. I currently live next to the exiting trail within the community and continually contact local police for parking issues in front of my residence, kids drinking or doing drugs on the trail and people trespassing on my property. There should be no consideration for trails within the rocky river community.
- As new roads are under construction, the inclusion of bicycle lanes are imperative to the connectivity of Harrisburg. A "Hilton Head" feel of shops, restaurants, and family-friendly activities should be accessible by foot or bicycle.
- Thank you!

- Sidewalks on Patricia and Parallel.
- Please connect this town together with sidewalks and trails. We need it!
- It would be lovely if the Town of Harrisburg would join forces with a YMCA so the older citizens can stop driving to West Cabarrus for pool usage.....
- dont need to waste money for bikers, way too many other things Harrisburg needs like LESS HOUSES being built by the builders that come in and throw money to town.....
- I've lived close and done things within Harrisburg for over 20 years.
- Please, please, please offer paved sidewalks on 1) Stallings Rd between Stallings Park and Rocky River Rd and 2) on Rocky River Rd between Stallings Rd to Hickory Ridge Rd. Our family would love to run & bike together with neighbors but it's just too dangerous! Thank you for asking!
- The greenway would bring more people to Harrisburg to live and patronize businesses that are in walking/biking distance and accessibility.
- PLEASE MAKE IT SAFE TO CROSS 49. OUR FAMILY WOULD LOVE TO ENJOY THE PARK AND LIBRARY, FIREWORKS. 49 IS UNSAFE!!!
- Before the town takes on pet projects of the Mayor, you need to focus on what is the vision for the entire town for ALL ages (too much is spent on sports and recreation for younger people). But first, a priority should be finishing the town center and showing us taxpayers a model of what the town will look like. Improve the Hwy 49 corridor and the commercial facades. Image and perception of a town is everything. Looks awful driving through town. First impressions are everything. Also stop the overdevelopment of houses -- some existing subdivisions are not even finished. How are we to sell our own homes with this glut of track houses -- and a sea of poorly built beige vinyl.?! The rooftop-retail line is BOGUS., Show the proof/studies. Nobody's buying it. And when people say they want more retail, they don't mean more chain stores and restaurants, but cafes, a movie house, real hardware store, boutiques, antique shops. Look at Davidson or Mint Hill. You are doing all these one-off piecemeal projects. Where are the contingency plans for emergency services and increased school population with all this growth. Let's connect the dots and communicate to the people (not sure what "First Alert" phone calls and emails were stopped since it was a voluntary sign-up). You are putting the cart before the horse. Prioritize!
- if it is going to increase our taxes then I am against a project of this magnitude. I would like to see more sidewalks installed on the Stallings road side of the RR tracks so we could ride our bikes and have access to the town center Like the other side of Harrisburg does now. The roads are now too dangerous to ride our bikes on
- Something needs to be done about the bicyclists clogging up the back roads. They take up an entire lane and do not try to help traffic at all. They should not be allowed to be in large groups. Try driving from Flowes Store to Robinson Church behind them, unable to pass. Every Sun just before 10 am there's another

- large group on Robinson Church
- we are on the edge of Harrisburg
- I currently jog but would like to mountain bike and would like more trails in the area for that
- There should be no bicycles on Stallings, rocky River, or Robinson Church road. They are a hindrance. The roads are too narrow. Roads were made for cars/trucks not bicyclists to slow things down. I'd support a ban before someone gets injured
- I love harrisburg!
- Allowing more development at the sacrifice of our parks and trails is detrimental to the climate of Harrisburg- we don't need more development- we need to protect our parks and trails for their sustained use by our current residents. We expect our town council to protect our resources rather than promote more population growth in an area that is already bursting at the seams.
- we need better walking trails our park stinks
- I feel the Greenway is a win win for everyone.
- Would love to see connections to all parks, neighborhoods, and the town to improve connectivity and the quality of life for our residents. All great towns in this country have trails to bike and hike on. Projects like this are better than money for signage!
- I'd love to see the neighborhoods on Tom Query get connected to Harrisburg Park since we're so close. You'd have a lot of traffic on trails.
- Harrisburg is already full. Why would we need anything else? This isn't Charlotte. Harrisburg Town Center already has enough people. Adding more to it brings the wrong crowd. I'm so sick at looking and listening to disrespectful people.
- New developments should have to include bike lanes and extra wide shoulders possible even 4 lanes. Eventually they will all connect and the town will not have to pay for those improvement or buy properties to widen the roads in those areas. Will be cheaper in the long run. If this occurred now for instance, Robinson Church would almost be a 4 Lane road with bike lanes and sidewalks.
- The reason I am not sure I would be willing to pay more tax for such a system is that I don't necessarily trust the politicians to use the money for said system.
- Rocky River rd and Robinson Church are in great need of Bike lanes and sidewalks!
- I love to walk places with my kids. We gave walked to CVS, the hardware store, the bank, Sherwin Williams, Hawthornes and many other places. My biggest concern is crossing Roberta when it is busy. There is no crosswalk to get to the town center out if my neighborhood to get across Roberta, plus we have to jump a median. One of the reasons that we picked the location of our house is because I love to walk places, but with two young kids, it is getting dangerous for me. I would love to see some improvement.
- it needs to be SAFE!! I put my dog in the car and drove to the UNCC Greenway once or twice until I realized that was where a woman was murdered several years ago!! Never went back!
- Developers should bear the bulk of the cost of greenways when putting in new neighborhoods. See Mallard Creek Greenway as

an example. Some empty land should be used as a mounting bike park. Look at Sherman's Branch park in Meck for example. It cost nothing to build or maintain and 100s of people use it each week. Compare that to Pharr Mill park...I'm sure it cost mutiple 100s of thousands and it used by just a handfull of people unless the weather is perfect. I go there several times a week and it is busy about 1 day per month.

- Linking into the existing greenways in Charlotte and Concord would be most valuable. I feel this would allow people to spend more time on the Greenway and travel on the Greenway bringing people from other communities.
- None
- My family lives in Windsor Forest. We would love to connect our neighborhood with the Harrisburg Park with a walking trail bike path!
- I'm surprised your looking for the towns opinion since the council rarely listens to it
- #2: We don't have one close for safety
- #11: Builders
- We can build walkway around Fuda Creek, and or Sewage Line.
- Safety/predators
- #19: Just outside
- There seems to be a lack of concern for the natural aesthetics of this town as it's being developed-sort of being thrown together. Consider reviewing developments done in Columbia, MD (one of the largest planned towns in US with neighborhoods and shopping connected through greenways and park system camouflages by natural landscaping and signage restrictions).
- #20: Work in Harrisburg
- Implementation. Please speed up.
- #8 safe running areas
- Would like to see sidewalk and greenways expanded to allow for safe travel on bikes and runners
- #8: Being able to stay in shape for free
- Please give us sidewalks along Stallings Rd. We could walk/bike to parks/stores/be safer!
- If the TC want sidewalks please do no make them come over in someone's yard crooked then go back near the edge of street. To take peoples yard to make a crooked sidewalk is not planning correctly. It looks like a rush job.
- It is long overdue. I also believe that is a significant benefit to current and future residents.
- We really need bike paths. These will be great selling points for current and future Real Estate.
- Please connect it to abbington
- need dog walkers to scoop the poop from the pooch!
- Very satisfied with current trails and paths! They are sufficient for current population. The 55 and older community is very important to this community as well where access to local services are convenient to this age group. The new addition that will be proposed will not impact current trails and bike paths in a negative manner. The 55 plus population is very important to this community.
- If builders want to build, and we want them to build in our town,

ask each of them to pitch in to help build the greenway. I could see a good greenway structure helping local businesses if people had more freedom to walk/bike to more businesses

- It doesn't matter what I would vote for because the Town Council has their own agenda. We spoke against more residences and you passed it anyway. Our roads are WAY TOO CROWDED NOW so we don't need more traffic.
- waste of money unless along greenways
- Heatherstone is a fairly isolated neighborhood and jogging on Stallings or Rocky River is very unsafe no matter what time one runs.
- I would love to be able to bike places, but Stallings Road does not seem safe.
- Please do this! We want to walk and ride our bikes but it is not safe enough!
- It's the right thing to do if Harrisburg is to be a town of forward thinking residents.
- Make it happen
- A very welcome topic
- There are a lot of bikers that ride on Stallings Rd, Rocky River Rd, and Roberta Rd and some of them have no respect for vehicles, I wish there were bike lanes for these riders..
- invest for the future and stop all this crazy housing approvals
- I am would support separate facilities. But I think that bike lanes on roads are dangerous and impede traffic. Especially on main roads like Rocky River or Hickory Ridge or 49. I think these types of paths for bikes and pedestrians need to be COMPLETELY isolated from roads meant for cars. Additionally I would be willing to find something like this privately. I do not think this should come through public funds.
- We need sidewalks from Rocky River/Hickory Ridge intersection down to the high school area. And then from the high school to the Stallings Park area.
- I want a safe place for my kids to play. And I want to give those currently running or biking on Rocky River Rd a safe alternative. I get so afraid for them with the crazy drivers!
- I would love to see more connectivity between nearby neighborhoods and schools to cut down on traffic. The master plan should include a way to connect any new bike/walking paths with existing paths. With so much new growth in Harrisburg, we can't rely only on vehicle traffic to get around town.
- Please make this happen!
- I love the idea. We want Harrisburg to be an active and healthy community with safe paths/trails for children and adults. More connected or longer paths would motivate more people instead of doing short laps around our existing paths. I also think a greenway is a selling point when people are looking for a community to live in.
- We need this badly!!
- We relocated from Austin where there are tons of bike trails and places to ride/walk. We would like to see Harrisburg have the same opportunities for exercise and transportation.
- Before we moved to the Oaks Estates, by rode my bicycle to work (downtown Charlotte) every day. Until about 10 years ago I

rode Rocky River, Lower Rocky River, Hickory Ridge) every few days. With the increase traffic (and increase in age), it has not been safe to use that route.

- I always have concerns for the safety of runners and cyclists going on Hickory Ridge Road and Robinson Church Road. Just too dangerous.
- Hickory Ridge Road and Rocky River road always has bikers and walkers and joggers and it is very hard to navigate around them. Also it would be nice to walk on these roads ourselves and feel safe. At this point we would never leave our neighborhood when walking or riding bikes.
- I am concerned about attracting more people from other areas into this already congested area.
- Mountain Bike trails!
- I live in Valhalla neighborhood and can walk and bike to Harrisburg Park and other restaurants, but there are no protected crossings on Morehead or Hwy 49. My family is trapped due to traffic.
- Would make Harrisburg more attractive for new family development.
- None
- We don't live "in" Harrisburg, but do most of our shopping, dining, and recreation there. I would like to see more recreational options, perhaps, pet friendly.
- I live in the heart of Harrisburg & love it, with the major exception of traffic volume & safety. I enjoy running and do so on a daily basis, and long for the day when I feel safe enough to be able to take my son running or bicycle riding through town.
- My family uses the Mallard creek greenway all the time. I would love one that is closer
- Needed!
- I drive quite a distance to run on a greenway path...I would love to stay local and run in my own town! And I would love to safely walk from neighborhood to neighborhood without risking my lot my children's lives!
- We need a bike lane in and around Harrisburg and concord desperately
- Connect existing trails
- Slow down development, protect green space and make the town and parks more easily reached by foot. Plant and protect trees. Keep lot sizes larger at new developments.
- It would be nice if the sidewalk would finally come to Kings Dr. We were told years ago that it would be completed and nothing is done! Matter of fact our neighborhood is neglected by town council and town dept for any kind of up keep! !
- Great idea!
- Connecting the existing "sidewalks to nowhere" would be a good start. Tried walking from Meineke to McD's to Salon 7 past Ruckus House. Either walking in the street or Hwy 49 shoulder (!) or thru car lot. Not fun.
- High school track is always locked, middle school track has a sign forbidding use. Can this be changed?
- I don't live in Harrisburg but rather right outside of it. I love Harrisburg and I am very excited about this project.
- Much needed!

- We already have traffic problems we DO NOT need bicycles, walkers, runners, or scooters on the roads!!!!
- What Harrisburg needs is a public pool. For those that live in subdivisions without pools
- Please continue to extend sidewalks in Harrisburg Park neighborhood along Patricia and Parallel. For the families who live in this neighborhood (especially with young children), it becomes quite dangerous to walk and ride bikes around Harrisburg when this neighborhood is used as a traffic cut through. Maybe even speed bumps to discourage it? I routinely see people drive through this area at close to 50 mph
- This town has lacked proper planning in terms of green ways and pedestrian traffic ways. A greenway connecting parks and central locations would be a huge asset to the town and would have been much easier only a few years ago, but it's important to remember that it will only become harder as time goes by
- There are already multiple projects established/underway with the Carolina Thread Trail, Mecklenburg County, Cabarrus County, and the City of Concord. It would be nice to see a tie in with some of those to build a stronger sense of regional community and bring recognition to the Harrisburg area.
- No comments
- The neighborhoods like orchard park, Camelot, and Huntwick have no pedestrian access to the parks without being on the side of the road without sidewalks
- This would really put Harrisburg on the map as a progressive and desirable place to live!
- I didn't know there was a "plan" but I noticed as soon as our family moved here that we would not be able to bike or walk anywhere anymore, but would have to drive everywhere due to lack of safe roads for biking and walking.
- It should be a loop. Too many Greenways just have a beginning and end, so you have to turn around and cover the same ground over. A loop is much more pleasant.
- Safety
- I am an avid runner and would love to see sidewalks connect from Tom query rd to Robinson Church road!!
- New developments should be responsible for assisting with the creation of these greenways due to increasing traffic from the new homes. Harrisburg didn't have traffic problems like this a few years ago.
- Traffic congestion should prohibit non motorized use if roads.
- It is very important and there needs to be smart planning and distribution of accessible pedestrian ways. I suggest public meetings where citizens may have a say in the master plan design.
- Moreover than just a greenway, there first needs to be an improvement on the current situation: Sidewalks (or lack of sidewalks) are a pitty and there are no bicycle lanes making riding a bike unsafe
- We should encourage the Carolina Thread Trail to complete their plans and the we could attach to those existing trails. I live ON the trail in Rocky River Crossing and would love to see it maintained better.

- Would love to see bike lanes/sidewalks connect the neighborhoods in the city, with each other and with main roads to connect to Town Center and such. Sep Robinson Church Rd, Hickory Ridge Rd, Tom Query.
- I would like sidewalks from Caldwell to town center for options to walk more places. And places to bike - Tom query isn't the greatest road for biking but would love to bike to town center area
- I don't live in Harrisburg, but it is important to have biking and pedestrian facilities in all of Cabarrus County and to interconnection the Carolina Threads Trail. Connectivity in all communities is the key to making it successful. If there were more safe places to ride bikes or walk in Harrisburg I would also visit businesses in Harrisburg more often.
- N/A
- Please bring the Carolina a Thread Trail to Canterfield subdivision !!!
- Harrisburg pull for us as a family was the small town feel... We are beginning to feel like harrisburg wants to be charlotte... We will be looking to move
- Need more soccer facilities
- As a fit community, more safe accessibility for running/walking/cycling is crucial. It would add so much to our town. Please don't build any more houses though. We want to remain a small town.
- I live down road from Town center and around corner from Frank Liske would like to be able to safely ride bikes with my boys to both locations but roads are not wide enough and there are no sidewalks
- Sidewalks and bike lanes are needed.
- There should be a tax added to developers and builders for each home sold to fund an infrastructure fund. If they build, they should help pay.
- We need more sidewalks on busy roads like Robison church rd, rocky river rd.
- I feel this is necessary!! As an avid runner, there are such limited places to run and feel safe. To achieve any sort of mileage requires running on main roads, which posses no bike lane, let alone shoulder. I fear for my safety every time I venture out of my neighborhood.
- Even if greenways are not expanded, additional sidewalks and wider shoulders on many of the roads would be very useful.
- It would be so nice to be up to stay local to do my jogging. Instead of having to go to a green way across town!
- I would love to see a sidewalk/bike lane from Harrisburg to Rocky River RD on Hickory ridge. There is already existing sidewalk at the middle/high school that could be expanded connecting two large neighborhoods to downtown by bike.
- Bicycle Ped greenway is a must for the town of Harrisburg. This is long overdo
- Sidewalks connecting neighborhoods to the town would be great. Sidewalk and bike lanes along Stallings Road would be highly desirable. This is a busy road that is unsafe to ride bikes on or walk near.
- Better lighting around current paths and roadways is highly suggested. Looking at LED street lighting, while initially more

expensive provides less maintenance costs as the life is longer than standard bulbs and provides a much brighter and wider lighting. Do that as well and I'd be happy!

- More bike lanes will encourage more people to ride bikes. Bike trips cost taxpayers less compared to auto trips. We need kids to be able to ride bikes safely to school. We need to educate drivers. Mountain biking trails bring mountain bikers to town. Mountain bikers almost always spend money when they come to ride local trails. Mountain bikers also do the vast majority of volunteer trailwork. Just look at local clubs like the Tarheel Trailblazers. We build and maintain local trails based on IMBA standards for safety and sustainability. The trails we build and maintain are safe, well marked and open to all user groups. Good trail systems encourage young and old to get outside and enjoy healthy exercise.
- Add bicycle paths to both sides of all roadways!
- It's long been needed
- Taking land from people to use for these purposes is disgraceful and goes against the personal property rights this country was founded on!
- With all the new construction in Harrisburg, one of the major concerns is traffic. A greenway system would aid in curtailing car traffic through the town and allow easier access to various town destinations.
- My interest in paying more taxes only applies if the work was started immediately following the tax implementation. How long has the council been talking about this, 10 years now? We need action; not more studies and discussion.
- Waste of money for the few that will actually use it
- I don't want bike lanes. Take your bike to the park and stay off the road.
- Bike lanes, primarily those on streets, are a total waste of money and real estate. The expense involved benefits an astoundingly small number of people. Look at Mint Street and Remount Road in Charlotte. The lanes are virtually unused and at what expense? This isn't Japan, China or Amsterdam and wishful thinking and bike lanes will not convert this area into a pedaling paradise. Why not raise the money from the cycling community? Let those who want the lanes or paths or whatever actually pay for them.
- I would LOVE to have adequate sidewalks and greenways available to allow my family to walk to the town center area. Hiking and biking trails would be great as well. While I am dreaming, let's add a disk golf course!
- It seems that safe sidewalks between Rocky River Rd and Hwy 49 on Robinson Church would provide valuable pedestrian/bicycle access between the growing neighborhoods along Robinson Church and town center.
- This is definitely needed to make our town safer and more connected.
- Would love to see something connecting to the greenway in Charlotte
- I would love to have sidewalks/trails that would connect the Tom Query Road area with the rest of Harrisburg.
- The town needs to work more proactively and strategically with

the Carolina Thread Trail.

- Stalligs Road is a BIG biking road and I did not see any entry on the priority list for anything other than from Hickory Ride to HES. That is not useful.....
- There is little infrastructure other than the new sidewalks for walking safely and virtually no safe way to ride bikes in Harrisburg without getting hit by cars.
- Harrisburg is the perfect size for pedestrian connectivity. If more places were connected by walking facilities that weren't right beside roads, plenty of people would take advantage. Everything inside city limits seems like it could be accessible by foot in 30 minutes or less.
- Please get us safe pedestrian and bicycle paths/sidewalks. My husband and I are actively considering downsizing our home and top on the list of requirements is safe walk and bikeways. We are considering relocating for them but would love to stay in Harrisburg for them. It is a win win win...better health, less congestion on the roads, and attracting new working families to our town - they desire these things as well.
- Will not be remaining in Harrisburg after 2017 due to over crowding of homes in the area so I'm not concerned any longer.
- Excellent idea.. Promotes exercise for everyone... Kids could ride their bikes to school, which would help reduce childhood obesity.
- This is something Harrisburg definitely needs. It would offer great benefits to the entire community.
- I live in Yates Meadow and would like to see a sidewalk/greenway along Roberta Rd. so I can get to Town Center.
- How about getting the sidewalks in order first. Sad to see that there are roads, school and parks not connected by sidewalks.
- How about when redoing roads owned by the town, have the road widened with a shoulder/bike path
- Thank you for putting together this survey! A safe biking route (Greenway) is desperately needed to UNC Charlotte. Also Rock River Road is completely unsafe for biking; this needs to be addressed with an actual greenway trail.
- Wide shoulders strategically routed in the rural roads between hwy 49 and Ablemarle Rd would be great - connecting neighborhoods to school and providing a place for a biking community to really grow and develop as well as the running community.
- The sidewalks around town have been a huge blessing.
- Long overdue
- need more historic sites and maps of area. Websites. Need a true downtown feeling in Towncenter
- Parks, trails, and greenways make a town stand out from other places and certainly improve the quality of life for the residents. These facilities make living in Harrisburg more desirable.



- A. Example Trail Parking Easement
- B. Greenway Easement
- C. Sewer Greenway Easement

Appendix

EXAMPLE EASEMENT AGREEMENTS

EXAMPLE EASEMENT AGREEMENT

STATE OF NORTH CAROLINA
_____ COUNTY

Tax Parcel(s):

Drawn by and mail to: Catawba Lands Conservancy, 105 W. Morehead Street
Charlotte, NC 28210

TRAIL AND PARKING EASEMENT AGREEMENT

THIS TRAIL AND PARKING EASEMENT AGREEMENT (“**Agreement**”) dated as of _____ (the “**Agreement Date**”) is by and between _____ (the “**Grantor**”) and **CATAWBA LANDS CONSERVANCY**, a North Carolina nonprofit corporation (“**CLC**”).

ARTICLE I Background

1.01 Property.

- (a) Grantor is the sole owner in fee simple of that certain parcel of land containing approximately _____ acres located _____ in _____ County, North Carolina as described in Deed ___ at Page ___ in the _____ County Public Registry (the “_____ **Property**”).
- (b) Grantor desires to allow a trail pursuant to the provisions of this Agreement on a portion of the _____ Property, said location being more particularly described in **Exhibit A** attached hereto and by reference incorporated herein (the “**Trail Property**”) and depicted on the survey or plat dated _____, 20__ prepared by _____ a copy of which is attached as **Exhibit B** hereto and by reference incorporated herein (the “Survey”).
- (c) Grantor desires to allow a parking lot for trail users on the portion of _____ Property described in **Exhibit C** attached hereto and by reference incorporated herein (the “**Parking Property**”) and also depicted on the Survey.
- (d) The Trail Property and the Parking Property are collectively referred to as the “**Property.**”

1.02 Purposes. The purposes of this Agreement are to set forth the terms under which the Trail Facilities and Parking Facilities described in Article II can be established and maintained for activities and uses by the general public described in Article III.

1.03 Consideration. The Grantor acknowledges receipt of the sum of \$1.00 in consideration of the grant of easements to CLC under this Agreement and other good and valuable consideration, including the promises of CLC set forth herein.

ARTICLE II Grant of Easement for Trail Facilities and Parking Facilities

EXAMPLE EASEMENT AGREEMENT

2.01 Grant of Trail Facilities Easement. The Grantor, intending to be legally bound, grants, bargains, sells and conveys to CLC a perpetual non-exclusive easement (“**Trail Facilities Easement**”) to (i) create the Trail (hereinafter defined) on the Trail Property, and (ii) enter the Trail Property at any time to construct, install, maintain and repair any one or more of the items (collectively, with the Trail, the “**Trail Facilities**”) described in paragraph (a) of this Section 2.01. The Trail Facilities Easement is granted subject to conditions, covenants, restrictions, easements and other matters of record, other than (i) mortgage liens, which Grantor agrees to cause to be subordinated to this Agreement, and (ii) the lien of Ad Valorem taxes which Grantor agrees to pay prior to delinquency, and subject to any matters that would appear on a current and accurate survey of the Trail Property and to all subdivision ordinances, zoning ordinances, land use regulations and other laws, regulations or ordinances applicable to the Trail Property. Grantor and CLC shall work together in good faith to develop mutually acceptable rules and regulations for the Trail Property and Parking Property.

(a) **Trail Facilities**

- (1) A paved or unpaved trail of varying width not to exceed _____ feet in width, together with steps, railings, and other surface structures which, as to wet areas, may include bridges, boardwalks and culverts (collectively, the “**Trail**”).
- (2) Signs to mark the Trail, to provide information related to the Trail and for interpretive purposes.
- (3) Fencing, gates, and barriers to control access to the Trail Facilities, provided that (i) Grantor shall be given a mechanism for unlocking any fencing, gates or barriers, (ii) Grantee shall submit the location of the same to Grantor for Grantor’s prior written consent, not to be unreasonably withheld, conditioned or delayed, and (iii) Grantor shall have the right to require the relocation of the same, at Grantor’s cost and expense (if approved by Grantor) or at CLC’s costs and expense (if not approved by Grantor), if any such fencing, gates or barriers impairs Grantor’s use of the Trail Property or Grantor’s adjacent property.
- (4) Facilities incidental to and for the convenience of users of the Trail, such as observation platforms, benches, picnic tables, wastebaskets, kiosks and bicycle racks.

(b) **No Obligation to Construct or Connect**

CLC shall have no obligation to construct the Trail or any particular Trail Facilities within any particular time, if ever, or to connect the Trail with other trails.

2.02 Grant of Parking Facilities Easement. The Grantor, intending to be legally bound, grants and conveys to CLC a perpetual non-exclusive easement (“**Parking Facilities Easement**”) to (i) create the Parking Lot (defined below) on the Parking Property, and (ii) enter the Parking Property at any time to construct, install, maintain and repair any one or more of the items described in paragraph (a) of this **Section 2.02** (collectively, “**Parking Facilities**”). The

EXAMPLE EASEMENT AGREEMENT

Parking Facilities Easement is granted subject to all conditions, covenants, restrictions, easements and other matters of record, to any matters that would appear on a current and accurate survey of the Parking Property and to all subdivision ordinances, zoning ordinances, land use regulations and other laws, regulations or ordinances applicable to the Parking Property.

(a) **Parking Facilities**

- (1) A paved or unpaved parking lot (the “**Parking Lot**”).
- (2) Signs to mark the Parking Lot and to provide information related to the Parking Lot.
- (3) Fencing, gates, and barriers to control access to the Parking Lot, provided that (i) Grantor shall be given a mechanism for unlocking any fencing, gates or barriers, (ii) CLC shall submit the location of the same to Grantor for Grantor’s prior written consent, not to be unreasonably withheld, conditioned or delayed, and (iii) Grantor shall have the right to require the relocation of the same, at Grantor’s cost and expense (if approved by Grantor) or at CLC’s cost and expense (if the original location was not approved by Grantor), if any such fencing, gates or barriers materially impairs Grantor’s use of the Parking Property or Grantor’s adjacent property.
- (4) Facilities incidental to and for the convenience of users of the Parking Lot, such as benches, picnic tables, wastebaskets, kiosks and bicycle racks.

(b) **No Obligation to Construct**

- (1) CLC shall have no obligation to construct the Parking Facilities or any particular component of the Parking Facilities within a particular time, if ever.

2.03 Exercise of Rights.

- (a) Creation of the Trail and Parking Lot and other construction, installation, maintenance and repair of the Trail Facilities and Parking Facilities includes all activities necessary for the proper construction, installation, maintenance and repair of the Trail Facilities and Parking Facilities, and may include, without limitation, installation of signage; mowing, cutting or removal of soil, rock, trees or vegetation; application of gravel, crushed stone, wood chips or paving; or other means of creating the Trail and Parking Lot surface (if any) and/or identifying the Trail’s path. These activities may include vehicular use.
- (b) CLC, its employees, contractors or agents shall (i) perform all construction, maintenance, repair and replacement of the Trail Facilities and Parking Facilities in a good and workmanlike manner, in accordance with all applicable federal, state and local laws and regulations and in accordance with any standards which may apply to the performance thereof, including any professional engineering standards; (ii) obtain all necessary governmental permits and approvals for the

EXAMPLE EASEMENT AGREEMENT

performance of all construction, maintenance, repair and replacement of the Trail Facilities and Parking Facilities; and (iii) be responsible for all costs of performing all construction, maintenance, repair and replacement of the Trail Facilities and Parking Facilities, including permitting costs. Grantor shall cooperate with CLC to obtain any such permits if reasonably requested at no cost to Grantor.

ARTICLE III Grant of Easement for Public Access

3.01 Grant of Public Access Trail Easement. The Grantor, intending to be legally bound, grants to CLC the right to make available to the public a perpetual non-exclusive easement and right-of-way over the Trail and the right to use Trail Facilities for the purposes (“**Permitted Trail Uses**”) described in paragraph (a) of this **Section 3.01** (“**Public Access Trail Easement**”). The Public Access Trail Easement is granted subject to conditions, covenants, restrictions, easements and other matters of record other than (i) mortgage liens, which Grantor agrees to cause to be subordinated to this Agreement, (ii) the lien of Ad Valorem taxes, which Grantor agrees to pay prior to delinquency, and to any matters that would appear on a current and accurate survey of the Trail Property and to all subdivision ordinances, zoning ordinances, land use regulations and other laws, regulations or ordinances applicable to the Trail Property.

(a) **Permitted Trail Uses.** The Trail Facilities shall be used solely:

- (1) As a right-of-way for (i) walking, hiking, jogging, bicycling, horseback riding, bird watching, or nature study; (ii) events such as “runs” or competitive races; (iii) programmatic use by schools, clubs or other groups; (iv) picnicking or other similar stationary activities reasonably related to the activities permitted under items (i), (ii) and (iii) above, (v) wheelchair use by persons who need to use wheelchairs; (vi) maintenance vehicles used in the construction, management, maintenance or stewardship purposes of the Trail Facilities; (vii) by CLC and CLC’s contractors for events; and (viii) emergency vehicles in the case of emergency within the Trail Property.
- (2) For resource management, including the right (but not obligation) to mow, cut or remove trees, vegetation, or plant vegetation, within the Trail Property.

3.02 Grant of Public Access Parking Easement. The Grantor, intending to be legally bound, grants to CLC the right to make available to the public a perpetual non-exclusive easement and right-of-way over the Parking Lot and the right to use Parking Facilities for the purposes (“**Permitted Parking Uses**”) described in this **Section 3.02** (“**Public Access Parking Easement**”). The Public Access Parking Easement is granted subject to all conditions, covenants, restrictions, easements and other matters of record, to any matters that would appear on a current and accurate survey of the Parking Property and to all subdivision ordinances, zoning ordinances, land use regulations and other laws, regulations or ordinances applicable to the Parking Property. The Parking Facilities shall be used solely for the purposes of parking vehicles and bicycles in connection with the use of Trail Facilities.

EXAMPLE EASEMENT AGREEMENT

ARTICLE IV Rights of Grantor

4.01 Grantor Improvements, Uses and Activities. Grantor has the rights accorded to the general public to use the Trail Facilities located on the Trail Property and the Parking Facilities located on the Parking Property, as well as exercise any one or more of the following rights:

- (a) **Other Rights.** Grantor may exercise all rights accruing from ownership of the Property, including, the right to engage in, or permit or invite others to engage in, all uses of the Property, that are not expressly prohibited by this Agreement or inconsistent with the easement rights granted hereby and do not interfere with same.
- (b) **Enforcement Rights.** Grantor may remove or exclude from the Property any Persons (as defined in **Section 6.04**) other than CLC, CLC's contractors or agents, who are (i) in locations other than the Trail or other Trail Facilities located on the Trail Property or the Parking Facilities, or (ii) not engaged in Permitted Trail Uses.

4.02 Location of Parking Property. The location of the Parking Property described in **Exhibit ___** has been surveyed. Such location will be utilized in a driveway permit application and will be subject to the approval of by the Department of Transportation ("DOT"). Accordingly, CLC shall, at its expense, apply for a driveway permit and other permits or approvals necessary for the Parking Lot. In the event the surveyed location is not approved by DOT, CLC and Grantor shall exercise commercially reasonable, good faith efforts to agree upon a revised location. Upon the determination of the revised location of the Parking Property, Grantor and CLC shall execute and deliver to each other an amendment to this Agreement indicating the revised location of the Parking Property and releasing any easement rights under this Agreement in any property lying outside of the revised location of the Parking Property.

ARTICLE V Enforcement; Liability Issues

5.01 Enforcement. Each party may, in addition to other remedies available at law or in equity, compel the other party to make the Property available for the purposes set forth in this Agreement by exercising any one or more of the following remedies:

- (a) **Injunctive Relief.** Seek injunctive relief to specifically enforce the terms of this Agreement; to restrain present or future violations of this Agreement; and/or to compel restoration of Trail Facilities or Parking Facilities or other resources destroyed or altered as a result of the violation of this Agreement.
- (b) **Self Help.** Enter the Property to remove any barrier to the access provided under this Agreement and do such other things as are reasonably necessary to protect and preserve the party's rights under this Agreement.

EXAMPLE EASEMENT AGREEMENT

5.02 Representations and Warranties. The Grantor warrants to CLC that to the best knowledge of Grantor, without investigation:

- (a) There are no unrecorded agreements, or unrecorded encumbrances, to which Grantor is a party that would nullify or materially impair the rights or obligations of the parties under this Agreement.
- (b) The Property is not encumbered by (i) lien of any mortgage or deed of trust (a “Mortgage Lien”), (ii) or any mechanics or materialman’s liens (a “Mechanics & Materialman’s Lien”), or if there is either a Mortgage Lien or Mechanics & Materialman’s Lien on the Property, Grantor will cause it to be removed or subordinated to this Agreement on the same date that this Agreement is recorded in the public registry for _____ County.
- (c) Except as previously disclosed to CLC, (i) no substance defined, listed, or otherwise classified pursuant to any federal, state, or local law, regulation, or requirement as hazardous, toxic, or as a pollutant or contaminant (collectively, “**Hazardous Materials**”) exists or has been released, generated, treated, stored, used, disposed of, deposited, abandoned, or transported to or from the _____ Property in violation of applicable federal, state, and local laws, regulation and requirements (collectively, “**Applicable Law**”), (ii) there are no underground storage tanks located on the _____ Property, (ii) no Hazardous Materials or underground storage tanks have been removed from the _____ Property in a manner not in compliance with Applicable Law
- (d) Except as previously disclosed to CLC, Grantor has received no written notice that the _____ Property is in violation of any Applicable Law;
- (e) There is no pending or threatened litigation against or by Grantor in any way affecting, involving or relating to the Property;
- (f) No civil or criminal proceedings or investigations have been instigated against or by Grantor which are now pending against or by Grantor, and no written notices of claims, demands, or orders have been received by Grantor, arising out of any violation or alleged violations of, or failure to comply with, any federal, state, or local law, regulation, or requirement applicable to the Property or its uses.
- (g) Neither the Property, nor any portion thereof, is or shall be used to satisfy mitigation requirements under 33 U.S.C. §1344 or N.C. Gen. Stat. §143-214.11.

5.03 Immunity under Applicable Law. Nothing in this Agreement limits the ability of Grantor and CLC to avail themselves of the protections offered by any applicable law affording immunity to Grantor and CLC including, to the extent applicable, the recreational use statute, N.C. Gen. Stat. § 38A-1 et seq. (“**Recreational Use Statute**”) (as may be amended from time to time).

5.04 Public Enters at Own Risk. Use of any portion of the Property by members of the general public is at their own risk. Notwithstanding any provision herein to the contrary, neither CLC nor Grantor by entering into this Agreement assume any duty to or for the benefit of the

EXAMPLE EASEMENT AGREEMENT

general public for defects in the location, design, installation, maintenance or repair of the Trail Facilities or Parking Facilities; for any unsafe conditions within the Property; or for the failure to inspect for or warn against possibly unsafe conditions; or to close the Trail Facilities or Parking Facilities to public access when unsafe conditions may be present. CLC will endeavor to repair damaged Trail Facilities and Parking Facilities but has no duty to do so unless and until CLC receives actual notice given in accordance with Article VI of this Agreement of the need to repair an unreasonably dangerous condition.

5.05 Costs and Expenses. CLC will maintain the Trail Facilities and Parking Facilities at its expense except to the extent such repair or maintenance results from the negligence or intentional misconduct of Grantor or Grantor's agents, employees, contractors, representatives or invitees. In such event, Grantor will promptly reimburse CLC for such expenses or costs within ten (10) business days after CLC shall submit an invoice for such work expense.

5.06 Covenant Against Liens. CLC shall promptly pay and discharge on or before the due date any claim or obligation for labor or materials furnished at the direction of CLC which, if not paid or discharged, would result in a lien on the Property. This **Section 5.06** shall survive the termination of this Agreement.

5.07 Insurance. CLC shall maintain Commercial General Liability Insurance against claims for personal injury or death and property damage occasioned by any occurrence on the Property or arising out of the exercise of CLC's rights under this Agreement in an amount of not less than \$1,000,000 per occurrence and aggregate limits of not less than \$3,000,000, commercial auto liability insurance and such workers' compensation/employer's liability insurance as required by law. All liability policies required by this **Section 5.07** shall: (a) be issued by insurers that are authorized to issue the applicable insurance in the state where the Property is located and are reasonably acceptable to Grantor; (b) name Grantor as an additional insured; (c) contain a provision by which the insurer will give Grantor at least 30 days prior written notice before making any material change in the nature or extent of the coverage provided under such policies and/or canceling or terminating such policies; and (d) contain a provision by which CLC's policies are primary to and non-contributory with any coverage that Grantor may have in effect. Prior to exercising any rights under this Agreement, CLC shall provide Grantor with evidence satisfactory to Grantor of the policies required by this **Section 5.07**. Grantor may review such insurance limits every three years and increase as reasonably necessary the minimum limits of the coverages required under this **Section 5.07** so as to provide, at all times, coverage comparable to that for similar facilities located in _____ County, North Carolina. The aforesaid insurance obligations shall not apply to an assignee of CLC in the event CLC assigns its interest hereunder to a governmental entity that elects to self-insure in lieu of carrying liability insurance. In the event CLC assigns its interest hereunder to a governmental entity that does not self-insure, the aforesaid insurance obligations shall apply to such assignee but only to the extent they are not in conflict with the terms and provisions of the assignee's blanket liability policy or if they are not, only to the extent that such terms and provisions can be readily amended at no additional expense to the assignee.

ARTICLE VI Miscellaneous

6.01 Beneficiaries and Agents. The rights of CLC under this Agreement may be exercised by CLC and any of the contractors, agents and employees acting at the direction of CLC. This

EXAMPLE EASEMENT AGREEMENT

Agreement may be assigned by CLC to a governmental entity or agency or another non-profit corporation whose mission includes creation and/or operation of trails or greenways without the prior consent of Grantor. If CLC assigns this Agreement to a governmental entity or agency, Grantor will cooperate to make any changes hereto reasonably required by the assignee. Upon any assignment hereto by CLC, all references herein to CLC shall thereafter mean the assignee.

6.02 Binding Agreement. This Agreement is a servitude running with the land binding upon the Grantor and, upon recordation in the Public Records, any subsequent owner of the Property or any portion of the Property is bound by its terms whether or not the owner had actual notice of this Agreement and whether or not the deed of transfer specifically referred to the transfer being under and subject to this Agreement. Subject to such limitations (if any) on CLC's right to assign as may be set forth in this Agreement, this Agreement binds and benefits Grantor and CLC and their respective personal representatives, successors and assigns.

6.03 Governing Law. The interpretation and performance of this Agreement shall be governed by the laws of the State of North Carolina.

6.04 Definition and Interpretation of Capitalized and Other Terms. The following terms, whenever used in this Agreement, are to be interpreted as follows:

- (a) “**Grantor**” means each owner of all or any portion of the Property for so long as that owner owns all or any portion of the Property.
- (b) “**Person**” means an individual, organization, trust, or other entity.
- (c) “**Public Records**” means the public records of the Office of The Register of Deeds of _____ County, North Carolina.
- (d) “**Including**” means “including, without limitation”.
- (e) “**May**” is permissive and implies no obligation; “must” or “shall” are obligatory.

6.05 Incorporation by Reference. Each exhibit or schedule referred to in this Agreement is incorporated into this Agreement by this reference.

6.06 Amendments; Waivers. No amendment or waiver of any provision of this Agreement or consent to any departure by a party from the terms of this Agreement is effective unless the amendment, waiver or consent is in writing and signed by an authorized signatory for the other party. A waiver or consent is effective only in the specific instance and for the specific purpose given. An amendment must be recorded in the Public Records.

6.07 Severability. If any provision of this Agreement is determined to be invalid, illegal or unenforceable, the remaining provisions of this Agreement remain valid, binding, and enforceable. To the extent permitted by applicable law, the parties waive any provision of applicable law that renders any provision of this Agreement invalid, illegal, or unenforceable in any respect.

6.08 Recordation. CLC shall record this instrument in the Public Records, and may re-record it at any time as may be required to preserve its rights in this Agreement.

EXAMPLE EASEMENT AGREEMENT

6.09 Successors. Subject to the terms of **Section 6.01**, the covenants, terms, conditions and restrictions of this Agreement shall be binding upon, and inure to the benefit of, the parties hereto and their respective personal representatives, heirs, successors and assigns and shall continue as a servitude running in perpetuity with the Property.

6.10 Counterparts. This Agreement may be signed in multiple counterparts, each of which constitutes an original, and all of which, collectively, constitute only one agreement.

6.11 Entire Agreement. This is the entire agreement of Grantor and CLC pertaining to the subject matter of this Agreement. The terms of this Agreement supersede in full all statements and writings between Grantor, CLC, and others pertaining to the transaction set forth in this Agreement.

6.12 Notices. Any notice contemplated by this Agreement must be in writing, addressed as set forth below and shall be either (a) sent by United States Mail, postage prepaid, registered or certified mail, return receipt requested, in which case the notice will be deemed delivered two (2) business days after being deposited in the United States mail; (b) sent by overnight delivery using a nationally recognized overnight courier, in which case the notice shall be deemed delivered one (1) business day after deposit with such courier; (c) sent by facsimile or e-mail in which case the notice shall be deemed delivered upon confirmed transmission of such notice; provided that no later than the next business day after the facsimile or e-mail is sent, a hard copy of the facsimile or e-mail transmission is also sent in the manner set forth in (a), (b) or (d) of this Section; or (d) sent by personal delivery, in which case the notice will be deemed delivered on the date of delivery. Either party may change its address by giving the other party five (5) days advance written notice of such change.

If to Grantor, to:

With a copy to:

If to CLC, to: Catawba Lands Conservancy
 105 W. Morehead Street
 Charlotte, NC 28202
 Attn: Executive Director

TO HAVE AND TO HOLD the aforesaid easements, with all the rights, privileges and appurtenances thereunto appertaining unto CLC, its successors and assigns forever, subject to the terms of this Agreement, and the said Grantor for itself and its successors and assigns, does covenant with CLC, its successors and assigns that it is the sole owner of the Property and has good right and title to convey the easements in the manner aforesaid, that the Property is free from encumbrances except easements, conditions and restrictions of record and the lien of

EXAMPLE EASEMENT AGREEMENT

Cabarrus County Ad Valorem taxes for 2014 and subsequent years not yet due and payable and that Grantor will warrant and defend the title against the lawful claims of all persons.

IN WITNESS WHEREOF, Grantor and CLC by their respective duly authorized representatives, have caused this Agreement to be executed as of the day and year first above written.

By: _____

STATE OF NORTH CAROLINA

COUNTY OF _____

I, _____, a Notary Public for the County and State aforesaid, certify that _____ personally came before me this day and acknowledged that he/she is _____ of _____ and that he/she, as _____, being authorized to do so, executed the foregoing on behalf of the corporation and the said _____ acknowledged the said writing to be the act and deed of said corporation.

WITNESS my hand and notarial seal this _____ day of _____, 2014.

Notary Public

My commission expires:

CLC:

**CATAWBA LANDS CONSERVANCY, a
North Carolina nonprofit corporation**

By: _____
_____, **President**

STATE OF NORTH CAROLINA

COUNTY OF _____

I, _____, a Notary Public of the County and State aforesaid, certify that _____ personally came before me this day and acknowledged that he is President of **CATAWBA LANDS CONSERVANCY**, a North Carolina nonprofit corporation, and that he, as President, being authorized to do so, executed the foregoing on behalf of the corporation. And the said President acknowledged the said writing to be the act and deed of said corporation.

Witness my hand and official stamp or seal, this the _____ day of _____, 2014.

Notary Public

My Commission Expires:

[NOTARY SEAL]

EXHIBIT A

Legal Description of Trail Property

EXHIBIT B

Plat showing Trail Property and Parking Property

EXHIBIT C

Legal Description of Parking Property

provided, trail markers, litter receptacles, gates, boat launch trails, trail bridges, shelters, and other convenience facilities may be placed upon the property by the City of _____, consistent with the City's Master Greenway Plan.

- (2) There shall be no dumping of ashes, garbage, waste, or other unsightly or offensive material on the property.
- (3) There shall be no excavation, dredging, removal of loam, rock, sand, gravel or other material, or other change in the natural topography of the property, excepting for the construction and maintenance of trails, boat launches, fire lanes, or other accesses by the City of _____.
- (4) There shall be no removal, destruction or cutting of trees, shrubs, or other vegetation from the property except as may be performed by the City of _____: (a) for the maintenance of trails, fire lanes and other accesses; (b) for the prevention or treatment of disease; or (c) for other good husbandry practices.
- (5) Members of the general public shall have free access to and use of the property, subject to the laws and ordinances of the City of _____, and for the purposes allowed under the Greenway Master Plan of the City including, but not limited to the following: walking, nature studies, hiking, bike riding, jogging and picnicking; provided, there shall be no access by the City of _____ or the public at large granted by this easement to any property of the Grantor other than that described and conveyed herein.
- (6) The City of _____ shall have the right and duty to maintain this Greenway Easement in a clean, natural and undisturbed state, consistent with the City's Greenway Master Plan.
- (7) The Grantor shall be considered the fee owner of the property for purposes of determining development density standards under applicable zoning and land use regulations and shall be responsible for the payment of taxes on the property.
- (8) The City agrees to hold the Grantor harmless from liability for personal injury or property damage arising out of the use of the property for Greenway purposes; provided the Grantor shall not be held harmless from liability causes by the active conduct or instrumentalities of the Grantor, its agents, invitees, or contractors; or by acts of the Grantor, its agents, invitees or contractors which violate the terms and conditions of this Deed of Easement.
- (9) EXCEPTED from the above-stated terms, conditions, and restrictions are activities incidental to the construction of a public sanitary sewer collector, outfall, or interceptor, it being the intention of the parties that a public sewer line (together with customary, related uses of public sewer easement such as pump stations) may in the future be constructed over all, or a portion of, the area subject to the herein conveyed greenway easement.

The City does not waive or forfeit the right to take action to insure compliance with the terms, conditions and purposes of this Greenway Easement by a prior failure to act.

The City reserves the right to enter the property at reasonable times in order to monitor compliance with the terms, conditions, restrictions, and purposes of this Greenway Easement.

The Grantor expressly reserves the right to continue the use of the property for all purposes not inconsistent with this Greenway Easement.

The Grantor agrees that the terms, conditions and restrictions of this Greenway Easement will be inserted by it in any subsequent deed or other legal instrument by which it divests itself of either the fee simple title to, or of its possessory interest in, the subject property.

TO HAVE AND TO HOLD the said right, privileges and easement herein granted to the City of _____, its successors and assigns forever. The covenants agreed to and the terms, conditions and restrictions imposed herein shall be binding upon the Grantor and its agents, personal representatives, heirs and assigns, and all other successors to it in interest and shall continue as a servitude running in perpetuity with the above described land.

AND the Grantor covenants that he is vested of the premises in fee and have the right to convey the same in fee simple; that the same area free from encumbrances except as hereinafter stated, and that the Grantor will warrant and defend title to the same against the claims of all persons whomsoever.

IN WITNESS WHEREOF, THE Grantor has caused this instrument to be signed in its corporate name by its president, its corporate seal affixed, and attested by its secretary, by order of its Board of Directors, the day and year first above written.

GRANTOR

(Name of Corporation)

ATTEST:

BY: _____
President

Corporate Secretary

Approved as to Form:

(SEAL)

(Associate) City Attorney

STATE OF NORTH CAROLINA

COUNTY OF _____

This is to certify that on the _____ day of _____, 20__, before me personally came _____, with whom I am personally acquainted, who, being my duly sworn, says that ___he is the Secretary, and _____ is the President of _____, the corporation described in, and which executed, the foregoing instrument; that ___he knows the common seal of the corporation; that such seal was affixed to the instrument, and that the Secretary and President subscribed their names thereto, all

by order of the Board of Directors of the corporation, and that the said instrument is the act and deed of the corporation.

WITNESS my hand and official seal this the _____ day of _____,
200__.

Notary Public

(SEAL)

My Commission Expires: _____

Instrument Prepared By: _____
Brief Description for Index: _____
Parcel Identifier: _____
Mail After Recording to: _____

STATE OF NORTH CAROLINA
COUNTY OF _____

**GENERAL WARRANTY DEED
EASEMENT FOR SANITARY SEWER AND
GREENWAY PURPOSES**

THIS DEED OF EASEMENT, made this _____ day of _____, 20__, by and between _____ hereinafter referred to as the Grantor, and the City of _____, a municipal corporation of the State of North Carolina, hereinafter referred to as the "City";

WITNESSETH:

WHEREAS, the Grantors are the of the land hereinafter described and have agreed to convey to the City, according to the terms set forth below, the easement hereinafter described;

The designation "Grantors" as used herein shall include the singular and plural, as required, and the masculine, feminine and neuter gender as appropriate.

NOW, THEREFORE, in consideration of Ten Dollars (\$10.00) and other valuable consideration paid to the Grantors, receipt of which is hereby acknowledged, the Grantors, do hereby grant unto the City, its successors and assigns, the right, privilege and easement in perpetuity to: establish upon and maintain the land, hereinafter described, specifically as a greenway with facilities or improvements which may include trails, litter receptacles, boat launches, gates, trail markers, trail bridges, shelters, and other facilities necessary or convenient thereto and including and right of ingress and egress to the City and members of the general public for greenway maintenance and use; to construct, install, improve, remove, replace, inspect, repair, maintain, and use a system of pipelines or mains for sanitary sewer purposes, together with all the appurtenant facilities and equipment necessary or convenient thereto; subject to the laws and ordinances of the city, in, upon, and across the property of the Grantors described in a deed recorded in Deed Book _____, Page _____, _____ County Registry, which said easement is more particularly described in Exhibit A attached hereto and incorporated herein.

TO HAVE AND TO HOLD the aforesaid easement interest and all privileges and rights thereunto belonging to the City of _____, its successors and assigns forever.

THE FURTHER TERMS AND CONDITIONS of the easement interest herein conveyed are as follows:

1. The City if authorized hereunder to remove and keep removed from the easement all trees, shrubs, underbrush, and part thereof, or other obstructions as necessary to maintain, repair or protect said greenway and sanitary sewer lines and appurtenances or as necessary to the prevention or treatment of disease and for other good husbandry practices. Except as hereinabove

allowed there shall be no other removal, destruction or cutting of trees, shrubs or other vegetation from the easement interest herein described and conveyed by any person or entity.

2. Nothing herein shall be construed to grant to the City of _____ or the general public any right of access through or over any property of the Grantors except that lying within the easement interest herein described and conveyed.

3. Following the installation of a sanitary sewer main and appurtenant facilities within the permanent easement hereinabove referenced and described, any and all temporary construction easement interest conveyed herein to the City shall terminate; and further, the City shall regrade, mulch, and reseed all damaged lands lying within the permanent and temporary easements, to the end that the same shall be restored to a conditions as good as or better than that before construction.

4. Except as herein authorized, no building, fence, sign, or other structure nor any vehicular surface area shall be erected within the easement interest herein described and conveyed.

5. There shall be no dumping of ashes, garbage, waste or other unsightly or offensive material on the easement interest herein described and conveyed.

6. There shall be no excavation, dredging, removal of loam, rock, sand, gravel or other material, nor any building of roads or other change in the natural topography of the easement interest herein described and conveyed, excepting for the construction and maintenance of the greenway and the sanitary sewer system undertaken by the City of _____ or its agents.

7. The City of _____ shall have the right and duty to maintain this Greenway Easement in a clean, natural, and undisturbed state, consistent with the City's Greenway Master Plan.

8. The City agrees to hold Grantors harmless from liability for personal injury or property damage arising out of the use of the easement for greenway purposes; provided Grantors shall not be held harmless from liability caused by the active conduct or instrumentalities of the Grantors, their agents, invitees or contractors; or by acts of Grantors, their agents, invitees or contractors which violate the terms and conditions of this Deed of Easement.

The City does not waive or forfeit the right to take action to insure compliance with the terms, conditions and purposes of this easement by a prior failure to act.

The City reserves the right to enter the subject property at reasonable times in order to monitor compliance with the terms, conditions, restrictions, and purposes of this easement.

The Grantors expressly reserve the right to continue the use of the property for all purposes not inconsistent with this easement.

The Grantors agree that the terms, conditions and restrictions of this easement will be inserted by them in any subsequent deed or other legal instrument by which they divest themselves of either the fee simple title to, or of their possessory interest in, the subject property.

TO HAVE AND TO HOLD the said right, privileges and easement herein granted to the City of _____, its successors and assigns forever. The covenants agreed to and the

terms, conditions and restrictions imposed herein shall be binding upon the said Grantors and its agents, personal representatives, heirs and assigns, and all other successors to it in interest and shall continue as a servitude running in perpetuity with the above described land.

AND the said Grantors covenant that they are vested of the premises in fee and have the right to convey the same in fee simple; that the same are free from encumbrances except as hereinafter stated; and that they will warrant and defend title to the same against the claims of all persons whomsoever, subject only to the following exceptions:

IN WITNESS WHEREOF, the said Grantors have hereunto set their hand and seals the day and year first above written.

WITNESS:

_____ (SEAL)

Approved as to Form: _____ (SEAL)

_____ (SEAL)

(Deputy) City Attorney _____ (SEAL)

STATE OF NORTH CAROLINA

COUNTY OF _____

This is to certify that on the _____ day of _____, 20__, before me personally came _____, with whom I am personally acquainted, who, being my duly sworn, says that __he is the Secretary, and _____ is the President of _____, the corporation described in, and which executed, the foregoing instrument; that __he knows the common seal of the corporation; that such seal was affixed to the instrument, and that the Secretary and President subscribed their names thereto, all by order of the Board of Directors of the corporation, and that the said instrument is the act and deed of the corporation.

WITNESS my hand and official seal this the _____ day of _____, 200__.

Notary Public

(SEAL)

My Commission Expires: _____

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