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ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

In June of 2006, LandDesign, Inc was commissioned by the Town of Huntersville, North Carolina to create a comprehensive Greenway and Bikeway Master Plan. The first master plan was adopted in August, 2007 and most of the content in the original plan is still relevant and has been carried forward into this document. In August, 2014 this plan was revised by the Greenway, Bikeway and Trails Commission. The purpose of this plan was to develop a plan that will outline priorities and provide guidance for the Town of Huntersville Parks and Recreation Department over the next 10 years. This plan should be re-evaluated and updated as needed, with major updates every 5 years. The full build-out for a complete network of greenways and bicycle facilities could be achieved in approximately 30 years.

The plan process included project initiation, inventory and analysis, route network map development, and production of a comprehensive greenway, trails and bikeway master plan.

The Vision

During the planning process, the public identified 7 key areas in which this plan should specifically address. These key areas helped to guide the development of the plan’s vision statement and a framework for its goals, strategies and actions. The key areas identified are listed below:

- Connectivity
- Safety
- Conservation
- Environment
- Recreation
- Transportation
- Strong Public/Private Relationships

A vision statement was then crafted to incorporate the identified key areas of interest into a concise statement in order to reflect the future condition of the Town of Huntersville’s Greenway and Bikeway network.

Vision Statement:

*Design greenway trails that are pedestrian-friendly and connected to other areas and destinations.*

“Key Stakeholder”

Town of Huntersville Greenway and Bikeway Master Plan • August 2014
opportunities, promotes environmental conservation and protection, and serves to improve the quality of life for all Huntersville residents.

Plan Process

The Town of Huntersville Parks & Recreation Department initiated the development of the Town of Huntersville Greenway and Bikeway Master Plan in an effort to ensure responsible growth of the greenway, bikeway system while providing maximum recreational and transportation opportunities for all residents.

The planning process consisted of five steps starting with a review of the history of parks and recreation facilities, related documents, and an examination of current national greenway benefits and trends. The second step included an inventory and analysis of the town’s existing greenways, trails, and bikeways. This phase was followed by public, staff, and key stakeholder input. The last step was the development of an action plan to guide future growth of greenways and bikeways within the Town of Huntersville.

Goals, Strategies and Actions

The development of the goals, strategies, and actions were inspired by the key goals of the vision statement—connectivity, safety, conservation, environment, recreation and transportation.

A brief definition of goals, strategies, and actions is provided:

Goals: Value-based statements that are not necessarily measurable. For the purposes of this plan, they express an ideal future condition.

Strategies: A course set forth to achieve the desired goals.

Actions: Specific steps that indicate how the goals and strategies of the plan should be realized.
There are a total of five goals in the action plan and they are presented in the following order:

- A safe and interconnected network of greenways, trails, and bicycle facilities.
- A ‘green’ greenway system promoting conservation and environmental protection.
- A greenway, trail and bikeway system built upon strong public and private partnerships.
- A progressive greenway, trail and bikeway system that provides numerous recreation opportunities for people of all ages.
- A pragmatic greenway, trail and bikeway system that provides non-motorized transportation opportunities interconnecting neighborhoods, parks, schools, shopping and other community facilities.

Summary of Strategies and Actions

The following summarizes the recommended strategies and actions developed during the planning process to help accomplish the above stated goals.

**Strategy 1** Begin to design and construct a town-wide network of trails and on-road bicycle facilities.

**Action 1-1**: Develop a five-year capital improvement program for specific greenway and bikeway projects.

**Action 1-2**: Strategically build 25 miles of designated greenway trails within the next 10 years (2.5 miles per year), not including trails currently under design and construction, via partnerships and collaborations with Mecklenburg County and the local development community.

**Action 1-3**: Develop 30 miles of on-road bicycle facilities coinciding with new road construction and rehabilitation projects within the next 10 years (3 miles per year).

**Action 1-4**: Encourage restriping efforts to develop on-road bicycle facilities for roadways identified in the plan undergoing asphalt rehabilitation and resurfacing by coordinating requests with the North Carolina Department of Transportation.

**Action 1-5**: Integrate trail and on-road bicycle facilities into all future development projects.

**Action 1-6**: Coordinate with Charlotte Area Transit System (CATS) to include bike access and bike facilities at the proposed commuter rail stations and bus park and ride lots.

**Action 1-7**: Conduct detailed corridor design studies for proposed Tier 1 routes for both greenway and on-road bicycle facilities to determine recommended bicycle facility type and/or appropriate trail classification based on site-specific opportunities and constraints.

For greenway trails that are proposed to be located in existing neighborhoods, every effort should be made to ensure that these trails do not negatively impact existing properties. Furthermore, one boundary of the greenway trail shall adjoin the boundary line of any property to be affected by a proposed greenway trail.

**Action 1-8**: Coordinate with the Mecklenburg Union Metropolitan Planning Organization.
(MUMPO) to include roads identified for on-road bicycle improvements within this plan with long range transportation planning efforts initiated by MUMPO.

**Action 1-9:** All future thoroughfares should be considered for on-road bicycle facilities.

**Strategy 2 Connect neighborhoods, destinations and origins throughout the town via trails and on-road bicycle facilities**

**Action 2-1:** Develop and implement a Safe Routes to School program within the town to help build safe bicycle and pedestrian connections from local neighborhoods to schools.

**Action 2-2:** Provide trail and on-road bicycle connections between key greenway trail heads to local destinations and origins such as shopping centers, parks, and cultural attractions.

**Action 2-3:** Establish connections to greenway / bikeway systems in Charlotte, Concord, Cornelius, and Davidson.

**Strategy 3 Effectively and efficiently manage existing greenways, trails and bicycle facilities.**

**Action 3-1:** Incorporate points of interest and interpretative education signage along greenway trails and bikeways where appropriate.

**Action 3-2:** Develop and implement a maintenance plan for all existing trails and bicycle facilities.

**Action 3-3:** Develop town-specific greenway design standards for signage, trail construction, planting and other appropriate greenway features.

**Action 3-4:** Re-evaluate and update Greenways, Trails, and Bikeway Master Plan as needed, with major updates every five years.

**Strategy 4 Incorporate existing natural areas into the proposed greenway network.**

**Action 4-1:** Develop greenway trails in existing natural areas to help conserve and protect sensitive environmental areas.

**Action 4-2:** Work diligently with local land trusts and conservation agencies to acquire and develop greenway corridors.

**Strategy 5 Develop strong public and private partnerships to maximize greenway and bikeway development opportunities.**

**Action 5-1:** Consider requiring landowners to dedicate the necessary right-of-way to accommodate a greenway, trail, or bikeway designated by this plan which crosses any portion of land proposed for development. In addition, where a greenway, trail or bikeway, either on the property to be developed or on land which adjoins or is in close proximity to the property to be developed can be used to satisfy the Town’s requirements for open space, it is recommended that the Town’s Zoning Ordinance be revised to require the construction of these required improvements or alternately that an in-lieu payment be made to the Town or County for the construction of these improvements.

**Action 5-2:** Encourage the development a local non-profit 501(c)(3) greenway and bikeway advocacy organization to help develop private contribution campaigns and to facilitate private financial donations.

---

“Partnerships between individual developments and the Town offer excellent opportunities.”

Key Stakeholder
Action 5-3: Work with local and regional trail, bikeway and greenway groups to extend the proposed network across jurisdictional boundaries.

Action 5-4: Coordinate with local businesses that are located near existing or future trail and bikeway facilities.

Action 5-5: Develop a program for voluntary land dedication of future greenway easements by landowners.

Action 5-6: Work with local utilities to secure greenway rights-of-way for trail development along major utility corridors.

Strategy 6 Seek trail and bicycle facility funding from a variety of program resources.

Action 6-1: Develop an annual schedule to guide application processes for federal, state, and local funding opportunities.

Action 6-2: Explore opportunities for revenue and obligation bond funding to help develop a capital improvement program for acquisition and development of greenway trails and construction of on-road bicycle facilities.

Action 6-3: Seek state and federal funding for greenway development and acquisition and for on-road bicycle facilities through various SAFETEA-LU and NCDOT Bicycle Improvement funding programs. (see appendix funding compendium for more information)

Strategy 7 Develop an effective, proactive community education program.

Action 7-1: Develop a community-based education program for greenways, trails and on-road bicycling through the Huntersville Parks and Recreation Department.

Action 7-2: Develop an education and marketing program for local businesses to highlight the benefits of providing non-motorized transportation systems for its employees.

Action 7-3: Partner with local schools to educate students about healthy lifestyle choices, recreation and the benefits of trails and greenways.

Action 7-4: Develop a bicycle education program for school students to teach them how to safely ride a bicycle on local trails and roadways.

Master Plan Concept Network Map

After the initial framework was identified based on natural and manmade features and various attractions and origins, a prioritized network map was developed based on public input. The network map highlights all possible proposed greenways and bikeways to be developed within the Town of Huntersville. This map is intended to show the vision of connectivity for the Town through a complete system of greenways and bikeways. Routes highlighted in the plan may be removed over time due to feasibility issues, budget and lack of public support. These routes will be ranked annually of importance to help develop a capital improvement plan for most critical pieces of the network.

Please note: The location of greenways, trails and bikeways shown in this plan are conceptual only. The final location of these facilities will be determined only at the conclusion of a thorough public involvement process.

“Education is critical for long-term success”
Community Member

“Funding is one key component to build our network strategically over time”
Key Stakeholder
and after preliminary engineering and environmental design has been completed”.

**Conceptual Capital Improvement Plan**

A general planning estimate range for the proposed greenway trail and bicycle network was prepared to help guide future capital improvements. The estimates take into account general engineering and other professional services cost; typical construction cost, project administration cost, and a contingency of at least 15% of the estimate for each typical greenway segment. The costs estimates are for planning purposes only and do not cover the costs for land acquisition, major structures (such as bridges), major infrastructure costs, heavy road construction or maintenance. The plan has conceptually highlighted just under $12 million in future Tier 1 greenway improvements and the potential for just over $5 million in Tier 1 bicycle improvements.

*Public meeting 2014*
1.0 INTRODUCTION

The term “quality of life” is an elusive term and is most often used to describe the most desirable conditions we would like to achieve for our families and our community. The Town of Huntersville already offers a high quality of life by offering a family-friendly environment, housing choices, and a small-town atmosphere with countless amenities. In an effort to continually improve quality of life for its residents, the Town of Huntersville developed a comprehensive Greenway, Trails, and Bikeway Master Plan. The first master plan was adopted in August, 2007 and most of the content in the original plan is still relevant and has been carried forward into this document.

By improving and further developing the trail and bikeway system, the Town of Huntersville will be better equipped to attract new businesses, entice the best and brightest young people to stay and live, and ensure that the town will be an attractive and competitive market for many years to come. Parks and Recreation are vital components to the area’s recipe for a high quality of life and should be an integral part in the overall plan for the development, preservation and success for the Town of Huntersville.

1.1 Parks and Recreation in Huntersville

The Town of Huntersville provides a staff of 20 full-time employees as well as 14 part-time employees to help maintain over 173 acres of developed parkland and over 225 acres of undeveloped parkland. This includes a variety of recreation facilities where over 1,300 baseball and softball games are played annually. The 2011 Parks and Recreation System-wide Master Plan inventory indicated that there are approximately 40 recreational sites within Huntersville, 10 of which are managed by the Town, three managed by Mecklenburg County Parks and Recreation, three by Charlotte-Mecklenburg School system, and more than 20 by private entities such as local churches, businesses, and neighborhoods. In addition, the town coordinates and delivers a wide array of festivals, concerts, activities and special events for all ages. Current recreation facilities within the town include:

- 7 basketball courts
- 11 playgrounds
- 5 baseball fields
- 16 softball fields
- 13 tennis courts
- 9 picnic shelters
- 4 picnic areas
- 2 walking trails
- 5 gymnasiums
- 1 fitness & Aquatic Center

“Greenways can improve the quality of life for the residents and spur local economic growth.”

Key Stakeholder

Bicycle Parking in Birkdale Village
1.0 Introduction

- 18 multi-purpose fields (soccer, football)
- 1 mountain bike trails
- 2 greenway trails
- 1 disc golf course

Sources: Town of Huntersville website and the 2003 Parks and Recreation System wide Master Plan, Updated January 2014.

1.2 Plan Purpose

The purpose of this effort is to develop a comprehensive Greenway, Trails, and Bikeway Master Plan that will outline priorities and provide guidance for the Town of Huntersville Parks and Recreation Department, over the next 10 years.

When the first master plan was developed in 2007, public participation played an important part of the master planning process and during the first public workshop exercise; key words were identified by the meeting attendees. These include:

- Connectivity
- Safety
- Conservation
- Environment
- Recreation
- Transportation
- Strong Public/Private Relationships

A vision statement was then crafted to incorporate the key words into a concise statement in order to reflect the future condition of the Town of Huntersville Greenway, Trail and Bikeway network.

Vision Statement:
A community connected via a system of safe and scenic greenways, trails, and bikeways developed from strong public and private relationships that offer numerous recreation and transportation opportunities, promotes environmental conservation and protection, and serves to improve the quality of life for all Huntersville residents.

Plan Goals

The next step in the master planning process was to develop goals. The following five goals arose from both the key words and vision statement. It is important to note that goals are value-based statements that are not necessarily measurable. For the purposes of this plan, they express an ideal
future condition. The following goals were generated:

- A safe and interconnected network of greenways, trails, and bicycle facilities.
- A ‘green’ greenway system promoting conservation and environmental protection.
- A greenway, trail and bikeway system built upon strong public and private partnerships.
- A progressive greenway, trail and bikeway system that provides numerous recreation opportunities for people of all ages.
- A pragmatic greenway, trail and bikeway system that provides non-motorized transportation opportunities interconnecting neighborhoods, parks, schools, shopping and other community facilities.

1.3 Plan Process

The Town of Huntersville Parks & Recreation Department initiated the development of the Town of Huntersville Greenway, Trails, and Bikeway Master Plan in an effort to ensure responsible growth of the greenway, bikeway system while providing maximum recreational and transportation opportunities for all residents.

The planning process consisted of five steps starting with a review of the current Master Plan and the history of parks and recreation facilities, related documents, and an examination of current national greenway benefits and trends. The second step included an inventory and analysis of the town’s existing greenways, trails, and bikeways. This phase was followed by public, staff, and key stakeholder input. The last step was the development of an action plan to guide future growth of greenways and bikeways in the Town of Huntersville.
2.0 OVERVIEW OF GREENWAYS, TRAILS, AND BIKEWAYS

Bicycling and walking are popular activities in the Huntersville area, both for transportation and recreation purposes. In certain areas, however, travel by foot or bicycle is difficult and even dangerous. The town has experienced strong growth in the last 15 years and as a result, many of the previously quite rural roads are now busy with traffic. In addition, many destinations in Huntersville are separated by highways and thoroughfares, often leaving the residents with no other choice but to drive. The Town of Huntersville is making a serious effort to provide its residents with alternatives to automobile travel through the Greenway and Bikeway Master Plan to help guide future planning efforts.

2.1 A Brief History of North Carolina Greenways

Greenways have deep roots in North Carolina and the history has been documented in an article in the North Carolina Landscape Architect Journal. Below are a few excerpts:

“The Greenway movement in North Carolina began in earnest in the early 1970’s. A series of environmental, social and economic concerns in Raleigh and Charlotte converged and created the opportunity for citizens, community planners, academicians and elected officials to begin planning and implementing municipal greenway systems.”

“The City of Raleigh created a Greenway Commission in 1974 and embarked on implementing the Capital Area Greenway program. Today Raleigh’s greenway system has protected approximately 2,000 acres of land, and includes almost 50 miles of interconnected trails. Their success inspired communities throughout North Carolina to follow suit and establish local, county-wide and regional greenway programs.”

“In 1977, the Secretary of North Carolina’s Department of Natural Resources and Community Development proposed a trail that would extend from North Carolina’s mountains to the Atlantic Ocean. Built mostly through the efforts of volunteers, this trail has slowly and steadily emerged during the past 30 years to become one of the most significant long distance trails in the nation.”

“North Carolina has long been regarded as a leader in the American Greenway movement. Not only does our state have an abundance of local government, state and national greenway projects and programs, we are..."
also well known for promoting and disseminating important information about greenways throughout the United States and around the globe.”


2.2 Key Definitions

Greenways

A ‘greenway’ is generally defined as a linear open space that often serves as a method of land conservation. Greenways accomplish several functions: by providing a non-motorized transportation alternative, conserving open space, preserving wildlife habitats, acting as buffers between developed areas, and improving local air and water quality. Greenways may or may not have trails.

Trails

Trails are often multi-purpose pathways located within greenways, parks and natural resource areas. They can be used to connect community destinations such as parks, neighborhoods, schools and businesses. They serve as pedestrian and bicycle connections that encourage safe travel to and from origins and destinations throughout the community.

A trail is typically constructed of materials such as concrete, asphalt, compacted gravel, or compacted natural materials. They are used for recreation, or as an alternative mode of non-motorized transportation, or both. Trails may be designed with specific users in mind, such as runners, mountain bicyclists, or hikers. See Chapter 5 for trail classification definitions, specifications, and graphics.

Trails can include –

Multi-use Pathways—A path physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Multi-use pathways include bicycle paths, rail-trails, or other facilities built for bicycle and pedestrian traffic. They may also be used by skaters, wheelchair users, joggers, and other non-motorized users. Most shared use paths are designated for two-way travel. (Source – NC DOT)

“The citizens of our state have long understood and recognized the qualities that make the Old North State a special place to live, work and raise a family. “ Charles A. Flink
Equestrian Trail – An equestrian trail is a dedicated, marked pathway comprised of grass; packed dirt; or fine, crushed and rolled stone designed specifically for use by horses, ponies, or mules and their riders. Because of safety, weight and sanitary considerations, equestrian trails generally are not located coincidentally on paved streets used by vehicular traffic, nor on the same trails used by pedestrians and bicyclists, though they may parallel, and in some cases cross such roads or bicycle-pedestrian trails at marked intersections.

Adapted from 1995 NRPA Park, Recreation & Open Space Guidelines

Bikeways

A bikeway is any path, paved or unpaved, that in some fashion has been specifically designed and designated for bicycle travel, including both on and off-road bicycle facilities. In most jurisdictions, on-road bikeways are under the control of the state, and as such, their use is governed by rules and regulations related to safe bicycle travel. Bikeways are typically paved in concrete or asphalt with the exception of off-road mountain trail bicycle courses.

The most important function of a bikeway is to provide cyclists with designated space on the road. This can be accomplished by several different ways including, bike lanes, wide paved shoulders, and wide outside lanes. See Chapter 5 for bicycle facility classification definitions, specifications, and graphics.

Adapted from the State of Oregon Bicycle Plan.

Additional definitions are available in Appendix A

2.3 Benefits of Greenways, Trails, and Bikeways

There are numerous positive reasons to promote greenway and bikeway development in Huntersville, including environmental, transportation, health and safety, cultural and historic, and economic benefits.

Environmental Benefits

The preservation of open green space is the primary environmental benefit of a greenway. Open green space provides a place for wildlife and botanical
habitats, which in turn helps preserve biological diversity. In addition, greenways help improve air quality by way of atmospheric gas exchange that occurs in the resident vegetation. Water quality is improved by providing a green buffer which can slow down storm water run-off, therefore allowing the water to go through earth’s natural filtering process. If the storm water is not slowed down it may run off of an urban surface (like a parking lot, which is covered with pollutants) untreated and dump directly into a water course such as a local creek or river. Needless to say, this could have severe environmental implications. Slowing storm water down and allowing for natural processes to take place is especially important if the greenway is located within the limits of a floodplain.

Another environmental benefit results from providing an alternative to the automobile transportation. Any type of non-motorized transportation reduces the demand for petroleum products and decreases the production of greenhouse gases.

Lastly, greenway trails and bikeways provide an outdoor classroom for environmental education projects. Studies have shown that children who are exposed to ecological and environmental issues remain interested and engaged as adults.

**Transportation Benefits**

As mentioned, greenway trails and on-road bicycle facilities provide alternatives to automobile transportation. Sometimes we forget that there are members of our society who do not or cannot drive an automobile. This includes our children, elderly and poorer segments of our communities. By providing a well-connected and continuous greenway trail/bikeway system to shopping, businesses and schools we are providing non-drivers a safe, alternative method of transportation. According to the Bicycle Program Manager for the City of Charlotte, approximately one third of all U.S. residents do not have a driver’s license, thereby underscoring the importance of providing non-motorized transportation modes for residents.

**Health Benefits**

According to the National Institute on Health, approximately 65% of all Americans are overweight or obese, 61 million adult Americans are considered obese and, perhaps more alarmingly, 17% of children between the ages of 2-19 are overweight. The reasons for this are numerous, but include a higher daily caloric intake and an overall decrease in daily activity. Installing a well-connected greenway trail/bikeway system in Huntersville, will encourage more citizens to engage in an exercise program. According to
the Surgeon General, walking for as little as 60 minutes a day provides significant healthful benefits such as decreased body weight, increased stamina, and improved flexibility. In turn, this decreases the chance of developing high blood pressure, heart disease, and Type II Diabetes.

Cultural + Historical Benefits

Greenways help conserve our cultural and historic resources by conserving open space. When an historic feature is located within a greenway system the benefits to the community are enhanced. The community has the opportunity to experience historic features located within a natural setting, providing multiple opportunities for community educational programs.

Examples of successful greenway-based education programs include the Swift Creek Recycled Greenway in Cary, NC, where the use of recycled waste by-products is the featured element of the trail. At the Stones River Greenway in Murfreesboro, TN, they emphasize the local Civil War history. Boulder, Colorado Greenway System uses outdoor classrooms to help children learn about surrounding cultural and natural systems.

Economic Benefits

The economic benefits of greenways are numerous and substantial. In recent years, tourism dollars have become an important source of income for many North Carolina communities. This is particularly important in the Huntersville area because of existing tourist attractions such as NASCAR, the City of Charlotte, and Concord Mills.

Another economic benefit is related to North Carolina’s strong housing industry. As previously mentioned, Huntersville’s population has skyrocketed in the last 15 years, as result, open space is at a premium. New residents are moving to Huntersville because the area offers a high quality of life, includes access to open green space. One of the questions poised during the key stakeholder interviews was “Do you feel that greenways can spur economic development? The answer was a resounding ‘yes!’” It was commonly held that greenways contribute to the overall quality of life of a community. When an area offers a high quality of life, residents are willing to pay by way of higher housing prices. In turn this results in an improved tax base.

One example of the economic benefits of greenways comes from the Tallahassee-St. Marks Trail in Florida where approximately 170,000 people...
visit every year. The National Park Service conducted a study and found that the average user spends more than $11 a day. Another example is the Northern Central Rail Trail in rural Maryland. This greenway project supports 264 jobs statewide and produces in excess of $3.38 million in annual revenues. Greensboro also did a study in 2010 showing an increase in economic development. (Appendix C)

According to a key stakeholder, “Huntersville is growing drastically and the competition for land is tight, especially for commercial and residential development. These two types of development can increase opportunities to work and live in the same town. Therefore, greenways would be an excellent method of connecting the two--residential and commercial.”
3.0 INVENTORY AND ANALYSIS

The Commission collected, reviewed, and updated a variety of information from many different sources, including previous master plans, official Huntersville documents, ordinances, and other municipal documents that might impact the design and development of the greenway system in Huntersville.

3.1 Summary of Document Review

A total of 16 related documents were reviewed during the data collection phase of the Master Plan process in order to understand the history of the Huntersville greenway system, to help maintain a consistent approach, and to allow for connections with adjacent greenways. A summary of the document review is presented on the following pages. Please see the appendix for the full document review.

Documents Reviewed

1. Carolina Thread Trail, data as of December 2012
2. Charlotte Area Transportation System CATS
4. The Lake Norman Bicycle Route 2010
5. Mecklenburg County Parks and Recreation Greenway Update, 2008
6. Mecklenburg-Union Metropolitan Planning Organization (MUMPO) 2035 Long Range Transportation Plan (LRTP), March 24, 2010
7. Town of Cornelius Greenway/Bikeway Master Plan
8. Town of Davidson Bicycle Transportation Plan, 2008

Carolina Thread Trail

- The Carolina Thread Trail (The Thread) is a regional network of greenways and trails that will eventually reach 15 counties, 2 states and 2.3 million people.
- The Thread’s plans include 1,500 miles of trails including several segments on the Huntersville Greenway and Bikeway Master Plan.
- Preserving open space and natural areas is their number one priority.
• While The Thread includes 76 local governments collaborating together, the Catawba Lands
• Conservancy is the lead agency for The Thread, with Foundation For The Carolinas providing support as a philanthropic partner. The Thread’s Regional Advisory Council provides technical advice and community insight.
• The Thread provides grants to communities with adopted Master Plans. The grant application process is on a rolling quarterly schedule. Types of grants: Planning and Implementation grants (Corridor Planning, Land Acquisition, and Construction grants).
• While this is a public and private venture, the majority of the funding comes from public sources.

http://www.carolinathreadtrail.org/overview/about/

Charlotte Area Transportation System CATS

The Charlotte Area Transit System – known as “CATS” – is a multi-modal transit system incorporating an extensive bus, light rail, and streetcar network in the Charlotte metropolitan region. It is the largest public transit system between Washington, DC and Atlanta, GA, and accounts for more than 25 million passenger trips per year (as of Dec. 2012). All CATS busses in the fleet are equipped with bicycle racks capable of holding two bicycles. CATS’ policy presently allows bicycles to be carried on LYNX light rail trains, with certain limitations.

• The CATS bus network serves more than 50 local (i.e. neighborhood and inter-community) routes and 19 express bus routes -- principally from suburban areas to downtown Charlotte using Interstate and key state highways.
• The CATS light rail system, called “LYNX”, is a 9.6 mile, 15-station surface rail line extending southward from the city center to the Pineville, NC, city limits.
• A 9-mile “Blue Line” northeast LYNX extension under development is scheduled for operation in 2017 and will connect the city center facilities of the University of North Carolina with the main UNC campus at University City -- adding 11 stations serving local neighborhoods.
• The proposed Red Line would use the 35-mile Norfolk-Southern Railway “O-Line” track connecting Charlotte with Huntersville, Cornelius, Davidson, Mount Mourne, and Mooresville to the north, adding twelve new stations and creating a public rail transit alternative to Interstate and state highways along this corridor.

“One third of all US citizens do not have a driver’s license and they need a safe and efficient way to get around.”

Key Stakeholder
Currently there are two express bus routes and three circulator routes serving the Town of Huntersville. There are also two park and ride lots within the Town of Huntersville. Planned greenways are proposed in close proximity to both park and ride lots.

**Charlotte to Mooresville Trail**

The 35-mile Charlotte-to-Mooresville multi-use trail is proposed to generally run parallel to the existing Norfolk Southern “O” line from Charlotte to Mooresville. This north-south spine trail would incorporate segments of the 14-county Carolina Thread Trail (CTT) and the newly-approved Lake Norman Bike Trail (LNBT). It will also provide connectivity with existing and planned east-west greenway and trail networks in each of the towns along the way. This resource would:

- Leverage connectivity between new Red Line train stations and existing bus lines, residential neighborhoods, employment centers, commercial shopping areas, schools, public parks and recreational facilities along this route.
- Integrate many existing and planned on- and off-road trail segments together, providing a highly utilitarian alternative transportation option for area residents and also serve as a major recreational attraction for expanded tourism in the Lake Norman region.
- Require a public-private partnership (P-3) for construction and long-term maintenance of this trail.


**City of Charlotte Bicycle Plan**

- Vision statement - “Charlotte is the premier bicycling city in the United States. Policies, programs and facilities promote safe recreational and commuter cycling for those of all skill levels.”
- This Plan sets forward a blueprint for an accessible, connected and comfortable network of bicycle facilities in the City of Charlotte. The City’s goal is to complete at least 150 miles of bikeway facilities within the city by 2015.
- Segment priorities are in part driven by road widening/resurfacing projects as well as spot projects focused on connectivity – particularly to greenways.
• The City will require bicycle lanes designed consistent with the Urban Street Design Guidelines, on all new or reconstructed roadways within the city, where feasible. Where bicycle lanes are not feasible, justifications will be included as part of the road preliminary design process and alternative bike routes will be identified.
• The City Council approved a bicycle parking ordinance to require bicycle parking facilities in new or substantially reconstructed developments.
• The City has a procedure to provide bicycle lanes during street construction, reconstruction and resurfacing.
• Given educational and awareness initiatives will also play a critical role in creating a safer bicycling, specific educational activities are included in their plan.

Link to plan:
http://charmeck.org/city/charlotte/Transportation/PedBike/Pages/Bicycle%20Home.aspx

“The Lake Norman Bicycle Route

• The Lake Norman Bicycle Route (LNBR) is a continuous, multi-jurisdictional bicycle route encircling Lake Norman, North Carolina.
• By connecting neighboring communities, popular destinations, and various local bicycle facilities, this route is designed to provide a safe, useful, and attractive alternative transportation and recreation resource for a wide variety of local cyclists and visitors to the lake’s surrounding four-county region.
• The LNBR will is planned to be roughly 110 miles in length, including 16 miles of non-road trails.
• Portions of this route are planned to be shared with the Carolina Thread Trail and various greenway segments of participating towns.
• All affected town and county governments, transportation planning agencies and the North Carolina Department of Transportation are participating in its development.
• Signage identifying the LNBR already has been installed along the route.

http://www.facebook.com/pages/Lake-Norman-Bicycle-Route/177933818910932


“Once an ordinance is put in place, the critical issue is that it has to have teeth”

Key Stakeholder
Mecklenburg County Parks and Recreation Greenway Update, 2008

In 1999, the County developed and adopted the Greenway Master Plan Update. The update built on the objectives articulated in the 1980 Master Plan. This 2008 update includes a brief description of the existing greenways and trails system; a plan of action that describes goals for trail planning, design, construction, phasing and operations; a summary of benefits derived from the greenways and trail system; an evaluation of best practices in greenway trail development across the region and nation; an evaluation of regulatory policies and programs; and a list of recommendations for programming greenways and trails.

- From a list of 28 parks and recreation facilities, the ones most requested by the public (74%) was Walking and Biking trails (national average 68%)
- Survey results indicate County residents understand and support the role of greenways as both corridors for environmental protection and potential trail development.
  - 93% of all residents felt the role of greenways as a connected network of walking, biking and nature trails was very important (75%) or somewhat important (18%).
  - 88% of all residents felt the role greenways played in environmental protection was very important (65%) or somewhat important (23%).
  - 80% of residents support (56% very supportive, 24% somewhat supportive) using floodplain land to develop biking and walking trails.
- The results generated by the Mecklenburg County survey support trends seen throughout the state and nation. The results of the Statewide Comprehensive Outdoor Recreation Plan (SCORP) for North Carolina closely mimic Mecklenburg County survey results, and provide a strong rationale for natural resource conservation and the development of a strong trail system. According to the SCORP, the most popular outdoor activity for NC residents are:
  - 75% Walking for pleasure
  - 71% Viewing scenery
  - 62% Visiting historical sites
  - 53% Visiting natural areas
  - 52% Picnicking
- Since the 1999 Greenway Master Plan update, many of the surrounding towns have developed and adopted their own greenway and trails master plans. Mecklenburg County
Greenway Planning and Development Services staff will serve as consultants to the towns to help implement the adopted plans. The plans and priorities of the towns is and will continue to be reflected in the County’s trail development goals.

- Currently, Cornelius, Davidson, and Huntersville have adopted greenway plans. Matthews, Mint Hill and Pineville do not have separately mapped and adopted plans.
- The consultants and Greenway staff developed a list of criteria to score and prioritize each greenway segment identified within the five-year trail development program. All currently funded greenway trail segments and proposed five year trails listed below. The projects are numbered for identification purposes only and do not reflect ranking criteria. Of the 30 projects listed, there are 4 in Huntersville:
  - McDowell Creek Greenway
    - Taybrook Drive (Wynfield) to Baylis Drive (Gilead Village)
    - Huntersville
    - 2.0 Miles
  - McDowell Creek Greenway
    - Westmoreland Rd to Sam Furr Rd
    - Cornelius, Huntersville
    - 1.5 Miles
  - McDowell Creek Greenway
    - Baylis Drive to Beatties Ford Road
    - Huntersville
    - 1.8 Miles
  - Torrence Creek Greenway
    - I-77 to Bradford Hill Lane
    - Huntersville
    - 1.3 Miles

Mecklenburg-Union Metropolitan Planning Organization (MUMPO) 2035 Long Range Transportation Plan (LRTP)

Bicycle Planning

- In the Bicycle Planning section of the MUMPO 2035 LRTP, there is a reference that the Town of Huntersville has included bicycle components as part of a larger or more comprehensive greenway/bikeway plan. It states that Huntersville has striped dedicated bicycle lanes and bicycle parking requirements. It is also noted that Huntersville has appointed a commission that considers bicycling issues.
- The MUMPO 2035 LRTP lists 30.9 miles of programmed projects (funding identified and are anticipated to begin
only one (1) mile of programmed projects is within the Town of Huntersville (NC 73 East from US 21 to NC 115). The Town of Huntersville Greenway, Trail and Bikeway Master Plan called for a side path along the south side of NC 73 for this segment of roadway. This project was completed with a wide outside lane and six foot sidewalks.

- There are 36.6 miles of proposed bicycle facility projects (construction by 2035) listed in the MUMPO 2035 LRTP. Approximately 5.4 miles are within the Town of Huntersville:
  - Alexanderana Road (NC 115 to Eastfield Road): Bike Lanes, 0.9 miles, by 2025
  - Gilead Road (US 21 to NC 115): Bike Lanes, 0.7 miles, by 2025
  - NC 115 two-way pair (Mt. Holly-Huntersville Road to 4th Street Ext): Bike Lanes, 0.9 miles, by 2025
  - Statesville Road (South Town Limits to Gilead Road): Bike Lanes, 2.9 miles, by 2035

- The MUMPO 2035 LRTP incorrectly shows all the proposed bicycle facilities in North Mecklenburg County as “Existing.”

Greenway Planning

- The MUMPO 2035 LRTP acknowledges that Huntersville adopted its first greenway and bikeway master plan in 2007. It confirms that the Town of Huntersville contains about 1.4 miles of existing greenway along Torrence Creek and a one-mile addition to the Torrence Creek Greenway is currently under design and should start construction in 2010 (actually not until 2013). Construction of McDowell Creek Greenway—connecting Birkdale Village within the Town of Huntersville to Cornelius—was completed in October 2009 (approximately one mile in Huntersville).

- The anticipated future greenway projects are not formally included in the MUMPO 2035 LRTP. The plan however shows a map with proposed greenways, including four (4) in Huntersville. These greenways coincide with the following from the Huntersville Greenway, Trail and Bikeway Master Plan:
  - Generally along McDowell Creek from Gilead Road to Birkdale Commons Parkway
  - Generally along Crane Creek from Skybrook to Old Statesville Road (NC 115)
  - Generally along North Prong Clark Creek from Skybrook to Sam Furr Road (NC 73)
Town of Cornelius Greenway/Bikeway Master Plan

- The Town of Cornelius adopted a comprehensive Parks and Recreation Master Plan in October 1999. A major component of that master plan was the development of pedestrian and bikeway connectivity for the town. Prepare a Greenway/Bikeway Master Plan to guide the planning and implementation of a system of connectivity in Cornelius with a planning window of 10 years.
- The most recent version of this plan, accessible from the Town’s website is March 2004.
- The process that was followed in the development of the 2004 plan included 4 primary steps:
  1. Site Familiarization and Feasibility
  2. Public Involvement
  3. Master Planning
  4. Phasing and Implementation Strategies
- The Master Plan document itself is segmented according to the process followed and provides a summary of the steps taken, outcomes, recommendations and relevant copies of reference materials.
- Cornelius’ phase of public involvement included 2 public workshops and a survey that was distributed to provide a needs assessment for greenways, bicycle corridors and open space in Cornelius. Eight-three surveys were returned. There was also a simplified version of the survey posted on the Town’s website. 133 responses were received. Detailed breakdowns of the data received via these surveys can be found in the Master Plan.
- Cornelius used ranking criteria to determine greenway/bikeway trail corridors and prioritize construction. The criterion that was used was:
  1. Location and use of amenities
  2. Existing and proposed sidewalks
  3. Existing and proposed roadways
  4. Current Town and County land holdings
  5. Geographic features
  6. Location and potential open space use within residential neighborhoods
- It is not clear if ranking/prioritization process that Cornelius employed used a weighting approach for these criterion, but the plan does list 18 potential greenway/bikeway corridors which are listed in tabular form from 1 to 18 (although it does not state that the list is in rank order) and encompass 70.03 greenway miles.
- The Plan does provide a breakdown of the construction costs for each of these 18 greenway segments, as well as a comprehensive pedestrian crossing, landscaping and contingency fees. The total construction costs for these segments equaled approximately $205,000 per mile.

“A greenway must have designations and close access to neighborhoods... a well connected system offers users a sense of freedom and a physical activity outlet.”

Key Stakeholder
The plan also categorizes the 18 segments into a recommended phasing and implementation schedule according to the following timeframes:

1. Immediate Needs (0-2 years)
2. Near Term Needs (3-5 years)
3. Long Term Needs (6-10 years)

There are 2 pages that provide design guidelines for a greenway trail section, bicycle lane sections, SWIM buffer zones, and boardwalk sections.

The Plan has a section on Alternative Funding Sources that Cornelius could pursue for future land acquisition and development opportunities.

The Plan Appendix includes the output and consolidation of responses from the citizen surveys that the town employed for feedback.

Most Recent Published Version: March 2004
Source: http://www.cornelius.org/documentcenter/view/183

_Town of Davidson Bicycle Transportation Plan, 2008_

To support “growth must be sustainable” which was one of their eight general principles for planning, the Town of Davidson developed its first comprehensive Bicycle Transportation Plan in 2008 in partnership with NC DOT Division of Bicycle and Pedestrian Transportation. They felt that one of the key means to achieve this goal was to reduce reliance on the automobile and encourage walking, bicycling and riding public transit.

The plan provided current conditions for bicycling in Davidson and recommended improvements and outlined strategies to carry out the recommendations.

Throughout the planning process, they utilized Public participation (through workshops, steering committee meetings, and the online survey) which played a key role in plan development.

Their top five goals of the Plan were the following:

1. Make bicycling an integral part of the life in the Town of Davidson by establishing “bike-to-school” groups and regular bicycling activities
2 Launch three new programs in three years to increase bicycling among children, commuter/utilitarian cyclists and recreational/fitness cyclists
3 Sponsor at least one planner and one engineer from the Town of Davidson to attend a bicycle planning and design training session
4 Initiate a local bicycle safety and courtesy education campaign by 2009
5 Connect neighborhoods, parks, shopping centers, schools, employment centers, bus stops, trails and regional destination with bicycle route: Complete the plan’s top five priority bicycle projects by 2012

The town of Davidson is in the process of updating their plan for 2013 and conducted their kick-off meeting in March, 2013. They are calling their new plan “Davidson Walks & Rolls Active Transportation Master Plan.”

4.0 PUBLIC PARTICIPATION

Public participation and input is one of the most critical steps of the master planning process and as a result, meetings occurred between the members of the Huntersville Parks and Recreation staff, the Huntersville Greenway Committee and the consultant team. In addition, key stakeholders were interviewed and two open public meetings were held. Below is a summary of the public information generated to date.

In the 2011 Parks and Recreation Systemwide Master Plan, citizens of Huntersville indicated very clearly that trails and bikeways were important elements of the Parks and Recreation system.

When asked, “What additional facilities do you want in Huntersville?”

- The #1 response - 51% of all respondents wanted more hiking/fitness trails.
- The #2 response - 46% of all respondents wanted more Greenway trails.
- The #3 response – 32% of all respondents wanted more multi-use trails in the parks.

4.1 Summary of Key Stakeholder Interviews

Below is a brief summary of the key stakeholder interview questions and answers. Please see the appendix for the complete interview results.

What do you believe are the general priorities for Huntersville?

- Crossing I-77
- Connectivity in the Town for non-motorized traffic
- The infrastructure needed to create a safe environment

What roles can greenways, trails, and bikeways play in these priorities?

- Connects residents to work, shopping, school and recreation.
- Preserves natural, scenic and historical assets
- Creates opportunities for recreation, art and culture
- Offer an alternative means of travel in the community.
Why do you use or do not use our current greenway and trail system?

- Exercise
- Don’t, too far from home

What type of funding strategies would you support for greenway and trail development? What would you not support?

- Support small tax increase, Would not support a usage fee
- Bonds or Grants
- Land donation/sharing
- Other – private donations, fund raisers, user fees, etc.

How would you measure the “Return on Investment” regarding greenways?

- Number one requested amenity
- Increased quality of life (promotes healthy lifestyle, aesthetically pleasing areas)
- Increased property values (especially residential)
- Usage of the trails

How far are you willing to walk/ride to access a greenway, trail etc.?

- 1 mile
- ¼ to ½ mile. Would be nice to have them close
- Distance is not an issue if easily accessible without having to by using a main road.

“Residential developments that are adjacent to greenways are more desirable to perspective homeowners.”

Key Stakeholder

House along the greenway
4.0 Public Participation

Given that a multi-use path costs on average $1.1M per mile and sidewalk and bike lanes cost $1.2M per mile, which would you prefer and why?

- Sidewalk and bike lanes, less infrastructure
- Both, routes should be prioritized
- Greenways have more to offer in recreation, scenery, less crossings and traffic
- Increased aesthetics and maintenance
- Opportunity to be involved

What connections do you believe to be most important for greenways, trails, and bikeways (e.g. home to work; home to shop)?

- Home to work
- Home to school
- Home to recreation
- Home to shopping
- (Others – neighborhood to neighborhood, work to greenway (for use during lunch), and home to school).

In your opinion, what are the challenges that need to overcome in implementing a strong greenway, trails and bikeway network in Huntersville?

- The safety concerns and proving that the network is a safe alternative for the community.
- Money
- Concern over safety for property owners who adjoin the greenway and users of the greenway
- Building an advocacy groups for greenways
- Purchasing of land and identifying one or two projects to concentrate our efforts on

Are there any specific topics/elements that you would like to see addressed in the Master Plan?

- How to cross I-77
- Guidance on public/private partnerships in other parts of the country.
• Include markers allowing the citizens to better relay their locations for quicker responses.
• Safety and lighting

4.2 Public Survey

May 2013
A survey was posted on the Town of Huntersville website. Links to the survey were also sent out Huntersville staff, Elected officials and stakeholders as well as posted on Facebook and sent out an E-newsletters. The survey asked questions to see what type of trails user wanted; How far they would travel to use them; what their use was; and how they should be promoted. 448 people participated in the survey.

If given a choice to do one of the following activities, which would you choose?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stroll through a town or a neighborhood on a smooth path or sidewalk</td>
<td>39%</td>
</tr>
<tr>
<td>Walk or hike on an unpaved wooded trail</td>
<td>61%</td>
</tr>
</tbody>
</table>

If given a choice to do one of the following activities, which would you choose?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike ride on a paved surface</td>
<td>77%</td>
</tr>
<tr>
<td>Bike ride on an unpaved surface</td>
<td>23%</td>
</tr>
</tbody>
</table>

If given a choice to do one of the following activities, which would you choose?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike on a multi-use path separated from traffic</td>
<td>89%</td>
</tr>
<tr>
<td>Bike ride in a bike lane on a road</td>
<td>11%</td>
</tr>
</tbody>
</table>
How far are you willing to walk from home to a greenway multi-use trail?

<table>
<thead>
<tr>
<th>Distance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1/4 mile</td>
<td>20%</td>
</tr>
<tr>
<td>Up to 1/2 mile</td>
<td>46%</td>
</tr>
<tr>
<td>Greater than 1/2 mile</td>
<td>34%</td>
</tr>
</tbody>
</table>

How far are you willing to ride your bike to get to a greenway multi-use trail?

<table>
<thead>
<tr>
<th>Distance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1/4 mile</td>
<td>8%</td>
</tr>
<tr>
<td>Up to 1/2 mile</td>
<td>28%</td>
</tr>
<tr>
<td>Greater than 1/2 mile</td>
<td>64%</td>
</tr>
</tbody>
</table>

If you could, would you use public greenway multi-use trails and bikeways to: (check all that apply)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get to school</td>
<td>30%</td>
</tr>
<tr>
<td>Get to work</td>
<td>39%</td>
</tr>
<tr>
<td>Exercise</td>
<td>100%</td>
</tr>
<tr>
<td>Spend time outdoors with friends and family</td>
<td>99%</td>
</tr>
<tr>
<td>Get to local parks</td>
<td>89%</td>
</tr>
</tbody>
</table>

How did you hear about the greenway multi-use trail and bikeway system in Huntersville?

<table>
<thead>
<tr>
<th>Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
<td>7%</td>
</tr>
<tr>
<td>Word of mouth</td>
<td>24%</td>
</tr>
<tr>
<td>Internet / email / website</td>
<td>36%</td>
</tr>
<tr>
<td>Public forum or event</td>
<td>6%</td>
</tr>
<tr>
<td>Signage on trails, roads, parks, etc.</td>
<td>14%</td>
</tr>
<tr>
<td>I’m not familiar with the system</td>
<td>13%</td>
</tr>
</tbody>
</table>
Describe yourself as a cyclist (check all that apply):

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I compete in cycling events</td>
<td>8%</td>
</tr>
<tr>
<td>I am a recreational cyclist</td>
<td>41%</td>
</tr>
<tr>
<td>I use my bicycle to commute</td>
<td>5%</td>
</tr>
<tr>
<td>I enjoy riding my bicycle occasionally</td>
<td>52%</td>
</tr>
<tr>
<td>I am not a cyclist</td>
<td>18%</td>
</tr>
</tbody>
</table>

Describe yourself as a walker/runner/hiker

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not consider myself a walker, runner or hiker</td>
<td>4%</td>
</tr>
<tr>
<td>I enjoy these activities occasionally</td>
<td>47%</td>
</tr>
<tr>
<td>I compete or engage in these activities regularly</td>
<td>49%</td>
</tr>
</tbody>
</table>

How many times in the last 6 months did you or your family walk/hike/bike on a greenway or trail?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>33%</td>
</tr>
<tr>
<td>4-10</td>
<td>29%</td>
</tr>
<tr>
<td>11-19</td>
<td>17%</td>
</tr>
<tr>
<td>20 or more</td>
<td>21%</td>
</tr>
</tbody>
</table>

Are you more likely to use greenways if you could access them from your neighborhood (vs. driving?)

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not use the trail system, and would not use it even if it were more easily accessible from my own neighborhood.</td>
<td>1%</td>
</tr>
<tr>
<td>I am somewhat likely to use the greenway trail system more</td>
<td>6%</td>
</tr>
<tr>
<td>I am very likely to use the greenway trail system more</td>
<td>89%</td>
</tr>
<tr>
<td>I use the trail system even though I have to drive to get to it, and would not be likely to use it any more than I already do.</td>
<td>4%</td>
</tr>
</tbody>
</table>
In planning a bike ride/walk/hike, what info would you be most interested in? (check all that apply)

<table>
<thead>
<tr>
<th>Info</th>
<th>Interest (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of the trail or path</td>
<td>88%</td>
</tr>
<tr>
<td>Difficulty of the terrain</td>
<td>53%</td>
</tr>
<tr>
<td>If it were pet-friendly</td>
<td>37%</td>
</tr>
<tr>
<td>If it was family friendly and accessible with a stroller</td>
<td>30%</td>
</tr>
<tr>
<td>If it was accessible with a wheelchair</td>
<td>6%</td>
</tr>
<tr>
<td>If there were restrooms along the way</td>
<td>38%</td>
</tr>
<tr>
<td>If there were refreshments available along way</td>
<td>7%</td>
</tr>
<tr>
<td>If there were water stations</td>
<td>31%</td>
</tr>
<tr>
<td>water fountains along the way</td>
<td>31%</td>
</tr>
<tr>
<td>If there were any points of interest along way (historic site, nature preserve, wildlife sanctuary, etc.)</td>
<td>50%</td>
</tr>
<tr>
<td>The surface (dirt, gravel, paved, etc)</td>
<td>79%</td>
</tr>
<tr>
<td>Parking &amp; accessibility</td>
<td>52%</td>
</tr>
<tr>
<td>Any cost involved</td>
<td>43%</td>
</tr>
</tbody>
</table>

4.3 Public Meeting

March 2014

The second public meeting was held at the Huntersville Arts & Cultural Center on March 18, 2014 from 6:30 pm to 8:30 pm. In attendance were members of the Huntersville Parks and Recreation Department, Mecklenburg County Parks and Recreation Department, Huntersville Greenway Committee and members of the general public. Approximately 25 people were in attendance.

Agenda

- Introduction
- Project Review
- Break Out Session –
  - Route Prioritization Input
  - Recommendations and Action Input
- Group Summary Reports
- Next Steps + Closing Remarks
Break Out Session– Top Comments

1. Getting across I-77 should be a priority
2. Trail #24 – Currently ends at Huntersville-Concord road – suggested that it connects to the future Mooresville-Charlotte trail
3. Trail #25 - Going through Barry park, move the trail to the west to go all the way to #17 on county land.
4. Trail #14 – Finish the connectivity of it – it just dead ends
5. Place a side path along 73 from Birkdale to the other side of the river
6. Trail #28 - Connect it to the sidewalk going into Montieth Park neighborhood
7. Connect North Meck Park to a Greenway or the Charlotte Trail
8. Consider dirt ways as temporary solutions if we can’t afford to build paved trails
9. Pedestrian bridge on #29 across McCoy Rd
10. Trail #14 - Suggest a low water ford bridge across Torrance Creek in the business park

Additional Suggestions

1. Place side paths along the major roads
2. Install call boxes along the trails for emergencies
3. Road Cleaning.
4. Identify points of interest and integrate into trails, either as a trail head or destination.
5. Adequate facilities at these POI to accommodate non-motorized transit.
6. Trails need a destination or need to be circular with access in primary population centers.

Priorities from the 2007 Plan

Ranked High Priority

- Identify critical private and public partnerships for greenway development.
- Develop a five-year capital improvement program for greenway and bikeway projects.
- Seek state and federal funding for greenways and on-road bicycle facilities.
- Work with local utilities to secure greenway rights-of-way.
- Develop a safe routes to school program.
- Develop on-road bicycle facilities.
- Work with developers to help build greenway and bicycle facilities.
- Integrate bicycle and pedestrian facilities into all future development projects.
- Look for opportunities to build bicycle facilities during road resurfacing and construction projects.
- Seek bond funding for greenway acquisition and development and on-road bicycle facility development.

**Ranked Intermediate Priority**

- Continue to coordinate with the county/city to build and connect greenways.
- Develop a local non-profit greenway and bikeway advocacy group.
- Develop greenway trails in natural areas.
- Work with local land trusts and conservation agencies to develop greenways.
- Develop a maintenance plan for both trails and bicycle facilities.

**Ranked Low Priority**

- Develop an education program for greenways and on-road bicycling. Comments: Advocacy leads here. Except for on-road facilities which should be a program.
- Develop a safe routes to school program. Comments: Already a federal program. Advocacy leads here.
- Develop shared-use trails alongside existing roadways
- Encourage voluntary conservation, preservation, and dedication of greenways by landowners
- Coordinate with other agencies when greenways cross jurisdictional boundaries. Comments: Already being done.
- Work with local land trusts and conservation agencies to develop greenways
  - Develop a maintenance plan for both trails and bicycle facilities.

“Identify points of interest and integrate into trails either as a trail head or route destination.”

Route Exercise participants


5.0 CLASSIFICATIONS AND TOOLS

This section provides an overview of classification options to be considered when planning for greenway trails and bicycle facilities. The classification options should be selected based on the appropriateness of the selected option with regards to the impact of the surrounding area. Based on site specific circumstances, variations in trail class may be considered. In addition, a greenway toolbox is provided which highlights various options for future greenway acquisition and protection.

5.1 Trail Classifications

The Greenway trail classifications will aid the development of a connected, hierarchy of trails within the greenway system. These classifications are based on up to date research and current national greenway standards. The classifications move from primary paved trails to special use, unpaved trails. Each classification has a description, specifications, and a graphic example.

Class I: Multi-use Primary Trails

Class I trails are the primary circulation routes within a greenway system. They form the skeleton of the trail system off of which all other trails radiate. These are wide, paved, multi-use trails designed to accommodate a variety of users. Class I trails serve to connect major destinations including parks, neighborhoods, greenways, schools, and shopping centers. These trails are located away from vehicular circulation and are often found within undeveloped or underutilized areas such as floodplains, creek corridors, abandoned railroad corridors, open green spaces, and parks. Therefore, construction of these trails should be done in such a way as to minimize the impact on the surrounding areas.

Specifications:
10-12-foot width
Paved in asphalt or concrete
ADA accessible
Striping optional
5.0 Classifications

Class II: Multi-Use Pathways – Adjacent to Roadways

A multi-use pathway is physically separated from motor vehicle traffic, and can be either within the highway right-of-way or within an independent right-of-way. Multi-use pathways include bicycle paths, rail-trails or other facilities built for bicycle and pedestrian traffic. These trails are part of the primary circulation system or act as an extension and or connector to the Class I trails. Class II trails are wide, paved, shared-use trails designed to accommodate a variety of users. Like Class I, they serve to connect major designations within the greenway network including parks, neighborhoods, greenways, schools, shopping centers, and bikeways.

When to Consider this Type of Facility

When properly located, multi-use pathways can be a safer type of facility for novice and child bicyclists because they do not have to share the path with motor vehicles. To be safe and enjoyable, multi-use pathways must be designed according to well-established design standards. These design standards include adequate width for two-directional use by both cyclists and pedestrians, provision of good sight distance, avoidance of steep grades and tight curves that force bicyclists to make awkward movements, with minimal cross-flow by motor vehicles. Multi-use pathways can serve a variety of purposes, including recreation and transportation. For transportation purposes, a multi-use pathway should have a well-defined origin and destination. A multi-use pathway can be a safer type of facility for novice and child cyclists if properly located and designed.
Principle Planning Concerns with Multi-Use Pathways

An alignment with the fewest intersections with roadways should be chosen. Multi-use pathways need continuity with other facilities. A multi-use pathway should not just end, leaving bicyclists stranded with no nearby bikeway connection. Multi-use pathways are generally more expensive to build because they are entirely separate facilities from the roadway. This is an important reason why a well-defined origin and destination would help in the implementation of a proposed multi-use pathway project. Multi-use pathways that are intended for transportation should be as direct as possible or many bicyclists will choose a shorter route, such as a nearby roadway. Multi-use pathways located adjacent to a highway may result in bicycle/motor vehicle conflicts at driveways and with turning traffic at intersections with roadways. Where significant pedestrian usage is anticipated, additional width should be provided.

Planning and Design Considerations

Addressing planning and design concerns for a multi-use pathway is very much like selecting a roadway functional design. Some similar design considerations include horizontal and vertical alignment, sight distance, grades and pavement structure. The minimum paved width for a two-directional multi-use pathway is 10 feet; however, a path wider than 10 feet is very desirable when usage by both bicyclists and pedestrians is expected to be high. When a multi-use pathway must be located parallel to a highway due to a lack of an alternative location, a minimum separation of five feet should be provided between the roadway and multi-use pathways. If five feet of separation cannot be obtained due to limited right-of-way, a suitable positive barrier between the roadway and multi-use pathway should be provided. In addition, the pathway should function as a mode of transportation between well-defined locations, such as schools, residential subdivisions, and shopping centers. The pathway should foremost have a transportation purpose, which does not exclude recreation.


Specifications:
8 -10-foot minimum trail width
5-foot minimum buffer
Paved in asphalt or concrete
ADA accessible
Striping optional
Class III: Multi-use Secondary Trails

Class III trails are part of the secondary circulation system acting as a connector to Class I and II trails, as well as to designations such as neighborhoods or small open spaces. Class III trails are usually paved and utilized by a variety of users such as pedestrians, runners, and casual cyclists. These trails are usually located away from vehicular circulation and are often found within undeveloped or underutilized areas such as floodplains, creek corridors, abandoned railroad corridors, open green spaces, and parks. Therefore, construction of these trails should be done in such a way as to minimize the impact on the surrounding areas.

*Specifications:*
- 8 - 10-foot width
- Paved in asphalt, concrete, or compacted gravel
- ADA accessible
Class IV: Special Use Trails

Class IV trails are part of the tertiary circulation system. They are part of the larger greenway system but are usually delegated to as special use. These types of trails are usually not paved and follow the natural topography of the site, therefore limiting use. Class IV trails are appropriate in environmentally-sensitive areas such as stream edges or steep slopes, or for special uses such as mountain biking or horseback riding. These trails are located away from vehicular circulation and are often found within undeveloped or underutilized areas such as floodplains, creek corridors, abandoned railroad corridors, open green spaces, and parks. Therefore, construction of these trails should be done in such a way as to minimize the impact on the surrounding areas.

Please note: This plan does not focus on these types of trails and they have not be highlighted as future greenway connections due to the variety of specific uses.

Specifications:
Width is dictated by use and topography - a minimum of six foot width
Unpaved but usually protected with a three inch layer of wood mulch. Note these trails are not ADA accessible.
5.2 Bicycle Facility Classifications

The bicycle facility classifications will aide the development of a connected, hierarchy of bikeways within the Town of Huntersville. These classifications are based on up to date research and current North Carolina Department of Transportation standards. Each classification has a description and graphic example. This information comes directly from *NCDOT Bicycle Facilities Guide: Types of Bicycle Accommodations*.

**Class I: On-Road Bike Lane** A bicycle lane is a portion of the roadway that has been designated by striping, signing, and pavement markings for the preferential and exclusive use of bicyclists.

*When to Consider this Type of Facility*

Bicycle lanes may be considered when it is desirable to delineate road space for preferential use by cyclists. Streets striped with bicycle lanes should be part of a connected bikeway system rather than being an isolated feature. Bicycle lanes function most effectively in mid-block situations by separating bicyclists from overtaking motor vehicles. Integrating bicyclists into complicated intersection traffic patterns can sometimes be problematic. Strip development areas, or roadways with a high number of commercial
driveways, tend to be less suitable for bicycle lanes due to frequent and unpredictable motorist turning movements across the path of straight-through cyclists. Striped bike lanes can be effective as a safety treatment, especially for less-experienced bicyclists.

A Two-lane residential/collector streets with lower traffic volume, low-posted speed limit, and adequate roadway width for both bike lanes and motor vehicle travel lanes, and an absence of complicated intersections is a prime candidate for this facility. A median-divided multi-lane roadway with lower traffic volumes and a low volume of right and left turning traffic would be a more appropriate location for bicycle lanes than a high traffic volume undivided multi-lane roadway with a continuous center turn lane. Most bicyclists will choose a route that combines direct access with lower traffic volumes. An origin and destination of less than four miles is desirable to generate usage on a facility.

**Principal Planning Concerns with Bicycle Lanes**

High traffic volume, strip-developed areas that generate a high number of motor vehicle turning conflicts with straight-through cyclists riding in bicycle lanes are to be avoided. Most bicycle/motor vehicle crashes occur at intersections and driveways. Roadways with numerous complicated intersections and interchanges increase the potential for crashes. Inadequate lane width or use of the concrete gutter pan as the bike lane area is not desirable. Abrupt termination of bike lanes at hazard or constraint locations creates a situation that may force bicyclists to make awkward movements in traffic. Bike lanes striped on roadways with numerous complicated intersections, including freeway interchanges, may give some less-experienced bicyclists a false sense of security.

**Planning and Design Considerations**

Under ideal conditions, the minimum bicycle lane width is 4 feet, not including the concrete gutter pan. Roadways striped with bicycle lanes should be connected to a system of bikeways (other roads with striped bicycle lanes, signed bike routes, or off-road bicycle paths) to be effective. Bicycle lanes should be one-way facilities and should carry traffic in the same direction as adjacent motor vehicle traffic. Two-way bicycle lanes on one side of the road are not recommended because they promote riding against the flow of motor vehicle traffic. Wrong-way riding is a significant risk for bicyclists.

― Bicyclists, especially inexperienced ones, need to feel safe when riding on a busy road. If we want more people to ride then we have to provide safe routes.‖

Key Stakeholder
cause of car/bike crashes. On one-way streets, bicycle lanes should be on the right side of the road, unless it would decrease conflicts, such as at bus stops, if placed on the left.

**Class II Wide Outside Shoulder**

A paved wide outside shoulder refers to the part of the highway that is adjacent to the regularly traveled portion of the highway and is on the same level as the highway. Ideally, wide outside shoulders should be included in the construction of new highways and the upgrade of existing highways where there is a significant level of current/potential bicycle travel. A wide outside shoulder refers to additional pavement width of at least 4 feet that has been added to an existing roadway in order to more safely accommodate bicycles.

*When to Consider this Type of Facility*

On urban streets with curb and gutter, bicycle lanes are usually the preferred facilities. Shoulders for bicycle use are not typically provided on roadways with curb and gutter. On rural roadways where bicycle travel is common,
such as roads in coastal resort areas, paved wide outside shoulders are highly desirable. On secondary roadways without curb and gutter where there are few commercial driveways and intersections with other roadways, many bicyclists prefer riding on wide, smoothly paved shoulders.

**Principal Planning Concerns with Wide Outside Shoulders**

This type of facility is most frequently used in rural areas on both primary and secondary roads. Sufficient right-of-way is needed to accommodate the addition of the paved shoulders and, if necessary, to relocate drainage ditches that run parallel to the roadway. Shoulders that are paved to accommodate bicycle traffic are generally full depth or equal to the pavement depth of the adjacent roadway. Partial-depth paved shoulders are rarely recommended because of the tendency to crack under vehicular loads. Rumble strips and other devices used to alert sleepy motorists should be avoided, because they pose a safety hazard to bicyclists. If rumble strips are necessary, additional shoulder width should be provided for the bicyclists.

**Planning and Design Considerations**

The paved shoulder should be of adequate width, smoothly paved, and have adequate strength and stability to support vehicle loads without rutting. The minimum width for a paved shoulder to accommodate bicycles is 4 feet. Recommendations for the actual paved shoulder width may vary according to the width of the adjacent roadway, traffic volume, posted speed limit, and the presence of heavy truck traffic along the roadway. The slope of the roadway should continue across the shoulder to maintain adequate drainage. Wide paved shoulders not only benefit bicyclists, but improve safety for drivers and reduce maintenance costs.
5.3 Greenway Toolbox

The following section briefly discusses the different types of open space preservation techniques available for local municipalities in order to protect and acquire crucial open space lands.

Conservation Easements

A conservation easement is a written agreement between a landowner and a government entity or land trust in order to protect the conservation value of the land. This easement creates an enforceable land preservation agreement between the two entities. The purpose of the conservation easement is to protect agricultural land or natural resources such as large tracts of undeveloped land or water bodies.

The landowner continues to own the eased property and pay taxes on it, however, they give up certain agreed upon rights, such as the restriction of real estate, commercial and industrial development. It is important to note that the easement is attached to property deed and will transfer when the property is sold, inherited, or donated to another person or group. This means the easement is binding into perpetuity.

The most important benefit that results from a conservation easement is the preservation of open land, but there is a more tangible benefit to the land owner—significant federal and state tax incentives.
There is no typical conservation easement. Each easement is customized for the individual owner, property, and situation. As a result, land owners can retain certain rights. For example:

- Continue agricultural production
- Maintain existing barns and sheds
- Maintain existing residences
- Manage woodland for timber production
- Subdivide land for residential development in certain “buildable envelopes”

It is possible for trails to be built on conservation easements. However, it is important to note that public access is not automatically given to an eased property unless agreed upon in the conservation easement official document.

The publication “Using Conservation Easements to Preserve Open Space” cites that municipal acquisitions may use tax dollars to preserve land as long as they include protection for:

- Water resources and watersheds
- Forest and farmlands
- Natural resources such as floodplains and steep slopes
- Scenic areas
- Historic, geological and botanical sites
- Open space between communities

Other methods of preserving land include donating, willing, or selling land to a land trust, local land development restrictions via ordinances, zoning and codes.

Types of Preservation Zoning, Ordinances and Codes
Below are examples of zoning, ordinances and codes that can help with greenway development. Please note that zoning and ordinances are occasionally changed and may or may not be currently in effect within the Town of Huntersville.

Flood Damage Prevention Ordinance: This ordinance is enacted in order to prevent development within the 100-year floodplain of a specified water body. The purpose of this ordinance is to protect the health, safety and welfare of the residents, reduce property losses from floods (and flood insurance claims), and preserve habitat and sensitive environmental land. It is
important to note that designated floodplains do not automatically equate to easements for greenway trails.

**Planned Unit Development Regulations:** The purpose behind this regulation is to encourage high density, cluster development of residential units while preserving large tracts of undisturbed, open land within the same property.

**Overlay Zoning:** Is a type of zoning used to overlay the existing zone with additional open space preservation requirements. This is in an effort to establish additional preservation standards and can be an effective tool to protect specific resources against development pressures.

**Mandatory Dedication of Open Space:** These are locally applied restrictions and requirements placed on developers to build new parks, preserve lands or pay a fee per proposed dwelling unit.

**Urban Growth Boundaries:** Are designated boundaries circumscribing a specified urban area. Development within the boundary is limited to high density and the area outside is reserved for lower density rural development. The purpose of this regulation is to limit sprawl development in rural areas and encourage infill development in the designated urban area. With proper planning the preserved rural open areas could be connected to the larger greenway/bikeway system.

**Performance Zoning:** Is an alternative to traditional zoning. The difference is that traditional zoning restricts the use of the land but performance zoning restricts the intensity of the land use. The advantages of is type of zoning include less administrative administration (re-zoning is not an issue), flexibility and innovation, and its more effective at preserving at natural features (since the impacts are evaluated directly). The major disadvantage is that it is more difficult to interpret and thus communicate to developers and the general public.

**Bonus Zoning:** Provides density bonus to developers in exchange for park and open space land. Can also be used in conjunction with Cluster Zoning.

**Cluster Zoning:** Another name for Planned Unit Development, which means that the housing units are built close together or in clustered groups, which preserved the remaining site for open space. For example, if you have a 100 acre site and 20 houses, you would build all 20 houses on 10 acres and leave the other 90 open for other uses.
Scenic Overlay Zoning: An additional zoning criteria which is placed over existing zones in a scenic area. This helps to maintain the character of the surrounding area, preserves open green space, and limits development.

Purchase of Development Rights: The landowners’ right to develop their land is sold to the local municipality. This is often done in exchange for a reduction in property taxes for the land owner.

Land Acquisition Methods

Below are examples of land acquisition methods with greenway development within the Town of Huntersville.

Fee Simple Purchase: Purchasing property for fair market value in order to acquire land for greenway development.

Bargain Sale: It is also possible for the Town to look for “bargain sales” where a property owner will sell land below appraised value to increase the tax benefits from the sale.

Installment Land Purchase: The Town could purchase land for greenway development via installments that could provide capital gains tax incentives to the seller over a set period of time.

Conservation Easement: A conservation easement is a written agreement between a landowner and a government entity or land trust in order to protect the conservation value of the land. This easement creates an enforceable land preservation agreement between the two entities. If specified, land conservation easements can be used for trail development through the identified property.

Option Contracts – The Town can leverage the use of option contracts for parcels that they wish to purchase in the future as they assemble large tracts of land for a trail segment.

Foreclosures: The Town may look for foreclosed lands due to failure of the private landowner to pay property taxes to identify properties for greenway development. It is possible to acquire property at below market value.

Lease: The Town may enter into a binding lease agreement to use certain portions of a property for greenway development and access in exchange for a set yearly fee.
Donation: Land may also be donated to the Town for by landowners for greenway development. Often land is bequeathed or donated through a life estate.

Eminent Domain: The government has a legal right to acquire private land for public use from the owner who is reluctant to sell if the land acquisition provides for a demonstrated public need. In the process, the government pays a fair market value price to the current landowner. This method often produces a negative response to greenway development and is not recommended.


Note: The Eminent Domain option is not being recommended as a method to be used for acquiring land for greenway and bikeways within the Town of Huntersville. The Huntersville Board of Commissioners adopted an ordinance on October 1, 2007 to not use Eminent Domain for Greenways, Trails, and Bikeways.

Mitigation Considerations: Greenways Adjacent to Existing Homes

If a planned greenway is located adjacent to or through homeowners’ property, mitigation considerations should be implemented.

Mitigation options include but are not limited to the following possibilities.

- Preserving or providing a buffer using landscaping techniques such as an earth berms/ and or native vegetation screening between the impacted property and the greenway.
- Preserving any natural features of the property adjacent to the greenway by designing the greenway to work in harmony with the adjacent natural features.
- Establishing clear boundaries of where the private homeowners’ property begins and the public greenway ends via plantings, fencing, signage, etc.
- Minimizing the impact of the greenway to the property by working jointly with the property owner to create a design solution that is appropriate for the greenway and the property owner.
6.0 ACTION PLAN

The following section sets the course for action in order to guide the development of Town of Huntersville Greenway and Bikeway Master Plan. The stated goals, recommendations and actions chart the course for implementation efforts, which lead into specific recommended facility improvements with an implementation strategy to put the plan recommendations into motion.

6.1 Vision and Goals

In the 2006, during the first public meeting, attendees were asked to produce a list of vision key words to help develop a vision statement for the master plan. A vision statement was crafted from the key word exercise to establish a clear direction and objectives for the master plan based on the key words listed below.

- Connectivity
- Safety
- Conservation
- Environment
- Recreation
- Transportation
- Strong Public/Private Relationships

Vision Statement:
A community connected via a system of safe and scenic greenways, trails, and bikeways developed from strong public and private relationships that offer numerous recreation and transportation opportunities, promotes environmental conservation and protection, and serves to improve the quality of life for all Huntersville residents.

The development of the goals, strategies, and actions were inspired by the key goals of the vision statement—connectivity, safety, conservation, environment, recreation and transportation.

A brief definition of goals, strategies, and actions is provided:

Goals: Value-based statements that are not necessarily measurable. For the purposes of this plan, they express an ideal future condition.
Strategies: A course set forth to achieve the desired goals.

Actions: Specific steps that indicate how the goals and strategies of the plan should be realized.

There are a total of five goals in the action plan and they are presented in the following order.

- A safe and interconnected network of greenways, trails, and bicycle facilities.
- A ‘green’ greenway system promoting conservation and environmental protection.
- A greenway, trail and bikeway system built upon strong public and private partnerships.
- A progressive greenway, trail and bikeway system that provides numerous recreation opportunities for people of all ages.
- A pragmatic greenway, trail and bikeway system that provides non-motorized transportation opportunities interconnecting neighborhoods, parks, schools, shopping and other community facilities.

6.2 Implementation Strategies and Actions

The following section lists the recommended strategies and actions needed to accomplish the above stated goals.

Strategy 1.
Begin to design and construct a town-wide network of trails, and on-road bicycle facilities.

Action 1-1: Develop a five-year capital improvement program for specific greenway and bikeway projects.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Short Term 1-5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Departments</td>
<td>P &amp; R Dept. Finance Dept.</td>
</tr>
<tr>
<td>Potential Funding Source</td>
<td>Capital Funds</td>
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Action 1-2: Strategically build 25 miles of designated greenway trails within the next 10 years (2.5 miles per year), not including trails currently under
design and construction, via partnerships and collaborations with Mecklenburg County and the local development community. For greenway trails that are proposed to be located in existing neighborhoods, every effort should be made to ensure that these trails do not negatively impact existing properties.

**Time Frame** 1-10 years  
**Participating Departments** P & R Dept. Transportation, Planning and Engineering Depts., Advocacy groups.  
**Potential Funding Source** Capital Funds, Grants

**Action 1-3:** Develop 30 miles of on-road bicycle facilities coinciding with new road construction and rehabilitation projects within the next 10 years (3 miles per year).

**Time Frame** 1-10 years  
**Participating Departments** P & R Dept. NCDOT, Transportation, Planning and Engineering Depts., advocacy groups.  
**Potential Funding Source** Capital Funds, Grants

**Action 1-4:** Encourage restriping efforts to develop on-road bicycle facilities for roadways identified in the plan undergoing asphalt rehabilitation and resurfacing by coordinating requests with the North Carolina Department of Transportation.

**Time Frame** Short Term 1-5 years  
**Participating Departments** P & R Dept., NCDOT, Transportation, Planning and Engineering Depts.  
**Potential Funding Source** Capital Funds, Grants

**Action 1-5:** Continue to integrate trail and on-road bicycle facilities into all future development projects.

**Time Frame** 1-10 years  
**Participating Departments** P & R Dept. NCDOT, Transportation, Planning and Engineering Depts., advocacy groups.  
**Potential Funding Source** Capital Funds, Grants

**Action 1-6:** Coordinate with Charlotte Area Transit System (CATS) to include bike access and bike facilities at the proposed commuter rail stations and bus park and ride lots.

**Time Frame** Short Term 1-5 years  
**Participating Departments** P & R Dept., NCDOT, CATS, Transportation, Planning and Engineering Depts.
Action 1-7: Conduct detailed corridor design studies for both greenway and on-road bicycle facilities to determine recommended bicycle facility type and/or appropriate trail classification based on site-specific opportunities and constraints.

Time Frame: Short Term 1-5 years
Participating Departments: P & R Dept., NCDOT, Transportation, Planning and Engineering Depts.
Potential Funding Source: Capital Funds, Grants

Action 1-8: Continue to coordinate with the Mecklenburg Union Metropolitan Planning Organization (MUMPO) to include roads identified for on-road bicycle improvements within this plan with long range transportation planning efforts initiated by MUMPO.

Time Frame: Short Term 1-5 years
Participating Departments: P & R Dept., MUMPO, Transportation and Engineering Depts.
Potential Funding Source: Capital Funds, State and Federal Funding

Action 1-9: All future thoroughfares to include on-road bicycle facilities.

Time Frame: Short Term 1-5 years
Participating Departments: P & R Dept., Transportation, Planning and Engineering Depts.
Potential Funding Source: State and Federal Funding

Strategy 2:
Connect neighborhoods, destinations and origins throughout the town via trails and on-road bicycle facilities.

Action 2-1: Develop and implement a Safe Routes to School program within the town to help build safe bicycle and pedestrian connections from local neighborhoods to schools.

Time Frame: 1-5 years
Participating Departments: P & R Dept., School District, local private schools, Parent/Teacher groups, Private Partners.
Potential Funding Source: Capital Funds, Grants
**Action 2-2:** Provide pedestrian/bicycle connections to local destinations and origins such as shopping centers, business and recreation parks, and cultural attractions.

**Time Frame**  
1-10 years

**Participating Departments**  
P & R Dept., private partners, Transportation, Planning and Engineering Depts. and Chamber of Commerce.

**Potential Funding Source**  
Capital Funds, Grants

**Action 2-3:** Coordinate and establish connections to greenway/bikeway systems in Charlotte, Mecklenburg County, Concord, Cornelius, and Davidson.

**Time Frame**  
5-10 years

**Participating Departments**  
P & R Dept., adjacent county and town/city park and Recreation depts., NCDOT, Transportation, Planning and Engineering Depts. Chamber of Commerce and advocacy groups.

**Potential Funding Source**  
Capital Funds, Grants

**Strategy 3.**

Effectively and efficiently manage existing greenways, trails and bicycle facilities.

**Action 3-1:** Incorporate points of interest and interpretative education signage along greenway trails, and bikeways where appropriate.

**Time Frame**  
Short Term 5-10 years

**Participating Departments**  
P & R Dept. Chamber of Commerce, School District

**Potential Funding Source**  
Capital Funds, Grants

**Action 3-2:** Develop and implement a maintenance plan for all existing trails and bicycle facilities.

**Time Frame**  
1-5 years

**Participating Departments**  
P & R Dept. Public Works Dept., Advocacy Groups

**Potential Funding Source**  
Capital Funds, Grants

**Action 3-3:** Develop town-specific greenway design standards for signage, trail construction, planting and other appropriate greenway features.

**Time Frame**  
1-5 years

**Participating Departments**  
P & R Dept. Transportation, Planning and Engineering
Action Plan

Depts., Utility Companies, private partners and advocacy groups.

Potential Funding Source  Capital Funds, Grants

**Action 3-4:** Re-evaluate and update Greenways, Trails, and Bikeway Master Plan as needed, with major updates every five years.

Time Frame  5 years
Participating Departments  P & R Dept.
Potential Funding Source  Capital Funds, Grants

**Strategy 4.**

**Incorporate existing natural areas into the proposed greenway network.**

**Action 4-1:** Develop greenway trails in existing natural areas to help conserve and protect sensitive environmental areas.

Time Frame  1-10 years
Participating Departments  P & R Dept., County P & R Dept., advocacy groups
Potential Funding Source  Capital Funds, Grants

**Action 4-2:** Work diligently with local land trusts and conservation agencies to acquire and develop greenway corridors.

Time Frame  1-10 years
Participating Departments  P & R Dept., Advocacy Groups, Land Trusts, Private Partners
Potential Funding Source  Capital Funds, Grants, private donations

**Strategy 5.**

**Develop strong public and private partnerships to maximize greenway and bikeway development opportunities.**

**Action 5-1:** Encourage landowners to dedicate the necessary right-of-way to accommodate a greenway, trail, or bikeway designated by this plan which crosses any portion of land proposed for development. In addition, where a greenway, trail or bikeway, either on the property to be developed or on land which adjoins or is in close proximity to the property to be developed can be used to satisfy the Town’s requirements for open space.

Time Frame  1-10 years
Participating Departments  P & R Dept., Development Community, Private Partners, advocacy groups.
Potential Funding Source  Capital Funds, grants, private donations
**Action 5-2:** Encourage the development of a local non-profit 501c3 greenway and bikeway advocacy organization to help develop private contribution campaigns and to facilitate private financial donations.

*Time Frame*  
1-5 years

*Participating Departments*  
P & R Dept., Finance Dept., advocacy groups

*Potential Funding Source*  
Capital Funds, Grants

**Action 5-3:** Work with local and regional trail, bikeway and greenway groups to extend the proposed network across jurisdictional boundaries.

*Time Frame*  
1-10 years

*Participating Departments*  
P & R Dept., Adjacent County and Town/City P & R and Planning Depts., advocacy groups

*Potential Funding Source*  
Capital Funds, Grants

**Action 5-4:** Coordinate with local businesses that are located near existing or future trail and bikeway facilities.

*Time Frame*  
1-10 years

*Participating Departments*  
P & R Dept., Private Partners, advocacy groups, Chamber of Commerce, and Business community.

*Potential Funding Source*  
Capital Funds, Grants, Private Donations

**Action 5-5:** Develop a program for voluntary land dedication of future greenway easements by landowners.

*Time Frame*  
5-10 years

*Participating Departments*  
P & R Dept., Development community, Private Partners, advocacy groups

*Potential Funding Source*  
Capital Funds, Private Donations

**Action 5-6:** Work with local utilities to secure greenway rights-of-way for trail development along major utility corridors.

*Time Frame*  
1-10 years

*Participating Departments*  
P & R Dept., Utility companies, Engineering Dept., and advocacy groups

*Potential Funding Source*  
Capital Funds, Private Donations

**Strategy 6.**

Seek trail and bicycle facility funding from a variety of program resources.

**Action 6-1:** Develop an annual schedule to guide application processes for federal, state, and local funding opportunities.
**Action 6-2:** Explore opportunities for revenue and obligation bond funding to help develop a capital improvement program for acquisition and development of greenway trails and construction of on-road bicycle facilities.

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<tr>
<td>Participating Departments</td>
<td>P &amp; R Dept., Financial Dept.</td>
</tr>
<tr>
<td>Potential Funding Source</td>
<td>Capital Funds</td>
</tr>
</tbody>
</table>

**Action 6-3:** Seek state and federal funding for greenway development and acquisition and for on-road bicycle facilities through various MAP-21, SAFETEA-LU and NCDOT Bicycle Improvement funding programs. (See appendix funding compendium for more information.)

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>1-5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Departments</td>
<td>P &amp; R Dept., Finance Dept.</td>
</tr>
<tr>
<td>Potential Funding Source</td>
<td>Capital Funds</td>
</tr>
</tbody>
</table>

**Strategy 7.**

**Develop an effective, proactive community education program.**

**Action 7-1:** Develop a community-based education program for greenways, trails and on-road bicycling through the Huntersville Parks and Recreation Department.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>5-10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Departments</td>
<td>P &amp; R Dept., advocacy groups, School District</td>
</tr>
<tr>
<td>Potential Funding Source</td>
<td>Capital Funds, Grants, Private Donations</td>
</tr>
</tbody>
</table>

**Action 7-2:** Develop an education and marketing program for local businesses to highlight the benefits of providing non-motorized transportation systems for its employees.

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>1-5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating Departments</td>
<td>P &amp; R Dept., Chamber of Commerce, Business Community, advocacy groups</td>
</tr>
<tr>
<td>Potential Funding Source</td>
<td>Capital Funds, Grants, Private Donations</td>
</tr>
</tbody>
</table>

**Action 7-3:** Partner with local schools to educate students about healthy lifestyle choices, recreation and the benefits of trails and greenways.
### 6.0 Action Plan

**Time Frame** 5-10 years  
**Participating Departments** P & R Dept., Local Health care services, School District, Dept. of Public Health, advocacy groups  
**Potential Funding Source** Capital Funds, grants, tourism dollars, private donations

**Action 7-4:** Develop a bicycle education program for school-aged students to teach them how to safely ride a bicycle on local trails and roadways.

**Time Frame** 5-10 years  
**Participating Departments** P & R Dept., NCDOT, Police Dept., School District  
**Potential Funding Source** Capital Funds, grants

### 6.3 Master Plan Concept Network Map

The master plan conceptual network map highlights all proposed greenways, trails and bikeways that could be developed within the Town of Huntersville. These routes have been classified into two tiers of importance in order to help develop a capital improvement plan for the most critical pieces of the network. This map is intended to show the vision of connectivity for the Town through a complete system of greenways and bikeways. Routes highlighted in the plan may be removed over time due to feasibility issues, budget and lack of public support. The tiers were generated based on information received from a collection of existing proposed greenway routes, The Bicycle Compatibility Index analysis for on-road facilities, origin and destination connectivity review and public support through steering committee meetings and public work sessions. The following tiered components are highlighted on the Master Plan Network Plan.

### A. Greenway Multi-Use Segment Prioritization Process

In 2011, the Town of Huntersville Greenway, Trail and Bikeway (GTB) Commission set a goal to perform a formal prioritization of each of the greenway/trail routes that are a part of the master plan.

The Town of Huntersville Greenway, Trail and Bikeway Master Plan includes greenways along 40+ planned routes. These routes are spread out across the Huntersville area and include planned routes that would immediately provide important connections to schools, neighborhoods, shopping, etc. as well as routes that, in the near term, would not provide as significant value to the community in terms of connectivity if constructed.
The purpose of this evaluation and prioritization process was to establish a ranking of the greenway segments that was based on a weighted list of objective criteria that are important to the development and construction of a greenway segment. By completing this evaluation, the committee would able to provide a list of those segments that would provide the most added value to the community.

The ranking criteria that the committee used was based on a document received from the Mecklenburg County Parks and Recreation Department. The Huntersville GTB committee then made some additions and revisions to establish a list of criteria that worked and made sense for the Huntersville Greenway Plan. The list of the criteria, along with a description is included below:

**Greenway Multi-Use Trail Project Ranking Criteria**

*Revised: 12/14/10*

The GTB Commission has established the following ranking criteria to assist with the Capital Needs Assessment prioritization of greenways.

- **No Significant Barrier to Construction** – Barriers such as railroads, interstates, major infrastructure, difficult grades, across developed property, and others present physical and financial obstacles to greenway construction. Preference should be given to greenways that do not require unusually difficult construction or high costs.

  **10 points awarded when greenway does not encounter a significant barrier to construction.**

- **Project Partnership, Public or Private** – Greenway is planned and built in conjunction with another public or private project. Examples include Carolina Thread Trail, CHA Housing projects, CPCC expansion, CDOT sidewalk extension, LUESA Stream Restoration, CMUD Relief Sewer, and others. There may not be a quantifiable dollar amount known, but it is perceived that when projects are done together there are some major cost savings involved.

  **10 points awarded per partnership mile**

- **Funding Partnership, Public or Private** – Funding can limit expansion of the greenway system. The Town of Huntersville has success with park and greenway bonds, but it is important to consider seeking additional funds
from other sources, and/or partnering with other projects to save cost. Examples include seeking donations from developers through the rezoning process, partnering with the county as they apply for grants, or partnering with other public agencies such as MCPR, CLC, LUESA, CDOT, or CMUD.

1 point awarded per $10,000 contributed to a greenway project from an outside agency.

- Listed in Other Adopted Plans or Studies – The 2007 Greenway Master Plan set a comprehensive look at the planned greenway system for 10 years. It is also important that the county have established district, small area, neighborhood, corridor, and transit plans which reference greenway linkages as a key objective and policy guide. This criterion incorporates other County and municipal policies into greenway development.

5 points if greenway section is listed in any other plan, (5 points each plan)

**LINKS** – Being linear features, greenways function best when they link to points of interests and activated spaces. Each criterion below is important to the prioritization for development. A particular greenway receives the number of points specified for each link and a smaller number of points for each additional link.

- Link to a Public or Private School – Greenways can provide an alternative means of transportation for students and school staff as well as educational opportunities for students. This criterion applies to any pre-K through 12th grade public or private school.

5 points for the first link, 2 points per additional links

- Link to another Park, Existing Greenway, Recreation Center, Nature Preserve, or Cultural Arts/Historical Facility/Property – Connection to these facilities is one of the primary goals of the greenway system. It is important to look at how greenways connect to other recreational and cultural opportunities.

5 points for the first link, 2 points per additional links

- Link to a Planned Regional Trail (ex. – Carolina Thread Trail) – It is important for The Town of Huntersville to contribute to the vision for regional trails and as such
should prioritize those greenways that would connect to a delineated regional trail.

**5 points for providing a regional trail connection**

- **Link to a College or Library** – These institutions are centers for civic and cultural activity and also are hubs of pedestrian activity, making them ideal targets for greenway connection.
  
  **3 points for the first link, 1 point per additional link**

- **Link to a Mixed-Use Development** – Greenways play a key role in creating a pedestrian-friendly community. Likewise, mixed-use centers (such as the Downtown area, Birkdale and Rosedale) are designed to increase pedestrian mobility.
  
  **3 points for the first link, 1 point per additional link**

- **Link to Transit** – Another primary goal of the greenway system is to provide transportation alternatives, and to link to other transportation opportunities. As the CATS bus and rail systems continue to expand, greenway linkage to mass transit becomes extremely important.
  
  **3 points for linking to light rail station, regional transit centers, or park & ride lots**
  
  **1 point per link to bus stops/bus routes**

- **Link to Office or Commercial Area** – It is also important for the greenway system to connect to other uses besides residential areas and parks to encourage use of greenways for commuting to work and performing errands. This criterion can be applied to retail services and office complexes.
  
  **3 points for linking to a business park**
  **3 points for linking to a shopping center (ex. Northcross, Rosedale etc...)**
  
  **1 point per link to general office or commercial area**

- **Opportunity for a Neighborhood Access** – The more neighborhoods that are connected to the greenways, the greater the potential number of greenway patrons. Neighborhood access points should be emphasized to encourage more people to use the greenways.
  
  **2 points per potential neighborhood**
• **LAND ACQUISITION MULTIPLIER** – The most important factor in prioritizing greenway construction is property ownership. Therefore, greenway sections with the fewest parcels remaining to be acquired should be given highest priority.

Land Acquisition Multiplier – The sub-total of all other ranking criteria is multiplied as shown below based on the number of parcels remaining to be purchased.

**Multiply based on the number of parcels remaining to be purchased.**
- 0 parcels = total (1)
- 1 – 3 parcels = total (.75)
- 4 – 6 parcels = total (.5)
- 6+ parcels = total (.25)

To enable the committee to weight and score each of the segments across these criteria, an Excel spreadsheet was developed which provided the Committee the ability to do the scoring:

**Example**

<table>
<thead>
<tr>
<th>No</th>
<th>Segment Name</th>
<th>10 Points</th>
<th>5 Points per Mile</th>
<th>1 Point per $10,000</th>
<th>3 Points Partner</th>
<th>3 Points Funding Partnership</th>
<th>3 Points Other Partner or Studies</th>
<th>3 Points Other Park Greenway/No Center, Nat Pres, or Cult.</th>
<th>3 Points Planned Regional Trail</th>
<th>3 Points College or Library</th>
<th>3 Points Mixed Use Development</th>
<th>3 Points Transit</th>
<th>3 Points Office or Commercial Area</th>
<th>3 Points Neighborhood Access</th>
<th>3 Points Land Acq Multi</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Birkdale Commons Greenway</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Peach Creek Greenway</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Swansons Island Greenway</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Lake Norman Greenway</td>
<td>10</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
</tbody>
</table>

The committee then evaluated each segment of the proposed Greenway system against the criteria above, allocating points where a given segment met the ranking criteria. All of the points were summed for each section and the segments were sorted from highest to lowest total score. The current ranking spreadsheet is available for review through the Parks & Recreation Department.
B. Bikeway Segment Prioritization Process

Bikeway segments will be prioritized using standard criteria similar to the process used for greenways. The Town of Huntersville Greenway, Trail and Bikeway Master Plan includes nearly 90 miles of roadway designated for bike facility improvements. These improvements range from designated bike lanes to wide outside shoulders. These routes, like the greenway network, are distributed throughout the Huntersville area and include planned routes that would provide important connections to schools, neighborhoods, shopping, public transportation, etc.

The ranking criterion that was used to prioritize the greenway routes was also used to evaluate the bikeway segments. Longer roadways, such as Gilead Road, were broken down into shorter segments for evaluation. Thus far, fifty-six (56) roadway segments have been evaluated. The list of the criteria, along with a description is included below:

Bikeway Project Ranking Criteria

The GTB Commission established the following ranking criteria to assist with prioritization of bikeways.

Funding Partnerships - Public or Private – Funding partnerships can have an immediate and dramatic impact the prioritization of bikeway segments.

No Significant Barrier to Construction – Barriers such as railroads, interstates, major infrastructure, difficult grades, across developed property, and others present physical and financial obstacles to bikeway construction. Preference should be given to bikeways that do not require unusually difficult construction or high costs.

10 points awarded when bikeway does not encounter a significant barrier to construction.

Listed in Other Adopted Plans or Studies – This criterion incorporates other County and municipal policies into bikeway development. There are several state, regional, county, and local plans that include references to bike facility improvements on the roadway system. It is also important that the Town of Huntersville Greenway, Trail and Bikeway Master Plan recognize these plans which reference bikeway linkages as a key objective and policy guide. This criterion incorporates other plan policies into bikeway development.

5 points if bikeway section is listed in any other plan.
LINKS – Being linear features, bikeways function best when they link to points of interests and activated spaces. Each criterion below is important to the prioritization for development. A particular bikeway receives the number of points specified for each link and a smaller number of points for each additional link.

**Link to a Public or Private School** – Bikeways can provide an alternative means of transportation for students and school staff as well as educational opportunities for students. This criterion applies to any pre-K through 12th grade public or private school.

*5 points for the first link, 2 points per additional links*

**Link to a Park, Existing Greenway, Recreation Center, Nature Preserve, or Cultural Arts/Historical Facility/Property** – Connection to these facilities is one of the primary goals of the bikeway system. It is important to look at how bikeways connect to other recreational and cultural opportunities.

*5 points for the first link, 2 points per additional links*

**Link to Existing Bikeways** – It is important to connect proposed bikeway facilities to existing facilities (such as the bike lanes in the Huntersville Business Park). These linkages can expand the utilization of bikeways as a system.

*5 points for providing a link to an existing bikeway*

**Link to a College or Library** – These institutions are centers for civic and cultural activity and also are hubs of pedestrian activity, making them ideal targets for bikeway connection.

*3 points for the first link, 1 point per additional link*

**Link to a Mixed-Use Development** – Bikeways play a key role in creating a pedestrian-friendly community. Likewise, mixed-use centers (such as the Downtown area, Birkdale and Rosedale) are designed to increase pedestrian mobility.

*3 points for the first link, 1 point per additional link*

**Link to Transit** – Another primary goal of the bikeway system is to provide transportation alternatives, and to link to other transportation opportunities. As the CATS bus and rail systems continue to expand, bikeway linkage to mass...
transit becomes extremely important.

3 points for linking to rail station, regional transit centers, or park & ride lots
1 point per link to bus stops/bus routes

Link to Office or Commercial Area – It is also important for the bikeway system to connect to other uses besides residential areas and parks to encourage use of bikeways for commuting to work and performing errands. This criterion can be applied to retail services and office complexes.

3 points for linking to a business park
3 points for linking to a shopping center (ex. Northcross, Rosedale etc…)
1 point per link to general office or commercial area

Opportunity for a Neighborhood Access – The more neighborhoods that are connected to the bikeways, the greater the potential number of bikeway patrons. Neighborhood access points should be emphasized to encourage more people to use the bikeways. For bikeways, a point system was developed based on the number of households within 0.5 miles of each bikeway. This number was adjusted based on the length of the bikeway being evaluated. The formula used to assign points to each route was:

\[
\text{Units within 0.5 miles ÷ length of segment ÷ 50} = \text{point value}
\]

This formula provided point values ranging between 0 and 10 with a few higher point values in very high density areas (like Birkdale Village).

1 to 10 points (typical) based on density formula

The committee then evaluated each segment of the proposed Bikeway system against the criteria above, allocating points where a given segment met the ranking criteria. All of the points were summed for each section and the segments were sorted from highest to lowest total score. The current ranking spreadsheet is available for review through the Parks & Recreation Department.
Conceptual Network Build-Out

The following section denotes the maximum amount of proposed conceptual network miles (greenways and on-road facilities) identified on the Master Plan Conceptual Network Map. These numbers represent the proposed miles identified to fully develop a town-wide system of greenway trails and on-road bicycle facilities. Based on the recommended actions, full build-out for a complete network of greenways and bicycle facilities could be achieved in approximately 30 years. Full build-out could be achieved earlier if funding is available to build these facilities at a faster rate.

Table 1: Conceptual Full Build-Out

<table>
<thead>
<tr>
<th>Proposed Greenway Network</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
</tr>
<tr>
<td>Proposed</td>
</tr>
<tr>
<td>Under Construction/Design</td>
</tr>
<tr>
<td>Existing Greenway</td>
</tr>
<tr>
<td>Total total</td>
</tr>
</tbody>
</table>

Recommended Tier 1 On-Road Bicycle Segments

Every attempt has been made to design a connected, efficient, and effective Tier 1 on-road bicycle route system. The recommended improvements start on the far northwestern side of town near Lake Norman and move first east, then south, through town, and finally ending in the southern portion of town, near Latta Plantation. These are recommendations only and any opportunity to make on-road bicycle friendly improvements (especially roads identified as Tier 2) should be seriously considered (i.e., NC DOT projects for restriping, repaving, expansion etc.). All proposed segments with designated bicycle improvements should be coordinated with the Mecklenburg Union Metropolitan Planning Organization Long Range Transportation Plan to help obtain state and federal transportation funds for on-road bicycle improvements. All future proposed thoroughfare routes to be built at a later date should be considered as a tier 2 on-road bicycle improvements segment. A copy of the draft of the Prioritized Network Map can be found at the end of this chapter.
Table 2: Conceptual Full Build-Out Proposed On-Road Bicycle Facility Network

<table>
<thead>
<tr>
<th>Status</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Proposed</td>
<td>24</td>
</tr>
<tr>
<td>Tier 2 Proposed</td>
<td>77</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>

**Variations from Previous Plans**

During the planning process numerous issues arose between preferred route corridors identified by local residents and existing corridors identified in other previous plans. The following section highlights incorporated components and notable variations from two key planning documents.

**MUMPO 2030 Long-Range Transportation Plan**

- The plan incorporates all proposed MPO bicycle lanes into the network as either a Tier 1 or Tier 2 route.

**Mecklenburg County Greenway Master Plan, March 1999**

Future trails recommended in the 1999 plan within the area include:

- McDowell Creek between Torrence Creek Greenway and the Town of Cornelius
  - *This greenway proposed route is partially supported, but deviates from the County’s plan of routing the greenway through the existing golf course. This plan identifies a possible alternative route to avoid the golf course.*
- Torrence Creek Greenway connecting to McCoy Road to the Huntersville Business Park.
  - *This proposed greenway route is supported within this plan document.*
- Torrence Creek Greenway along upper branch of creek from Wynfield to Cambridge Road.
  - *This plan deviates from the proposed route by recommending that this proposed trail terminate at Highway 21 with the potential for overland sidewalk connections to the park.*
- Two more trails are designated along Ramah Creek located in the northeast section of the town, and along South Prong Clarke Creek located on the eastern half of the Town.
These routes are consistent with the proposed greenway routes identified within this plan document.

The plan also recommended a natural vegetation - no trail greenway along Gar Creek for water quality reasons.

This is consistent with the recommendation found within this plan document to preserve the natural qualities of Gar Creek.

Land acquisition and trail priority criteria methods have been supported and cited from the 1999 Mecklenburg County Greenway Master Plan in order to remain consistent in a cooperative approach towards greenway prioritization in accordance with Mecklenburg County greenway planning procedures.

6.4 Conceptual Capital Improvement Plan

A general planning estimate range for the proposed greenway trail and bicycle network was prepared to help guide future capital improvements. The estimates take into account general engineering, drainage, utility relocation, structures (assume one small bridge per mile), landscaping, and contingency.

Greenways

The typical greenway cost estimate below is for planning purposes only and does not cover the costs for land acquisition, major structures (such as major bridges), major infrastructure costs or maintenance.

<table>
<thead>
<tr>
<th></th>
<th>1 mile</th>
<th>2 mile</th>
<th>5 mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering and design</td>
<td>$100,000</td>
<td>$150,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Path paving - Asphalt</td>
<td>$175,000</td>
<td>$350,000</td>
<td>$875,000</td>
</tr>
<tr>
<td>Crossings, Drainage, Erosion control, Utilities</td>
<td>$250,000</td>
<td>$500,000</td>
<td>$1,250,000</td>
</tr>
<tr>
<td>Excavation</td>
<td>$280,000</td>
<td>$550,000</td>
<td>$1,300,000</td>
</tr>
<tr>
<td>Landscaping, Furnishings &amp; Signage</td>
<td>$30,000</td>
<td>$60,000</td>
<td>$150,000</td>
</tr>
<tr>
<td><em>Subtotal</em></td>
<td>$835,000</td>
<td>$1,610,000</td>
<td>$3,825,000</td>
</tr>
<tr>
<td>Other fees &amp; Permits</td>
<td>$140,000</td>
<td>$180,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>contingency</td>
<td>$125,000</td>
<td>$240,000</td>
<td>$575,000</td>
</tr>
<tr>
<td><em>Total</em></td>
<td>$1,100,000</td>
<td>$2,030,000</td>
<td>$4,700,000</td>
</tr>
</tbody>
</table>

Note - Cost based on 2013 projects and cost estimates.
Greenway Improvements Conceptual Estimate

It is estimated that after completion of the greenway, maintenance costs will need to be allocated for facility upkeep and repair. The estimated average annual maintenance cost for greenways is approximately $14,000 per mile of greenway.

Bicycle Improvements

Bikeway facility cost estimates per corridor are unpredictable due to the many unknowns with various roadway engineering issues that could occur within each corridor and the amount of site-specific design work needed to determine the appropriate type of bicycle facility required for each individual roadway segment. For instance some roadways might only need to be restriped to accommodate bicycle lanes while other segments might need additional pavement added to the existing cross section which dramatically increases the construction expense.

6.5 Next Steps

The Town of Huntersville Greenway and Bikeway Master Plan has identified a conceptual network of greenway corridors throughout the Town which fulfill multiple objectives. To realize the vision laid forth in this master plan, the following phases will need to be completed for each conceptual greenway corridor identified in the plan.

Step 1. Land Identification and Acquisition: Before selecting a specific greenway alignment within an individual corridor, the Town should identify all of the ownership interest within the identified greenway corridors identified on the conceptual network plan. Corridors with predominantly Town owned properties could be given priority for development over corridors needing extensive land acquisition efforts. It is essential that an interest in land ownership take place prior to selecting specific trail alignments within the greenway corridor. Specific criteria for prioritizing land acquisition efforts for greenway development are identified in the following section.

Step 2. Greenway Segment Master Planning: Selecting a trail alignment within a specific greenway corridor will help to determine the feasibility of constructing the identified greenway. A master plan will have to be completed for each segment in order to identify the best route for the greenway trail within the corridor as well as preliminary cost estimates for
construction. The master planning process should involve the residents from the surrounding neighborhoods, as well as adjacent property owners and businesses. Public meetings should be held to help identify the best suited alignment for the greenway trail as well as identification of the types of amenities to be developed along the trail such as benches, trail parking and comfort station areas. In cases where a greenway corridor directly effects existing subdivisions, neighborhoods and other property owners, all options for potential alignments should be explored including overland opportunities on the existing sidewalk network. All route options should be identified and presented to the public during this process. If the public shows majority resistance to the proposed greenway development, the project may be removed from consideration.

**Step 3. Design and Engineering:** After selecting a specific trail alignment from the master plan process, detailed construction documents will then be produced for the project as well as a detailed cost estimation and assignment of responsibilities and costs. The documents will serve as the basis for public bidding of the construction work in order for the Town to receive the best cost based on current construction costs. The documents will also ensure that each segment of trail is developed with proper engineering techniques to protect the health, safety and welfare of all users.

**Step 4. Greenway Trail Construction:** Depending on the level of use that is appropriate for a specific greenway corridor, actual construction of individual greenway segments and greenway facilities, such as trails, parking, signs, and other amenities can be phased as necessary to meet budget and time constraints. A phasing plan will be identified after the completion of Step 3, Design and Engineering.

**Step 5. Maintenance and Management:** Once the greenway facilities have been completed, maintenance and management should begin immediately. The Huntersville Parks and Recreation Department and its divisions shall be the lead management agency and should work in partnership with other Town of Huntersville agencies and Mecklenburg County as well as private sector groups, to effectively manage and maintain the greenway system.
6.6 Criteria for Prioritizing Trail Development

The following criteria are provided in this master plan to guide the Town in determining greenway trail development. The criteria are listed in alphabetical order; the ordering does not represent either priority or hierarchy.

Please note: These criteria are cited from the 1999 Mecklenburg County Greenway Master Plan in order to remain consistent in a cooperative approach towards greenway prioritization in accordance with Mecklenburg County greenway planning procedures.

- **Trail Construction Cost** – an estimate for the project has been completed during corridor master plan process and it has been determined that it is financially feasible to build the greenway trail facility.

- **Trail Maintenance Cost** – an evaluation of the project has been completed and it has been determined that the corridor can be maintained in accordance with the Town of Huntersville Parks and Recreation Department policies. Additionally, adopt-a-greenway groups have been identified and have been enlisted to support the future operation of the greenway trail.

- **Expansion of Existing System** – the proposed greenway trail facility is an expansion of an existing trail.

- **Geographical Equity** – construction of the trail ensures that there is an equitable balance in trail facility development throughout the Town.

- **Public Need** – residents of an area are presently underserved and require the development of the greenway facility. Additionally, the trail segment has been identified as an element of other adopted plans (i.e. Small Area Plan).

- **Ownership of Land** – the Town has title or rights of public access and use on the property identified for greenway development.

- **Opportunity: Origin and Destination** – the trail segment has a logical point of beginning and end as well as provisions for possible connections to desired destinations.
6.0 Action Plan

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

- **Public Support** – the surrounding neighborhoods and communities support development of the trail. Public support will be measured during the master plan process for each identified greenway segment.

- **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 Trail** – the type and surface of the proposed trail can be accommodated within the environmental setting of the greenway corridor. Additionally, the proposed trail surface meets the needs of local user groups and will be accessible under appropriate guidelines established by the Town of Huntersville Parks and Recreation Department. The type of trail surface will be identified in the corridor master plan process.

6.7 Criteria for Prioritizing Land Acquisition

The following criteria are provided in this master plan to guide the Town in prioritizing parcels of land to be acquired for the 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.

*Please note:* These criteria are cited from the 1999 Mecklenburg County Greenway Master Plan in order to remain consistent in a cooperative approach towards land acquisition efforts in accordance with Mecklenburg County greenway planning procedures.

- **Cost of Acquisition** – a determination that 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 trail system development.

• **Maintenance of Property** – it has been determined that the property can be maintained in a manner that is consistent with the Town of Huntersville 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 Trail Development** – the property is ideally suited for trail development. Issues of accessibility have been addressed and satisfied.

• **Population Served** – the parcel of 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 Trail Development** – the property can accommodate an appropriate level of trail 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.
A. Compendium of Funding

This compendium is a collection of referenced funding resources available for greenway, trail and bikeway development in the State of North Carolina. Please note the following information is a collection of specific funding information obtained from each funding agency. All sources are cited and detailed information is available from each source’s web site and noted contacts.

Overview of Funding Strategies
The following section highlights possible greenways funding strategies that could provide a consistent source of dedicated capital to help build high priority greenways at a faster than normal pace.

Revenue Bonds
A revenue bond is a municipal bond identified by its guarantee of repayment solely from revenues generated by a specified revenue-generating entity associated with the purpose of the bonds. Revenues specified in the legal contract between the bond holder and bond issuer are required to be used for repayment of the principal and interest of the bonds; other revenues (notably tax revenues) and the general credit of the issuing agency are not so encumbered. This is the major difference between a revenue bond and a general obligation bond. Due to the pledge of secured funds is not as great as that of general obligation bonds, revenue bonds may carry a slightly higher interest rate than general obligation bonds; however, but are also considered one of the most secured type of municipal bonds options.

General Obligation Bonds
General obligation bonds are issued with the underlying belief that a municipality will be able to repay its debt obligation through taxation or revenue from projects. This financial commitment does not require assets to be used as collateral, but is issued as “good faith debt.” A GOB is a bond sold by a specified jurisdiction to investors to raise money. Typically, money is raised for capital improvement projects and general improvements (i.e. open space acquisition and/or park and greenway construction); this depends on the local and state laws which are subject to change. A GOB requires a referendum approval before issued. This portion of the process is time sensitive as referendums are approved or denied in election years.
Special Assessment Bonds
A special type of municipal bond used to fund a development project. Interest owed to lenders is paid by taxes levied on the community benefiting from the particular bond-funded project. For example, if a bond of this sort was issued to pay for sidewalks to be re-paved in a certain community, an additional tax would be levied on homeowners in the area benefiting from this project. Area homeowners get nicer walking paths, and they will probably see the value of their property increase accordingly, but this comes at a price. Their property taxes will increase to pay the interest owed to the bondholders by the municipality.
Source: http://www.investopedia.com

State Revolving Bonds
There is a variety of revolving loan funds offered through the State for water pollution control and environmental protection. These revolving loan funds are available for local communities and act similar to revenue bonds which require upfront revenue repayment sources, limited repayment terms and low interest rates.

Installment Purchase Agreement
An installment purchase agreement is basically a payment plan to compensate property owners for restrictions on the future use of their land. IPAs spread out payments so that landowners receive tax exempt interest over a period up to 30 years. The principal of the sales amount is due at the end of the agreed upon term thus making the agreement favorable in terms of property taxes. However, because installment purchase agreements are essentially long-term debt, the agreements generally require the same approvals as general obligation bonds and require a dedicated funding source to be in place (American Farmland Trust, 2000).

Stormwater Utility Fees
Storm water fees are financial obligations levied on land owners to compensate for storm water services provided. The fees obtained on the municipal’s behalf are important for municipal fiscal budgets, future capital projects, and general operations and management. The primary concern for most municipalities is the actual rate and the collection process. Oftentimes, the process is complicated and lacks an overall understanding on behalf of consumers as well as the respective municipality.
Local Option Sales Tax
State authorized sales tax on a variety of retail purchases used by counties for capital improvement projects. This is a method of appropriating funding for projects without incurring debt and is therefore considered an equitable method for creating funding. This decision is typically left up to voters as to whether or not they wish to extend a local option sales tax.

Local Option Excise Tax
State authorized sales tax on specific goods that are purchased such as gasoline, alcohol, tobacco, and luxury items. The money that is generated is used by counties for capital improvement projects. This is a method of appropriating funding for projects without incurring debt and is therefore considered an equitable method for creating funding. This decision is typically left up to voters as to whether or not they wish to extend a local option excise tax.

Local Tax Increment Financing (TIF)
A local TIF permits the use of a portion of local property and sales taxes to assist funding the redevelopment of certain designated areas within a given jurisdiction. Areas eligible for Local TIF are usually in need of conservation measures or economic expansion. The TIF program is a measure to generate income without leveraging significant debt or creating a new taxable system.

Impact Fee / Developer Contribution
Development impact fees are one-time charges applied to offset the additional public-service costs of new development. The fees are typically applied at the time a building permit is issued and are dedicated to provision of additional services, such as water and sewer systems, roads, schools, libraries, and parks and recreation facilities, made necessary by the presence of new residents in the area. Impact fees are essentially user fees levied in anticipation of use, expanding the capacity of existing services to handle additional demand. There are multiple methods of exercising an impact fee and can be somewhat creative depending on current demand.

Mitigation Banking
Mitigation banking involves the creation, preservation, or enhancement of wetlands. This happens only when wetland losses are unavoidable in
advance of development actions, when the wetland cannot be compensated for within the development’s parameters, or when the wetland would not be as environmentally beneficial. It typically involves the consolidation of small, fragmented wetland mitigation projects into one large contiguous site. Units of restored, created, enhanced or preserved wetlands are expressed as "credits" which may subsequently be withdrawn to offset "debts" incurred at a project development site.

**Private Individual Donations**

Private individual donations can come in the form of liquid investments (i.e. cash, stock, bonds) or land. Municipalities typically create funds to facilitate and simplify a transaction from an individual’s donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is undergone. Such donations can improve capital budgets and/or projects.

**Corporate Donations**

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Municipalities typically create funds to facilitate and simplify a transaction from a corporation’s donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is undergone. Such donations can improve capital budgets and/or projects.

**Corporate Sponsorships**

Corporate sponsorships are often delivered in the form of services, personnel volunteers, liquid investments (cash or stock) or land. Municipalities often team with corporations for necessary and or alternative funding. A sponsorship, which is the equivalent of a donation, usually involves some marketing elements or recognition in some form or another. The benefits of marketing often improve the image of the given corporation and are often thought to benefit both parties.

**Foundation Grants**

Foundation grants are provided by corporations, individuals, or organizations with a specific mission. The process involves an application which requires the municipality to explain the direct relation between the foundation’s mission and the applicant’s reason for the funding needs. Foundation grants can offer a wide range of awards from
a thousand dollars to a million dollars. The award amounts depend on the foundation’s funding capacity and allocation decision.

**Federal Grants**
The federal government offers grants for a variety of purposes. These grants can be extremely large and can jump start or complete an entire capital improvements program. Municipalities must apply for grants and express a connection between its agenda and the grants purpose. Given the financial capacity of these grants, each is extremely competitive among all jurisdictions.

**State Grants**
Each state offers a variety of grants, each with specific purposes. State grants are limited to municipalities within the specific state’s border. These grants range from capital improvement projects to economic revitalization purposes. The award amounts of these grants depend on the state’s funding capacity and allocation decisions.

**Local Grants**
Municipalities oftentimes offer a variety of grants, each with specific purposes. Local grants are limited to areas within the specific municipality’s border. These grants range from capital improvement projects to economic revitalization purposes. The award amounts of these grants depend on the state’s funding capacity and allocation decisions. These grants are typically much lower than federal grants and state grants.

**Fundraising / Campaign Drives**
Organization and individuals can participate in a fundraiser of a campaign drive. It is essential to market the purpose of a fundraiser to rally support and financial backing. Oftentimes fundraising satisfies the need for public awareness, public education, and financial support.

**Land Trust Acquisition and Donation**
Land trusts are held by a third party other than the primary holder and the beneficiaries. This land is oftentimes held in a corporation for facilitating the transfer between two parties. For conservation purposes, land is often held in a land trust and received through a land trust. A land trust typically has a specific purpose such as conservation and is used so land will be preserved as the primary holder had originally intended.
Greenway Specific Trust Fund
A greenway-specific trust fund is a holding company designated to shelter land for the purpose of greenway usage. This land should be preserved as intended and is protected by law. The trust can accept land, funding, or both. The land can be utilized for the actual greenway or for a potential land swap, which depends on the donor’s specifications. Funding can be used for infrastructure, land acquisition, maintenance, and/or services.

Capital Budget Increase
An increase in the capital budget increases the financial capacity for capital improvements. This option is rarely exercised unless there is a specific use for the capital reallocation. Capital budgets changes originate in the capacity of the federal government, state, county, town or city. It is possible for a jurisdiction to ask for a change in capital budget from more than one entity to obtain funding for a project.

Local Budget Yearly Contributions
Local governments may choose to contribute to capital improvement projects on an annual basis as opposed to a one-time budget allocation. A funding change such as this offers a project a financial perpetuity which is a continuous stream of funding. This is especially beneficial when a project requires additional funding for maintenance, operations, salaries, or scheduled enhancements.

Transportation Development Tax Credits
Some states have authorized transportation development tax credits for companies that contribute to a needed community development/public infrastructure improvement. Most of the time eligible activities are generally transportation facilities owned by a public entity for use by the public.

In Lieu of Fees
Developers often dedicate open space or greenways in exchange for waiving fees associated with park and open space allocation requirements in respect to proposed development. These types of requirements are presented within local municipal codes and ordinances.
Utility Lease Revenue

A method to generate revenues from land leased to utilities for locating utility infrastructure on municipally owned parcels. This can improve capital budgets and support financial interest in property that would not otherwise create revenue for the government.

Overview of Federal Funding Sources

The Federal-aid Highway Program provides more than $30 billion per year to the States for the Nation's surface transportation system. Most funds are distributed to the States by formula for several program areas: Interstate Maintenance, National Highway System, Bridge, Surface Transportation Program (STP, which has a set-aside amount for Transportation Enhancement activities), Congestion Mitigation and Air Quality Improvement Program, Highway Safety Improvement Program, Appalachian Development Highway System, and the Recreational Trails Program. There are also several discretionary programs, and congressionally directed high priority projects.

Federal-aid highway funding programs benefit recreational interests, either indirectly by providing access to goods and services, or directly by providing access to recreation areas. Nearly all Federal-aid highway funding categories can be used to develop pedestrian facilities and bicycle transportation facilities, including shared use paths and related facilities that may have recreational use. Since 1992, the States have invested more than $4 billion in more than 10,000 projects for shared use paths, trails, bicycle facilities, and related facilities with Federal-aid highway funds.

Source:
www.fhwa.dot.gov

Contact:
Federal Highway Administration
400 Seventh Street, SW
Washington, DC 20590
Federal Lands Highway Program

Federal Lands Highway Program (FLHP) funds may be used to construct roads and trails within (or, in some cases, providing access to) Federal lands. FLHP funds total about $800 million per year. Recreation interests often benefit from FLHP funds.

There are four categories of FLHP funds: Indian Reservation Roads, Public Lands Highways, Park Roads and Parkways, and Refuge Roads. Funds available to the US Forest Service may be used for forest development roads and trails. Funds available to the US Fish and Wildlife Service also may be used for trails (up to 5 percent). To be eligible for funding, projects must be open to the public and part of an approved Federal land management agency general management plan.

FLHP funds appropriated to a Federal land management agency may be used to pay the non-Federal share of the cost of any Federal-aid highway project that provides access to or within Federal or Indian lands. This allows Federal agencies to use FLHP funds to match Transportation Enhancement, Recreational Trails, or Scenic Byways funds.

Source:
www.fhwa.dot.gov

Contact:
Federal Highway Administration
400 Seventh Street, SW
Washington, DC 20590

Surface Transportation Program - Transportation Enhancement Activities

Pedestrian and bicycle projects are eligible for all Surface Transportation Program (STP) funds. The STP provides more than $6 billion annually to the States through a formula apportionment. Ten percent must be used for Transportation Enhancement (TE) Activities. TE funds provide about two-thirds of the Federal-aid highway funding for pedestrian and bicycle projects and programs. TE funds may be used for project construction and related activities, but not for routine maintenance. TE projects must relate to surface transportation, but many TE projects benefit recreation.
Three of the 12 TE categories specifically benefit pedestrians, bicyclists, and trails:

- Pedestrian and bicycle facilities (which may include sidewalks, bicycle parking, bicycles on buses, and pedestrian and bicycle transportation facilities, including shared use paths),
- Pedestrian and bicycle safety and education activities
- Preservation of abandoned railway corridors (also known as rail-trails or rails-to-trails).

Since 1992, more than 20,000 TE projects have been selected for funding, totaling about $6 billion. More than half of the TE funds have been used for pedestrian and/or bicycle facilities and related projects. About one-third to one-half of these projects are shared use paths or trail-related, including more than 1,000 rail-trail projects.

Many States give extra credit to projects that benefit two or more of the eligible TE activities (including items such as scenic or historic easements, landscaping and scenic beautification, historic preservation, environmental mitigation, and transportation museums).

In general, the maximum Federal share for TE projects is 80 percent (higher in States with large proportions of Federal lands). The non-Federal match must come from project sponsors or other fund sources. Some in-kind materials and services may be credited toward the project match. Some States allow case-by-case exceptions to standard Federal-aid requirements.

**Source:**
www fhwa dot gov/ environment/ te and www enhancements org

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1534 Mail Service Center
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**Surface Transportation Act (SAFETEA LU)**

“On August 10, 2005, the President signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). With guaranteed funding for highways, highway safety, and public transportation totaling $244.1 billion, SAFETEA-LU represents the largest surface transportation investment in our Nation's history. The two landmark bills that brought surface transportation into the 21st century—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21)—shaped the highway program to meet the Nation's changing transportation needs. SAFETEA-LU builds on this firm foundation, supplying the funds and refining the programmatic framework for investments needed to maintain and grow our vital transportation infrastructure.

**Source:**
Federal Highway Administration Office of Legislation and Intergovernmental Affairs Program Analysis Team

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**Recreational Trails Program (RTP)**
The Recreational Trails program provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Funded by contract authority, to remain available for 4 years. Funds are subject to the overall Federal-aid highway obligation limitation.
Before apportioning funds to the States, there will be a takedown of $840,000 each fiscal year (2005-2009) for program research, technical assistance, and training expenses.
Funds are available to develop, construct, maintain, and rehabilitate trails and trail facilities. Trail uses include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.

Continued eligibilities include:
- Maintenance and restoration of trails
- Development and rehabilitation of trailside and trailhead facilities
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails (with some limits on Federal lands)
- Acquisition of easements and fee simple title to property
- Assessment of trail conditions for accessibility and maintenance
- Development and dissemination of publications and operation of trail safety and trail environmental protection programs.

New eligible activities include:
- Assessment of trail conditions for accessibility and maintenance
- Clarification that education funds may be used for publications, monitoring and patrol programs and for trail-related training

States must meet minimum funding between motorized, non-motorized and diverse trail use:
- 40% for diverse trail use;
- 30% for non-motorized recreation
- 30% for motorized recreation

The ability for a State recreational trails advisory committee to waive the set-asides for non-motorized and motorized recreation has been eliminated by SAFETEA-LU.

States are encouraged to enter into contracts and cooperative agreements with youth conservation and service corps to perform trail construction and maintenance.

Recreational Trails program funds may be used to match other Federal program funds for purposes that would be eligible under the Recreational Trails program.

Source:
http://www.fhwa.dot.gov/environment/recrails/
Surface Transportation Program (STP)
The Surface Transportation Program provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities.

Funded by contract authority, to remain available for 4 years. Funds are subject to the overall Federal-aid obligation limitation. Apportioned funds are to be distributed based on the following factors:

- 25% based on total lane miles of Federal-aid highways
- 40% based on vehicle miles traveled on lanes on Federal-aid highways
- 35% based on estimated tax payments attributable to highway users in the States into the Highway Account of the Highway Trust Fund (often referred to as "contributions" to the Highway Account)

The Federal share is generally 80 percent, subject to the sliding scale adjustment. When the funds are used for Interstate projects to add high occupancy vehicle or auxiliary lanes, but not other lanes, the Federal share may be 90 percent, also subject to the sliding scale adjustment.

Source:
www.fhwa.dot.gov
Congestion Mitigation and Air Quality (CMAQ)
The Congestion Mitigation and Air Quality Improvement Program (CMAQ) provides funding for projects and programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide (CO), and particulate matter (PM-10, PM-2.5) which reduce transportation related emissions.

Funded by contract authority, to remain available for 4 years. Funds are subject to the overall Federal-aid obligation limitation.

Funds are apportioned according to a formula based on population and severity of pollution in ozone and carbon monoxide areas, similar to the formula under TEA-21, but weighting factors have been revised.

A State may transfer CMAQ funds to its Surface Transportation, National Highway System, Interstate Maintenance, Bridge, Highway Safety Improvement, and/or Recreational Trails apportionment.

States and MPOs are encouraged to consult with State and local air quality agencies in non-attainment and maintenance areas on the estimated emission reductions from proposed congestion mitigation and air quality improvement programs and projects.

An evaluation and assessment of CMAQ projects and programs to determine the direct and indirect impact of the projects on air quality and congestion is required. A cumulative database describing the impacts shall be maintained and disseminated.

The Federal share is generally 80 percent, subject to sliding scale and 90 percent for Interstate projects. Certain other activities, including carpool/vanpool projects, priority control systems for emergency vehicles and transit vehicles and traffic control signalization receive a Federal share of 100 percent.

Source:
www.fhwa.dot.gov
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Highway Safety Improvement Program (HSIP)
In 2005, safety programs are funded from a set-aside from the Surface Transportation Program. The program authorizes a new core Federal-aid funding program beginning in FY 2006 to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Each State's apportionment of HSIP funds is subject to a setaside for construction and operational improvements on high-risk rural roads. High-risk rural roads are roadways functionally classified as rural major or minor collectors or rural local roads with a fatal and incapacitating injury crash rate above the statewide average for those functional classes of roadways; or likely to experience an increase in traffic volume that leads to a crash rate in excess of the average Statewide rate. The setaside will total $90M nationally and be applied proportionally to the States' HSIP apportionments. If a State certifies that it has met all its needs relating to construction and operational improvements on high-risk rural roads, it may use those funds for any safety improvement project eligible under the HSIP.

The Federal share is 90 percent, subject to the sliding scale adjustment, except that the Federal share is 100% for certain safety improvements listed in 23 USC 120(c).

Source:
www.fhwa.dot.gov


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**National Scenic Byways Program**  
The National Scenic Byways Program provides for the designation by the Secretary of Transportation of roads that have outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities as All-American Roads or National Scenic Byways. To be considered for the designation as an All-American Road or National Scenic Byway, a road must be nominated by a State, Indian Tribe, or a Federal land management agency and must first be designated as a State scenic byway or, in the case of a road on Indian or Federal land, as an Tribal byway or a Federal land management agency byway.

The program also provides discretionary grants for scenic byway projects on All-American Roads, National Scenic Byways, or State-designated scenic byways, and for planning, designing, and developing State scenic byway programs.

The normal Federal share is 80 percent, with a 20 percent non-Federal share required. However, Federal land management agencies may provide matching funds for projects on Federal or Indian lands.

Projects must be developed through each State DOT. In making grants, priority is given to: Each eligible project associated with a highway that has been designated as a National Scenic Byway or All American Road and that is consistent with the corridor management plan for the byway;

Each eligible project along a State designated scenic byway that is consistent with the corridor management plan for the byway, or is intended to foster the development of a plan, and is carried out to make
the byway eligible for designation as a National Scenic Byway or All American Road; and
Each eligible project that is associated with the development of a State scenic byway program. An activity related to the planning, design, or development of a State scenic byway program.

Safety improvements to a State scenic byway, National Scenic Byway, or All American Road to the extent that the improvements are necessary to accommodate increased traffic and changes in the types of vehicles using the highway as a result of the designation as a State scenic byway, National Scenic Byway, or All American Road. Types of improvements include:

- Construction along a scenic byway of a facility for pedestrians and bicyclists, rest area, turnout, highway shoulder improvement, passing lane, overlook, or interpretive facility.
- An improvement to a scenic byway that will enhance access to an area for the purpose of recreation, including water-related recreation.
- Protection of scenic, historical, recreational, cultural, natural, and archaeological resources in an area adjacent to a scenic byway.
- Development and provision of tourist information to the public, including interpretive information about a scenic byway.
- Development and implementation of a scenic byway marketing program.

Source:
http://www.bywaysonline.org/grants/

Contact:
Phone: 1-800-429-9297, option 3, option 5
E-mail: grants-support@byways.org

Safe Routes to School Program (SR2S)

The SRTS is a federally funded program to enable and encourage children, including those with disabilities, to walk and bicycle to school; to make walking and bicycling to school safe and more appealing; and to facilitate planning, development and implementation of projects that will improve safety, and reduce traffic, fuel consumption, and air pollution in
the vicinity of schools. The program was initiated by the passing of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, which establishes a national SRTS program to distribute funding and institutional support to implement SRTS programs in states and communities across the country.

Funds are administered by State departments of transportation to provide financial assistance to State, local, and regional agencies, including non-profit organizations that demonstrate the ability to meet the requirements of the program. The NCDOT Safe Routes to School Program administers the SRTS efforts for North Carolina.

Funds are used for infrastructure related efforts, including planning, design, and construction of projects that will substantially improve the ability of students to walk and bicycle to school. These include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately 2 miles). These programs also emphasize non-infrastructure approaches to educate and encourage communities on how to safely take advantage of walking and bicycling opportunities in their neighborhoods. Such projects may be carried out on any public road or any bicycle or pedestrian pathway or trail in the vicinity of schools.

Each State must set aside from its Safe Routes to School apportionment not less than 10 percent and not more than 30 percent of the funds for non-infrastructure-related activities to encourage walking and bicycling to school. These include public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and training, volunteers, and managers of safe routes to school programs. The Federal share is 100 percent reimbursable funding to state and local agencies after completion of projects.

Source:
www.fhwa.dot.gov

NCDOT Contacts:
Ed Johnson, RLA, ASLA
Safe Routes to School Coordinator
NCDOT Division of Bicycle and Pedestrian Transportation
1552 Mail Service Center (Mail)
Raleigh, NC 27699-1552
Tel: 919.707.2604
Email: erjohnson2@ncdot.gov

1 South Wilmington (Delivery)
Transportation Building, 4th Floor
Raleigh, NC 27601
Direct 919.707.2604 Fax 919.715.4421

Tim Boland, PE
Division Operations Engineer
NCDOT - Division 10
716 W Main St.
Albermarle, NC 28001
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Email: tboland@ncdot.gov

High Priority Projects
The High Priority Projects Program provides designated funding for specific projects identified in SAFETEA-LU. A total of 5,091 projects are identified, each with a specified amount of funding over the 5 years of SAFETEA-LU. [1701]

The funds designated for a project in section 1702 are available only for that project with the following exception: Funds allocated for a project specified below may be obligated for any other of these projects in the same State:
High Priority Projects listed in section 1702 and numbered 3677 or higher;
Projects of National and Regional Significance listed in section 1301 and numbered 19 or higher;
National Corridor Infrastructure Improvement Program projects listed in section 1302 and numbered 28 or higher.
The Federal share remains at 80%, except in the States of Alaska, Montana, Nevada, North Dakota, Oregon, and South Dakota.

**Source:**
www.fhwa.dot.gov

**Contact:**
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**Land and Water Conservation Fund (LWCF)**
The Land and Water Conservation Fund (LWCF) provides funding to assist in preserving, developing, and assuring accessibility to outdoor recreation resources including but not limited to parks, trails, wildlife lands, and other lands and facilities desirable for individual active participation. Grants are to be evaluated based on:
- how the project addresses the identified needs and priorities of a statewide comprehensive or strategic plan
- technical merits
- public/private partnerships

**Eligible Grant Recipients:**
- Counties, cities and towns
- Park districts
- Port districts
- Tribal governments
- State agencies

Grant recipients must provide at least 50% matching funds in either cash or in-kind contributions. Applications are to be evaluated in a competitive process by a team of experts, with criteria developed by a citizen advisory committee. A portion of Federal revenue derived from sale or lease of off-shore oil and gas resources. The program is administered by the US Department of the Interior through the National Park Service and the IAC.
Environmental Protection Agency (EPA) - Environmental Education Grants Program

The Grants Program sponsored by EPA’s Environmental Education Division (EED), Office of Children's Health Protection and Environmental Education, supports environmental education projects that enhance the public’s awareness, knowledge, and skills to help people make informed decisions that affect environmental quality. EPA awards grants each year based on funding appropriated by Congress. Annual funding for the program ranges between $2 and $3 million. More than 75 percent of the grants awarded by this program receive less than $15,000.

Source: http://www.epa.gov/enviroed/grants.html

Contact: Alice Chastain
U.S. EPA, Region 4
Environmental Education Grants
Office of Public Affairs
61 Forsyth Street SW
Atlanta, GA 30303
chastain.alice@epa.gov

Community Block Development Grant Program (HUD-CBDG)

Since States are in the best position to know and to respond to the needs of local governments, Congress amended the Housing and Community Development Act of 1974 (HCD Act) in 1981 to give each State the
opportunity to administer CDBG funds for non-entitlement areas. Non-entitlement areas include those units of general local government which do not receive CDBG funds directly from HUD as part of the entitlement program (Entitlement Cities and Urban Counties). Non-entitlement areas are cities with populations of less than 50,000 (except cities that are designated principal cities of Metropolitan Statistical Areas), and counties with populations of less than 200,000.

The State CDBG program has replaced the Small Cities program in States that have elected to participate. Currently, 49 States and Puerto Rico participate in the program. HUD continues to administer the program for the non-entitled counties in the State of Hawaii because the State has permanently elected not to participate in the State CDBG. The primary statutory objective of the CDBG program is to develop viable communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low- and moderate-income.

Communities receiving CDBG funds from the State may use the funds for many kinds of community development activities including, but not limited to:

- Acquisition of property for public purposes;
- Construction or reconstruction of streets, water and sewer facilities, neighborhood centers, recreation facilities, and other public works;
- Demolition;
- Rehabilitation of public and private buildings;
- Public services;
- Planning activities;
- Assistance to nonprofit entities for community development activities; and
- Assistance to private, for profit entities to carry out economic development activities (including assistance to micro-enterprises).

Source:
www.hud.gov

Contact:
Greensboro Field Office
Asheville Building
Overview of State Funding Sources

Carolin Thread Trail

The Carolina Thread Trail (The Thread) is a regional network of greenways and trails that will eventually reach 15 counties, 2 states and 2.3 million people. Preserving open space and natural areas is their number one priority. The Thread provides grants to communities with adopted Master Plans. The grant application process is on a rolling quarterly schedule. Types of grants: Planning and Implementation grants (Corridor Planning, Land Acquisition, and Construction grants).

Source:
www.carolinathreadtrail.org

North Carolina DOT – Bicycle and Pedestrian Program

The North Carolina General Assembly enacted legislation (G.S. 136-71.12 Funds) that authorizes the North Carolina Department of Transportation (NCDOT) to spend any federal, state, local, or private funds available to the Department and designated for the accomplishment of Article 4A, Bicycle and Bikeway Act of 1974. In addition the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) requires the Department to set aside federal funds from eligible categories for the construction of bicycle and pedestrian transportation facilities.”

Federal Aid Construction Funds – Several categories of federal aid construction funds — National Highway System (NHS) and Surface Transportation Program (STP) — or Congestion Mitigation and Air Quality (CMAQ) funds provide for the construction of pedestrian and
bicycle transportation facilities. The primary source of funding for bicycle and pedestrian projects is STP Enhancement Funding.

*State Construction Funds* – State roadway construction funds (not including the Highway Trust Fund for Urban Loops and Interchanges) may be used for the construction of sidewalks and bicycle accommodations that are a part of roadway improvement projects.

*Governor’s Highway Safety Program (GHSP)* – GHSP funding is provided through an annual program, upon approval of specific project requests, to undertake a variety of pedestrian and bicycle safety initiatives. Amounts of GHSP funds vary from year to year, according to the specific amounts requested.

*Independent Projects* – $6 million is annually set aside for the construction of bicycle improvements that are independent of scheduled highway projects in communities throughout the state. Eighty percent of these funds are from STP-Enhancement funds, while state funds provide the remaining 20 percent. Currently, $1.4 million is annually set aside for pedestrian hazard elimination projects in the 14 NCDOT highway divisions across the state; $200,000 is allocated to the Division of Bicycle and Pedestrian Transportation for projects such as training workshops, pedestrian safety and research projects, and other pedestrian needs statewide.

*Incidental Projects* – Bicycle accommodations such as bike lanes, widened paved shoulders and bicycle-safe bridge design are frequently included as incidental features of highway projects. In addition, bicycle-safe drainage grates are a standard feature of all highway construction. Most pedestrian safety accommodations built by NCDOT are included as part of scheduled highway improvement projects funded with a combination of federal and state roadway construction funds.

**Source:**

www.ncdot.org

**Contact:**

Division of Bicycle and Pedestrian Transportation
1 South Wilmington Street, Raleigh, NC 27601 (Delivery)
1552 Mail Service Center, Raleigh, NC 27699-1552 (Mail)
North Carolina’s Clean Water Management Trust Fund (CWMTF)
North Carolina’s Clean Water Management Trust Fund (CWMTF) was established by the General Assembly in 1996 (Article 18; Chapter 113A of the North Carolina General Statutes). CWMTF receives a direct appropriation from the General Assembly in order to issue grants to local governments, state agencies and conservation non-profits to help finance projects that specifically address water pollution problems. The 21-member, independent, CWMTF Board of Trustees has full responsibility over the allocation of moneys from the Fund.

CWMTF will fund projects that (1) enhance or restore degraded waters, (2) protect unpolluted waters, and/or (3) contribute toward a network of riparian.

Source:
http://www.cwmtf.net

Contact:
Western Piedmont Field Representative:
Bern Schumak
6519 Haystack Road, Dobson, NC 27017
(336) 366-3801
Fax (336) 366-3802
bschumak@surry.net

North Carolina Parks and Recreation Trust Fund (PARTF)
The North Carolina General Assembly established the Parks and Recreation Trust Fund (PARTF) on July 16, 1994 to fund improvements in the state's park system, to fund grants for local governments and to increase the public's access to the state's beaches. The Parks and Recreation Authority, an eleven-member appointed board, was also created to allocate funds from PARTF to the state parks and to the grants program for local governments.
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 grants to local governments. Recipients use the grants to acquire land and/or to develop parks and recreational projects that serve the general public. At this website, you can learn how to apply for a grant, see lists of past grant recipients, and download an application. You can also learn about the Parks and Recreation Authority and how to contact us.

A portion of PARTF is the primary funding source for the Public Beach and Coastal Waterfront Access Program. The program, administered by the Division of Coastal Management (DCM), offers matching grants to local governments throughout North Carolina's twenty coastal counties.

Source:
http://www.ncparks.gov

Contact:
512 N. Salisbury Street, Archdale Building, 7th Floor, Room 742, Raleigh, NC (Physical Address)
1615 MSC, Raleigh, NC 27699-1615 (Mail)
Phone: (919) 733-4181
e-mail: parkinfo@ncmail.net

North Carolina Farmland Preservation Trust Fund
The purpose of the fund is to: Support the purchase of agricultural conservation easements, including transaction costs. Fund public and private enterprise programs that will promote profitable and sustainable farms by assisting farmers in developing and implementing plans for the production of food, fiber and value-added products, agritourism activities, marketing and sales of agricultural products produced on the farm, and other agriculture-related business activities.

The legislation also established a Trust Fund Advisory Committee to advise Commissioner Troxler on the prioritization and allocation of funds, the development of criteria for awarding funds, program planning,
and other areas for the growth and development of family farms in North Carolina.

**Source:**
http://www.ncadfp.org

**Contact:**
NC Agricultural Development & Farmland Preservation Trust Fund
2 West Edenton Street, Raleigh, NC 27601 (Directions)
Mailing Address: 1001 Mail Service Center, Raleigh, NC 27699-1001
Dewitt Hardee, Program Director
Phone: (919) 707-3069
Email: dewitt.hardee@ncagr.gov
David Mitchell, Budget Manager
Phone: (919) 707-3073
Email: david.w.mitchell@ncagr.gov

**North Carolina Natural Heritage Trust Fund**
Established in 1987, the North Carolina Natural Heritage Trust fund provides supplemental funding to select state agencies for the acquisition and protection of important natural areas, to preserve the state’s ecological diversity and cultural heritage, and to inventory the natural heritage resources of the state. The enabling legislation is found at General Statute Article 5A Sections 113-77.6 through 113-77.9.

The trust fund is supported by 25% of the state’s portion of the tax on real estate deed transfers and by a portion of the fees for personalized license plates. These sources now generate about $19 million each year. Since its creation, the trust fund has contributed more than $136 million through 345 grants to support the conservation of more than 217,000 acres.

Conserving North Carolina’s natural and cultural heritage now is critical. The state’s population is expected to grow by 50% in the next 25 years (that’s 4 million more people!). As detailed on One NC Naturally’s website, North Carolina loses an estimated 383 acres per day of woodlands, farmland and open space. This loss of natural areas has serious consequences for our air and water quality, wildlife habitat, recreational opportunities, and our quality of life. Jobs in rural areas are increasingly dependent upon tourism generated by scenic beauty, historic
places and quality outdoor recreational opportunities. Land conservation helps families to continue working in forestry and farming. Surveys show that open space, outdoor recreational opportunities and other conservation benefits are important for attracting and keeping knowledge-based workers.

The Natural Heritage Trust Fund invests in North Carolina’s most significant natural areas, strengthening our communities and our economy.

Source:
http://www.ncnhtf.org/

Contact:
Lisa Riegel, Executive Director
1601 MSC
Raleigh, NC 27699-1601
Phone (919) 707-8638
Fax (919) 715-3060
Email: Lisa.Riegel@ncdenr.gov

North Carolina Conservation Income Tax Credit Program
North Carolina has a unique incentive program to assist land-owners to protect the environment and the quality of life. A Credit is allowed against individual and corporate income taxes when real property is donated for conservation purposes. Interests in property that promote specific public benefits may be donated to a qualified recipient. Such conservation donations qualify for a substantial tax credit.

Source:
http://www.onencnaturally.org/pages/ConservationTaxCredit.html

Contact:
N.C. Department of Environment and Natural Resources
Office of Conservation, Planning and Community Affairs
1601 Mail Service Center, Raleigh, NC 27699
Scott Pohlman, Conservation Incentives Program Director
North Carolina Adopt-a-Trail Grants
The Adopt-A-Trail Grant Program (AAT) awards $108,000 annually to government agencies, nonprofit organizations and private trail groups for trails projects. The funds can be used for trail building, trail signage and facilities, trail maintenance, trail brochures and maps, and other related uses. Requires no local match or in-kind services.

Source:
http://ils.unc.edu/parkproject/trails/grant.html

Contact:
Darrell McBane, State Trails Program Manager
(919) 715-8699
Fax (919) 715-3085
darrell.mcbane@ncdenr.gov
N.C. Division of Parks and Recreation
State Trails Program
1615 Mail Service Center
Raleigh, NC 27699-1615

North Carolina Division of Water Quality - 319 Program Grants
By amendment to the Clean Water Act Section in 1987, the Section 319 Grant program was established to provide funding for efforts to curb nonpoint source (NPS) pollution, including that which occurs though storm water runoff. The U.S. Environmental Protection Agency provides funds to state and tribal agencies, which are then allocated via a competitive grant process to organizations to address current or potential NPS concerns. Funds may be used to demonstrate best management practices (BMPs), establish Total Maximum Daily Load (TMDL) for a watershed, or to restore impaired streams or other water resources. In North Carolina, the 319 Grant Program is administered by the Division of Water Quality of the Department of Environment and Natural Resources.
Each fiscal year North Carolina is awarded nearly 5 million dollars to address nonpoint source pollution through its 319 Grant program. Thirty percent of the funding supports ongoing state nonpoint source programs. The remaining seventy percent is made available through a competitive grants process. At the beginning of each year (normally by mid-February), the NC 319 Program issues a request for proposals with an open response period of three months. Grants are divided into two categories: Base and Incremental. Base Projects concern research-oriented, demonstrative, or educational purposes for identifying and preventing potential NPS areas in the state, where waters may be at risk of becoming impaired. Incremental projects seek to restore streams or other portions of watersheds that are already impaired and not presently satisfying their intended uses.

State and local governments, interstate and intrastate agencies, public and private nonprofit organizations, and educational institutions are eligible to apply for Section 319 monies. An interagency workgroup reviews the proposals and selects those of merit to be funded.

**Source:**
http://portal.ncdenr.org/web/wq/ps/nps/319program

**Contact:**
Mooresville Regional Office
610 East Center Ave
Suite 301, Mooresville, NC 28115
Voice: (704) 663-1699
Fax: (704) 663-6040

*North Carolina Ecosystem Enhancement Program*
Clean water, clean air and thriving natural habitats are fundamental indicators of a healthy environment. Protecting North Carolina's ecosystems is critical to maintaining the state's quality of life, continuing its economic growth, and ensuring the health and well-being of its citizens. According to the three-party Memorandum of Agreement that established the initiative's procedures in July 2003, the mission of the Ecosystem Enhancement Program is to "restore, enhance, preserve and protect the functions associated with wetlands, streams and riparian areas, including but not limited to those necessary for the restoration,
maintenance and protection of water quality and riparian habitats throughout North Carolina."

EEP provides:

- High-quality, cost-effective projects for watershed improvement and protection;
- Compensation for unavoidable environmental impacts associated with transportation-infrastructure and economic development; and
- Detailed watershed-planning and project-implementation efforts within North Carolina's threatened or degraded watersheds.

**Source:**
http://portal.ncdenr.org/web/eeplasp

**Contact:**
MAIN OFFICE
Shipping Address:
116 West Jones Street
Raleigh NC 27603
(919)715-0476
(919)715-2219 (fax)

Mailing Address:
1652 Mail Service Center
Raleigh, NC 27699-1652

**Source:**
http://www.ncep.net/abouteeplasp/wetlands.html

**Contact:**
Mecklenburg County Project Manager
Robin Hoffman
(919) 715-5836
Robin.hoffman@ncdenr.gov

*Urban and Community Forestry Assistance Program*
Urban and Community Forestry begins to address the stewardship of urban natural resources where 80 percent of the Nation lives. Important connections exist between the quality of life in metropolitan areas and
land consumption associated with sprawl. In addition there is a strong economic case for conservation of green open space to guide growth and revitalize city centers and older suburbs. The Urban and Community Forestry Program responds to these needs by maintaining, restoring, and improving the health of urban trees, forests, green spaces and sustainable forest ecosystems for more than 70 million acres of America’s urban and community forest resources. Through these efforts the Program encourages and promotes the creation of healthier, more livable urban environments across the Nation. The Program will continue to expand partnerships with non-governmental organizations to restore natural resources in older, declining cities and towns.

Source:
http://www.fs.fed.us/ucf/

Contact:
Ed Macie (R-8)
US Forest Service
1720 Peachtree Road, NW
Suite 850S
Atlanta, GA 30367
Phone: 404-347-1647
Fax: 404-347-2776
Email: emacie@fs.fed.us

Water Resources Development Grant Program
This program 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. Contact John Sutherland, Jeff Bruton or Darren England for additional information.

Source:
http://www.ncwater.org/Financial_Assistance/

Contact:
NC Division of Water Resources,
Blue Cross Blue Shield Grant
The BCBSNC Foundation funds programs that align with its mission and established focus areas. (Greenways, Bikeways and Trails would fall under the “Healthy Active Communities” focus area.) Applicants in the Grants up to $25,000 category, engage in a two-step, competitive process to identify those projects that meet all required eligibility criteria and present the most compelling case for funding. The typical range is between $5,000 - $15,000.

Source:
http://www.bcbsncfoundation.org/grants/

Contact:
Mailing Address:
BCBSNC Foundation
P.O. Box 2291
Durham, NC 27702
General Contact:
Phone: 919-765-7347
Fax: 919-765-7288
Email: jill.mallatratt@bcbsncfoundation.org

Overview Private Funding

Many communities have solicited greenway funding assistance from private foundations and other conservation-minded benefactors. Below are two examples of private funding opportunities available in North Carolina.

Charlotte Mecklenburg Community Foundation/ Foundation for the Carolinas
The Charlotte Mecklenburg Community Foundation is a permanent endowment established in 2001 to benefit a broad range of charitable purposes in Mecklenburg County.

The Foundation provides strategic leadership in the community by convening stakeholders on critical issues related to the civic, social, environmental and economic health of Mecklenburg County. It also assists community leaders in better understanding the challenges confronting Mecklenburg County and helps find solutions to many of our most pressing community issues.

Source:
http://www.fftc.org/

Contact:
Brian Collier
Senior Vice President
Community Philanthropy
704.973.4556
bcollier@fftc.org

North Carolina Community Foundation
The North Carolina Community Foundation serves philanthropic donors and supports not-for-profit organizations throughout North Carolina. The NCCF makes grants from charitable funds established by individuals, families, corporations, and non-profit organizations. Our donors make grants from over 800 funds that serve the following areas of interest:

- Arts and Humanities
- Community Service
- Education
- Environment
- Health
- Historic Preservation
- Religion
- Science
- Social Services
- Youth

Source:
http://www.nccommunityfoundation.org/

Contact:
4601 Six Forks Road, Suite 524
Raleigh, North Carolina 27609
(919) 828-4387
(800) 201-9533
Fax: (919) 828-5495

*Duke Energy Foundation*

The Duke Energy Foundation is the core of Duke Energy’s support and development of sustainable communities. The Foundation, along with employee and retiree volunteers, actively works to improve the quality of life in our communities, lending expertise in the form of leadership and financial support through grants to charitable organizations.

**Organizational Grants**

Community organizations are encouraged to complete our online grant application for financial consideration. We review requests at the regional level, and make decisions based on the needs of the community and alignment with our Foundation’s areas of focus. Please refer to our giving guidelines for more information.

**Volunteer Grants**

The Duke Energy Foundation provides financial support for our employees and retirees who volunteer in their communities. Volunteer grants are for “sweat equity” projects completed by employees, while board leadership grants are designed for employees and retirees who serve on the board of directors of qualifying organizations. The Foundation also matches 50 cents on the dollar for all employee and retiree contributions to 501(c)(3) organizations, and dollar for dollar for all educational institutions. Read more about these programs on our Volunteerism and Community Engagement page.

**Source:**


*American Greenways Eastman Kodak Awards*

Eastman Kodak, The Conservation Fund, and the National Geographic Society provide small grants to stimulate the planning and design of greenways in communities throughout America. The annual grants program was instituted in response to the President's Commission on
Americans Outdoors recommendation to establish a national network of greenways. Made possible by a generous grant from Eastman Kodak, the program also honors groups and individuals whose ingenuity and creativity foster the creation of greenways. The program goals include:

- Develop new, action-oriented greenway projects
- Assist grassroots greenway organizations
- Leverage additional money for conservation and greenway development
- Recognize and encourage greenway proponents and organizations

Source:
http://www.conservationfund.org

Contact:
North Carolina Field Office
P.O. Box 271
Chapel Hill, NC 27514
Phone: (919) 967-2223
Fax: (919) 967-9702
B. Definitions

[Note: The definitions marked with (*) are from the “Guide for the Development of Bicycle Facilities – 2012 – Fourth Edition”, published by the American Association of State Highway and Transportation Officials (AASHTO); 444 North Capitol Street, NW; Washington, DC, 20001. Used with permission of the publisher.

Bicycle – A pedal-powered vehicle upon which the human operator sits. The term “bicycle” for this publication includes three- and four-wheeled human powered vehicles, but not tricycles for children. In some states, a bicycle is considered a vehicle, while in others, it is not. (*)

Bicycle Boulevard – A street segment, or series of contiguous street segments, that has been modified to accommodate through bicycle traffic and minimize through motor traffic. (*)

Bicycle Facilities – A general term denoting improvements and provisions to accommodate or encourage bicycling, including secure parking and storage facilities; showers, dressing rooms and lavatories for commuting bicyclists at employment, recreational or other destinations; and shared roadways not specifically defined for bicycle use. (modified *)

Bicycle Lane or Bike Lane – A portion of roadway that has been designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs. It is intended for one-way travel, usually in the same direction as the adjacent traffic lane, unless designated as a contratwo-wayflow lane. (*)

Bicycle Level of Service (BLOS) – A model used to estimate bicyclists’ average perception of the quality of service of a section of roadway between two intersections. (*)

Bicycle Locker or Bike Locker – A secure, lockable container used for individual bicycle storage. (*)

Bicycle Network – A system of bikeways designated by the jurisdiction having authority. This system may include bike lanes, bicycle routes, shared multi-use paths, and other identifiable bicycle facilities. (*)
Bicycle Rack or Bike Rack – A stationary fixture to which a bicycle can be securely attached. (*)

Bicycle Route or Bike Route – A roadway or bikeway designated by the jurisdiction having authority, either with a unique route designation, or with Bike Route signs, along which bicycle guide signs may provide directional and distance information. Signs that provide directional, distance, and destination information for bicyclists do not necessarily establish a bicycle route. (*)

Bicycle Wheel Channel – A channel installed along the side of a stairway to facilitate walking a bicycle up or down the stairs. (*)

Bikeway – A bikeway is any path, paved or unpaved, that in some fashion has been specifically designed and designated for bicycle travel, including both on- and off-road bicycle facilities. In most jurisdictions, on-road bikeways are under control of the state, and as such, their use is governed by rules and regulations related to safe bikeway travel. Bikeways are typically paved in concrete or asphalt with the exception of off-road mountain trail bicycle courses. The most important function of a bikeway is to provide cyclists with their own space on the road. This can be accomplished by several different means, including bike lanes, wide paved shoulders, and wide outside lanes.

Greenway – Historically the term ‘greenway’ has been used to describe a linear open space that often served as a method of land conservation. Today greenways are specifically designed to connect community destinations such as parks, neighborhoods, and schools. Greenways serve several functions by providing a non-motorized transportation alternative, conserving open space, preserving wildlife habitats, acting as buffers between developed areas, and improving local air and water quality. Greenways may be effectively sited along public utility rights-of-way, or make practical use of floodplain or other designated environmental set-aside areas that otherwise cannot be used for roads, residential or commercial development.

Highway – A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way. (*)
Independent Right-of-Way – A general term denoting right-of-way outside the boundaries of a conventional highway. (*)

Joint Development and Maintenance Authority (JDAMA) – A cooperative agreement among jurisdictions engaged in a regional recreational infrastructure development that provides for shared, efficient involvement of planning, design, construction and maintenance personnel and resources to ensure success throughout the project life cycle.

Joint Powers Agreement (JPA) – A cooperative agreement among local or regional government authorities engaged in infrastructure facilities development that establishes zoning, financing, taxing, jurisdictional, and enforcement policies affecting such facilities.

Public-Private Partnership – An effective blending of government, non-profit, foundation and private sector resources study, planning, design, development and funding resources in a synergistic manner to help advance desired projects to completion.

Rail-Trail – A shared use path, either paved or unpaved, built within the right-of-way of a former railroad. (*)

Rail-With-Trail – A shared use path, either paved or unpaved, built within the right-of-way of an active railroad. (*)

Right-of-Way – A general term denoting land, property, or interest therein, usually in a strip, acquired for, or devoted to transportation purposes or utilities. (*)

Right-of-Way (Assignment) – The right of one driver or pedestrian to proceed in a lawful manner in preference to another driver or pedestrian. (*)

Roadway – A portion of the highway, including shoulders, intended for vehicular use. (*)

Recumbent Bicycle – A bicycle with pedals at roughly the same level as the seat where the operator is seated in a reclined position with their back supported. (*)
Roundabout – A type of circular intersection that provides yield control to all entering vehicles and features channelized approaches and geometry to encourage reduced travel speeds through the circular roadway. (*)

Rumble Strips – A textured or grooved pavement treatment designed to create noise and vibration to alert motorists of a need to change their path or speed. Longitudinal rumble strips are sometimes used on or along shoulders or centerlines of highways to alert motorists who stray from the appropriate traveled way. Transverse rumble strips are placed on the roadway surface in the travel lane, perpendicular to the direction of travel. (*)

Shared Lane – A lane of a traveled way that is open to both bicycle and motor vehicle travel. (*)

Shared-Lane Marking – A pavement marking symbol that indicates an appropriate bicycle positioning in a shared lane. (*)

Shared Roadway – A roadway that is open to both bicycle and motor vehicle travel. (*)

Shared Use Path – A bikeway physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Most shared use paths are designated for two-way travel. (*)

Shoulder – The portion of the roadway contiguous with the traveled way that accommodates stopped vehicles, emergency use, and lateral support of sub base, base, and surface courses. Shoulders, where paved, are often used by bicyclists. (*)

Sidewalk – That portion of street or highway right-of-way, beyond the curb or edge of roadway pavement, which is intended for use by pedestrians. (*)

Sidepath – A shared use path located immediately adjacent and parallel to a roadway. (*)
Signs, or Signage – Devices made typically of sheet aluminum, steel, or other durable materials and marked with weather resistant paint displaying symbols, printed material, or directional arrows, and which are mounted on posts, poles, or other devices adjacent to a roadway, bikeway, or trail, in order to provide directional, speed, turning, caution, terrain or hazard warning, or other instructions to operators of vehicles using the roadway, bikeway, or trail.

Speed Limit – Generally the speed at which a vehicle may be safely operated when considering the terrain and specifications of a roadway, bikeway, or trail on which the vehicle is moving. Speed limits may be designated by Federal, State, or local authorities, depending on locales, and the party having maintenance and enforcement jurisdiction over the roadway, bikeway, or trail.

Trails -- Trails are often multi-purpose pathways located within greenways, parks and natural resource areas. They serve as pedestrian and bicycle connections that encourage safe travel to and from origins and destinations throughout the community.

A trail is typically constructed of materials such as concrete, asphalt, compacted gravel, or compacted natural materials. Trails are used for recreation, or as an alternative mode of non-motorized transportation, or both. Trails are designed with specific users in mind, such as runners, bicyclists, or hikers.

Traveled Way – The portion of the roadway intended for the movement of vehicles, exclusive of shoulders and any bike lane immediately inside of the shoulder. (*)

Unpaved Path – Path not surfaced with a hard, durable surface such as asphalt or Portland cement concrete. (*)

Wide Outside Lane – A lateral extension of the pavement of a roadway or shoulder created especially for use by bicyclists, skaters, user of wheel chairs, and pedestrians, and set apart from the roadway by some form of physical barrier to safely separate users of the lane from auto vehicular traffic.
C. Supporting Documents

GREENSBORO STUDY
The Downtown Greenway is a job creator (short- and long-term) and an economic development engine. The Greenway makes nearby real estate more desirable, enhances existing property values, and encourages further development. Several parcels near the Greenway route already reflect this upward trend.

• Arbor House condominiums have a tax value of $9.6 million. Prior to development, the parcel sold for $750,000.
• New Zion developments on MLK Jr. Boulevard will exceed $20 million.
• TND Partners’ mixed-use project at MLK Jr. Boulevard and Lee Street (Ole Asheboro neighborhood) will create 165 units and represent an investment of $12.4 million.
• The city’s redevelopment goals for South Elm Street envision investments of about $50 million.
• State Employees Credit Union site, Murrow Boulevard. Total investment after new construction: $4 million.
• Deep Roots Market, North Eugene Street. Total investment after new construction: $1.9 million (estimated).
• Existing building, North Eugene Street. Estimated value following construction of Deep Roots Market: up 24 percent.
• Construction of Phase 1A of the Greenway has created 25 local jobs.

Greenways Stimulate Economic Development
Greensboro: investing in its future
Greenways produce positive returns in other cities

Boulder A study of the impacts of greenbelts on neighborhood property values in Boulder, Colorado, revealed the aggregate property value for one neighborhood was approximately $5.4 million greater than if there had been no greenbelt. This results in approximately $500,000 additional potential property tax revenue annually.

– Economic Impacts of Protecting Rivers, Trails and Greenway Corridors, National Park Service / 1995

Every $1 invested in greenways, parks, and open space generates $5 to $12 in private investment and positive economic impact.*

* Downtown Greenway research.
**Downtown Greensboro: increasing in value**

- In 2003, the tax value of property in Downtown Greensboro was $344 million.**
- The current (2010) downtown tax value (following development of Center City Park and NewBridge Bank Park) is $630 million.
- From 2005 to 2009, the tax value of Downtown Greensboro grew by 21 percent.
- From 2005 to 2009, the tax value for all of Greensboro (adjusting for annexation of The Cardinal subdivision) grew by 8.2 percent.

**Round Rock, Texas** “The preponderance of studies has revealed that excellent parks tend to add 15 percent to the value of a proximate dwelling…” (Harnik & Welle, 2009).

– Parks and Recreation Economic Benefit Analysis, Round Rock (Texas) Parks and Recreation, March 2010

**Seattle** “Parks increased the value of residential properties by $1.6 billion in 2010 – nearly 5 percent of the property value. This increased tax revenue to (Seattle) by more than $14.7 million.”

– Trust for Public Lands, March 2010

**Philadelphia** “Higher property values of residences closer to parks added $18.1 million to Philadelphia’s tax revenues in fiscal 2007.”


**Washington, D.C.** “Washington reaped an additional $6.95 million in property tax because of parks in 2006.”

– Measuring the Economic Value of a City Park System (Harnick and Welle) 2009

**Milford, Delaware** “The Mispillion River Greenway is credited with inspiring downtown investment and a net gain in new businesses with more than 250 people working in a downtown that was nearly vacant 10 years ago.”

– Economic Benefits of Trails and Greenways, published by the Rails-to-Trails Conservancy 2003

**Charlotte** The proposed Carolina Thread Trail is projected to raise housing values by 4 percent along the trail’s route, for an average of $3,380 per home. Total dollar gain in the affected area running through 15 counties is projected to be $1.7 billion.

“The annual economic benefit will exceed the amount of the initial
investment in the form of more property tax revenues, increased recreational value, and added tourism activity.”