

Mt Juliet Greenway, Bike and Pedestrian Master Plan

Mt. Juliet Elected Officials

Kevin Mack	Mayor
Linda Elam	Vice Mayor - Commissioner
James Bradshaw	Commissioner
Ray Justice	Commissioner
Ed Hagerty	Commissioner

Mt. Juliet Greenway Advisory Committee

Tom Brashears	Planning Director, Wilson County
Bob Daniels	Beautification Committee
Paul Deyo	Planning Commission - Park Board
Linda Elam	Vice Mayor - Planning Commission
Bobby Franklin	Planning Director, Mt. Juliet
Ed Hagerty	Commissioner - Planning Commission
Val Kelly	Appointed position
Kevin Mack	Mayor
Rob Shearer	City Manager
Harold Sutton	Appointed position
David Utley	Appointed position
Dorinda Wolentarski	Appointed position

Consultant:

Fisher & Arnold, Inc.

2110 Blair Boulevard
Nashville, Tennessee 37212
(615) 383-6000
www.fisherarnold.com

Executive Summary

It is the goal of the Greenway Bike & Pedestrian Master Plan to establish an ecosystem - based approach with the achievement of sustainable development and linked greenspaces as primary long-term objectives. The master plan provides a two level framework for protecting, restoring and linking the natural features and their functions in the City of Mt. Juliet to achieve a healthy natural environment and ecological diversity. The policy of this plan is designed to address cumulative impacts by promoting comprehensive planning for natural areas and watersheds.

The Mt. Juliet Greenway Bike & Pedestrian Master Plan is based on the belief that the quality of life in Mt. Juliet will be enhanced by the establishment and maintenance of a network that links environmental resources and recreational areas both within and beyond the boundaries of Mt. Juliet.

The Goals and Objectives established by the Greenway Advisory Committee are as follows:

- 1) Promote an attractive, cost effective and convenient greenway system that connects public and private open and green spaces with sidewalks throughout Mt. Juliet.
- 2) Establishment of an ongoing mechanism to oversee design funding opportunities and economic development strategies with broad representation from the whole community.
- 3) Encourage private support and development for the greenway that will use planned and existing utility easements, road acquisition and construction to minimize public cost of greenway development.
- 4) Plan the greenway system to be eligible for all private, local, state and federal funding programs including moneys available through the Intermodal Surface Transportation Efficiency Act (TEA 21), The Clean Air Act Amendments 1990, Recreational Access Funds and others as identified.
- 5) Describe public and private responsibilities to maintain an attractive, useful and safe greenway.
- 6) The greenway must contain a variety of features to attract and serve a wide range of diverse users.
- 7) Preserve and enhance all streams, wetlands and historic features and incorporate them as part of the greenway system.
- 8) Coordinate the greenway system with area storm water management.
- 9) Develop a comprehensive educational and enforcement program to promote the safe use of the greenway system and the personal safety of the users.
- 10) Create a greenway that enhances economic development and attracts tourists.

Environmental and physical features have a strong, underlying influence on land use patterns in the City. Land use changes can affect many of these features in a negative or positive fashion. These features can serve as amenities for development or constraints limiting development.

The Greenway Bike & Pedestrian Master Plan should be used as a guide for land development to maximize the value of potential amenities and adverse impacts. In undeveloped areas, the environmental features can serve as "edges" or boundaries that determine or separate the locations of different land uses. In developed areas, it can assist in preservation or restoration of sensitive environmental features.

It is important that the City maintain a detailed database of physical information such as flood plains, farm ponds, wetlands and sink hole information to support environmental analysis as part of all land use planning. Described below are some of these key physical and environmental features that should be included in any site analyses for specific development proposals. Environmental amenities or resources are described first, and then environmental constraints to development are described.

Water features

Key water features include isolated wetlands, farm ponds, stream corridors, drainage areas and riparian areas.

Maintaining and providing physical connections between these features will be important. As part of the planning for the greenway, bicycle and pedestrian system the City will need to evaluate the effect of any proposed development on these features. The City will need to determine whether to preserve them in their natural state or to allow them to be altered by development.

Recommendations

Water features should be preserved, protected and used for a variety of open space purposes.

Maintaining and improving connections between open space parcels should be a priority, including maintaining the continuity of drainage corridors as they cross roadways and developments. The use of culverts to channel drainage severely limits their open space function.

Water features should be used to provide open space connections in a way that protects wildlife, supports plant populations and allows for an interconnected system of bicycle and pedestrian trails.

Existing and Planned Green/Open Space

The plan shows existing developed parks, undeveloped natural areas and greenbelt links. This system provides recreational opportunities as well as pedestrian and bicycle trails.

Recommendations

Identification of choice open space lands should occur as part of the site analysis for new development. Open space should be given the same importance as other land uses.

Open space should be recognized as an important land use in neighborhoods. It can provide a community focal point, support walking, bicycling, and other activities and provide connections between other neighborhoods and land uses.

Overhead Utility Transmission and Gas/Petroleum Pipelines

Utility features existing in the City include overhead transmission lines and gas and oil pipelines. The Tennessee Valley Authority (TVA) owns electrical transmission lines and has an easement, however, land ownership in most cases is by the adjacent landowner. Columbia Gulf owns a pipeline easement, but does not own the land underneath.

Recommendations

In some circumstances, these corridors will be feasible for incorporation into the City's Greenway, Bike & Pedestrian Master Plan. Any future development of land with easements in these areas should be considered for greenways in addition to the underlying utility need.

Historic Resources

Mt. Juliet should survey and map all historic structures, archeological sites and other notable sites. These resources should be placed in the historical database.

Recommendation

In newly developing areas, historic and archeological sites should be preserved as open space when appropriate. The Tennessee Historical Commission review and compliance section checklist is included in Chapter 4 of this report for Section 106 compliance.

Bicycles

Many of Mt. Juliet's systems of roads act as a barrier to a bicyclist. Some of the roads are too narrow or winding for safe use. Safe bicycling can take place in many neighborhoods but they are not connected to other neighborhoods. Bicycle routes

should be established to provide the most direct, shortest and safest routes to desired destinations.

Recommendations

The City should develop and implement a program to add bicycle lanes to existing streets and to make connections using common areas or other design features.

All future developments should include streets designed to accommodate safe bicycle travel.

Pedestrian Routes

To promote walking, destinations need to be 1,300 - 1,500 feet or 5 to 10 minutes from their origin. Pedestrian routes should include safe and well-maintained sidewalks with a well-designed walking environment. Concentrating destinations, such as employment, shopping, recreation and schools will encourage walking.

Recommendations

All new developments should include pedestrian routes, which provide connections with nearby destinations and with other pedestrian routes.

Streets should be provided with appropriate lighting, landscaping and street furniture and should include detached sidewalks separated from lanes of traffic by trees and other landscaping, along with well-designated crosswalks.

Pedestrian routes should be interconnected with the greenway system.

Lastly, it is important that the City of Mt. Juliet coordinate its Greenway, Bike & Pedestrian Master Plan with the Wilson County School District, Nashville and Davidson County and the City of Lebanon. By coordinating this effort, a well organized regional system of greenways and bicycle routes could be developed.

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• **Chapter 1: History of Greenways and Trails in Tennessee**

Trails have played an important role in the development of Tennessee. Tennessee trails have played an important part in influencing the history of the United State. The Native American networks of trails such as the Chicksaw Trace in West Tennessee to the Black Fox Trail through middle and east Tennessee to the National Scenic Trail along the ridge tops of Cherokee National Forest and the Great Smoky Mountains. The early explorers also found a complex network of foot-paths that were used by Native Americans these paths were also used by settlers as wagon roads and some eventually became the highways of today.

Some of the important trails of the past that were responsible for the development of Tennessee are:

- The Wilderness Road, blazed by Daniel Boone in 1775 between Tennessee and Kentucky
- The Overmountain Victory National Historic Trail. This trail follows the path taken by "volunteers" from the Watauga settlement to Kings Mountain, South Carolina during the Revolutionary war.
- The Natchez Trace was a land side return route along the Tennessee and Mississippi Rivers.
- The Trail of Tears National Historic Trail. This is a memorial to the tragedy caused by the removal of the Cherokee Nation from the east. (Hwy 70)
- The Appalachian Trail. This is the first long distance recreational trail developed in the State and was envisioned by Benton Mackaye in 1921.

The Benefits of Greenways, Trails and Sidewalks

A multi-objective trail system for the City of Mt. Juliet can address and resolve many community issues that effect the present and future environmental and economic health of the community. Greenways, trails and sidewalks have been implemented by other communities to provide health and recreation, alternative transportation, flood control, protection of wetlands and historical sites, conserve wildlife habitat and buffer adjacent land-uses. Greenways incorporate varying types and intensities of human uses, including trails for recreation and alternative transportation. Trails have been shown to increase the value of adjacent private properties as an amenity and connector to residential and commercial developments.

Transportation Benefit

Since the late 1940's most American communities have grown in a sprawling suburban form as a result of our dependence upon the automobile and our choice of living locations. Americans have abandoned some traditional forms of transportation such as rail transportation and have been slow at improving or increasing other forms such as bicycle and bus transportation systems. Alternatives modes of transportation should be considered to provide some relief to traffic congestion and air quality degradation for the citizens of Mt. Juliet.



Multi-use trail corridors throughout Mt. Juliet can serve as an extension of the roadway network offering realistic and viable connections between points of origin and destination. Until an overall mass transportation system is developed in conjunction with Metro Nashville/Davidson County, this system will primarily be used by the citizens of the community within the community. Numerous linkages can presently be developed between residential, commercial, schools, parks and offices. National surveys by the Federal Highway Administration have shown that Americans are willing to walk as far as one to one and a half miles to a destination and bike as far as five miles. Nashville/Davidson County and Lebanon have developed individual Greenways and Trails Master Plans and this plan is intended to connect to both systems.

Health and Recreation Benefit

Americans are facing a national health crisis. A study completed in May of 2002 identified 61% of Americans adults and 13% of children as overweight. These figures have significantly increased for adults from 47% in 1976. In December of 2000, Surgeon General David Satcher formulated a list of strategies of Communication, Action, Research and Evaluation (CARE). Two of the strategies are: to ensure daily, quality physical education for all school grades and make community facilities available for physical activity for all people, including on the weekends.

Trails encourage more people to walk or bike to short distance destinations, improving the health of residents. Studies have shown that as little as 30 minutes a day of physical activity such as bicycling or walking can be an essential ingredient of a healthy life style. Providing opportunities for participation in various outdoor activities close to where people live and work is an important component of promoting healthy life-styles for residents of Mt. Juliet.

Water Quality & Quantity Benefits

Greenway trail corridors often preserve wooded open space along creeks and streams which absorb flood water and filter pollutants from storm water. As a flood control measure, greenway corridors serve as primary storage zones during periods of heavy rainfall. During non-flood periods, the greenway can be used for recreational purposes such as canoeing and kayaking.

Greenway trails also serve to improve surface water quality by filtering out sediment and pollutants prior to getting in the waterway. By filtering sediment and pollutants, water quality is improved for wildlife that depends on streams for their habitat.

Plant & Animal Benefits

Greenways and trails can provide important habitat for many species of wildlife and plants. Deer, raccoon and rabbits were observed along both Stoners and Cedar Creek near residential areas. Many greenways incorporate a variety of site conditions such as diverse topography, soil conditions and habitat. Because of this diversity, greenways are being defined as "gene-ways" for both plant material and wildlife. These "gene-ways" can become primary migratory corridors for terrestrial wildlife serving to help maintain the integrity of many plant and animal gene pools.



Some biologists have determined that greenways are essential to maintaining healthy wildlife populations in a community.

Both Cedar Creek and Stoners Creek are diverse micro-environments. Cedar Creek is slow moving and meanders through the community while Stoners Creek is shallow and flows over numerous rock outcrops. Both of these creeks could have programs established along them to study the ecosystems and their relationship to the environment. Cedar Creek passes within walking distance of the high school and Stoners Creek passes through Stoners Creek Elementary and Mt. Juliet Jr. High School and is within walking distance of Mt. Juliet and Rutland Elementary Schools.

Quality of Life Benefit

Communities with trail facilities and high levels of walking and bicycling are consistently rated as some of the best places to live in America. Examples of this are Portland, Oregon, Denver, Colorado and Germantown, Tennessee. Residents enjoy an increased quality of life defined by a greener, safer and more interactive community. Successful trail projects across the United States have served to provide meeting areas for neighbors, areas for children's play, and gathering areas for community groups in which to celebrate. Some communities celebrate "Trail Days" to celebrate the outdoors and local traditions. Various walking and running events are also held on trails to support charities or extend traditional sporting events.

Safety Benefit

Many Americans are concerned with crime and some of the best deterrents to criminal activity are community involvement and awareness. Trails have proven to be an effective tool to encourage local residents to participate in community watch programs. Crime statistics and reports from law enforcement officials have shown that parks and greenway trails are typically land uses with the lowest incident of criminal activity. As a recreation resource, alternative transportation corridor, or an area where fitness activities can take place, most trails provide a much safer and more user-friendly resource than other linear corridors such as roads. Trails typically attract local residents who use the facility frequently, creating an environment that is virtually self-policing.

Education Benefit

A trail system could enhance and protect many of the natural and cultural resources in Mt. Juliet. Interpretive displays and outdoor classrooms along trails can provide information to people of all ages on such topics as hydrology, history, ecology and the need to recycle materials. The educational elements of the trails will serve to increase awareness and appreciation of important local resources. Opportunities exist for local schools to educate students about the natural environment along greenways and trails.



Economic Benefit

Trails offer numerous economic benefits to Mt. Juliet, including higher real property values, increased recreation related revenues, and cost savings for public services. Trails have been shown to increase the value of properties immediately adjacent to the trail by as much as 5% to 20%. Many homebuyers and corporations are seeking real estate that provides direct access to public and private trail systems. Trails are viewed as amenities by residents and developers of commercial and office parks who in turn are realizing higher sales and rental values and profits. In addition, greenways in the Mt. Juliet area can save tax dollars by utilizing resource-based strategies for managing community storm water and hazard mitigation and thus place landscapes that would not normally be developable in a conventional manner into productive use.

What is happening at the state level

In 1998, Governor Sunquist created the Governor's Council on Greenways and Trails to oversee the development of the Tennessee Greenways and Trails Plan and to address critical issues in the establishment of a statewide system of greenways and trails.

The Governor Council on Greenways and Trails and the Tennessee Greenways and Trails Plan brings together all greenways and trails into a strategic plan. This plan is reviewed annually for effectiveness and implementation with updates prepared every two to five years.

The Governors Council on Greenways and Trails is an 18 member advisory board created to oversee the development of a statewide system of greenways and trails. This advisory group is comprised of a diverse group of users from motorized to non-motorized and includes farmers and industry.

Governors Charter:

The Governors Council was created with these objectives:

- Plan and promote the activities to address greenways and trail needs in Tennessee
- Foster partnerships and encourage the participation of local, federal, private and non-profit organizations to accomplish the objectives of the Charter
- Plan for the development of a statewide system of greenways and trails for the benefit of all Tennesseans

The objectives of the Governors Council:

- To establish a state - level support for greenways and trails
- To address the barriers that prevent development of greenways and trails
- To offer incentives, programs and polices that enhance the development and protection of greenways and trails
- To provide greenway and trail resources through funding, organizational contacts and technical assistance.





LEGEND

-  **SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**
- ZONE A** NO BASE FLOOD ELEVATIONS DETERMINED.
- ZONE AE** BASE FLOOD ELEVATIONS DETERMINED.
- ZONE AH** FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY PONDING); BASE FLOOD ELEVATIONS DETERMINED.
- ZONE AO** FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTH DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING; VELOCITIES ALSO DETERMINED.
- ZONE A99** TO BE PROTECTED FROM 100-YEAR FLOOD BY FEDERAL FLOOD PROTECTION SYSTEM UNDER CONSTRUCTION; NO BASE FLOOD ELEVATIONS DETERMINED.
- ZONE V** COASTAL FLOOD WITH VELOCITY HAZARD (WAVE ACTION); NO BASE FLOOD ELEVATIONS DETERMINED.
- ZONE VE** COASTAL FLOOD WITH VELOCITY HAZARD (WAVE ACTION); BASE FLOOD ELEVATIONS DETERMINED.
-  **FLOODWAY AREAS IN ZONE AE**
-  **OTHER FLOOD AREAS**
- ZONE X** AREAS OF 500-YEAR FLOOD; AREAS OF 100 YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE AND ARE PROTECTED BY LEVEES FROM 100-YEAR FLOOD.
-  **GREENWAY**

ALL FLOODWAY INFORMATION TAKEN FROM FEMA MAPS.

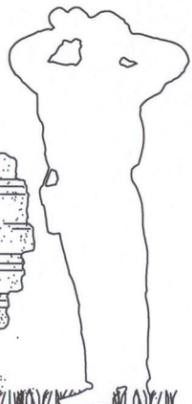
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FISHER & ARNOLD, INC.
 2110 Blair Boulevard, Nashville, Tennessee 37212
 (615) 383-6000 • Fax: (615) 383-6314 • www.fisherarnold.com
 Engineers • Environmental Consultants • Planners • Surveyors

FLOODWAY PLAN



**MT. JULIET
 GREENWAY, BIKE
 & PEDESTRIAN
 MASTER PLAN**



• Chapter 2: Existing Conditions

Mt. Juliet has seen a 200% population growth rate between 1990 and 2000. In the 2000 US Census, Mt. Juliet's population is 12,366. Like most areas, dependency on the automobile for transportation has influenced growth trends and patterns. Strip shopping centers, fast food restaurants, and other automobile oriented land uses have emerged along the main thoroughfares, especially Interstate 40 and the Mt. Juliet exit. Opportunities to choose other modes of transportation has decreased due to longer distances between origins and destinations, a lack of facilities that support alternative modes of transportation, and barriers to walking and biking such as wide arterial roadways and highways.

With this type of growth, Mt. Juliet has lost open and greenspace as well as some of the rural character that had originally brought people to Mt. Juliet. The Mt. Juliet Greenway Bike & Pedestrian Master Plan will examine ways to preserve corridors of land that provide outdoor recreational resources and transportation alternatives close to where people live, study and work. These corridors can link neighborhoods to the larger environmental outdoor resources such as Cedar Creek Campgrounds and Marina. These Army Corp of Engineers recreation facilities are located on Old Hickory Lake. These corridors will eventually link up with Nashville's greenways as well as primary everyday destinations in the City. Secondary features include both Cedar and Stoners Creek with naturally preserved floodplains and open spaces throughout Mt. Juliet. The City of Mt. Juliet's mild winters and warm summers make a greenway, bicycle and pedestrian system potentially accessible year round.

Bicycle and Pedestrian Master Plan: City of Lebanon, Mt. Juliet, Wilson County, 2002 Summary

In 2002, Wilson County and both the Cities of Mt. Juliet and Lebanon had a Bicycle & Pedestrian Master Plan completed. The purpose of this document was "to enhance the mobility and access needs of each community by recommending improvements that can be successfully integrated into the overall transportation plans for Lebanon, Mt. Juliet and Wilson County. The intention is to promote a higher quality of life by providing safe, efficient and desirable bicycle and pedestrian facilities to all people within the community. This plan identifies the most feasible bicycle and pedestrian routes and recommends specific types of facilities for each location." This document developed an overall master plan for the county as a whole with the goal of developing recommended routes and increasing the number of bicycle and pedestrian trips in Mt. Juliet, Lebanon and Wilson County.

As part of the bicycle pedestrian master plan development, opportunities and constraints were identified for Mt. Juliet. The constraints were:

- Low-density development
- Topography
- Existing transportation network
- Existing road design
- Interstate 40
- Lack of existing bicycle and pedestrian facilities.



Mt. Juliet's City limits extend from Old Hickory Lake on the north to beyond Interstate 40 on the south for a distance of eight miles. In the east-west direction, the City extends from Lebanon to the Metro Nashville/Davidson County line a distance of seven miles. Residential subdivision development is scattered throughout the community.

Topography: The report mentioned that topography within the planning area poses a challenge to providing safe and effective bicycle and pedestrian facilities. There are numerous communities throughout the United States that have similar problems and have overcome these obstacles. One such City is Denver and its surroundings. Some of their greenways and trails are placed along drainage ditches. Other than that, bicyclists have to cope with the hills and traffic. Soil conditions along both Stoners and Cedar Creek are similar. Cedar Creek is in the Talbott - Gladeville - Bradyville series of soils. The Talbott soils allow for slow percolation of water and are slightly erosive with regards to construction of paths and trails. Stoners Creek flows through both the Talbott - Gladeville - Bradyville series and the Hampshire - Maury - Stiverville series of soils. The Hampshire series of soils are conducive to erosion caused by paths and trails. These soils also have slow percolation rates. Any development along the creeks must take into consideration the erosions of the soils.

Flood prone areas: Mt. Juliet has two major waterways (Stoners Creek and Cedar Creek) and one smaller waterway (adjacent to the proposed Green Hill Greenway) that have both flood plains and floodways. These waterways are classified as blue line streams. Any development in these areas will require approval by the Army Corp of Engineers and the Tennessee Department of Environment and Conservation. Both Cedar and Stoners Creek flow through areas that are undeveloped. As development occurs, stream flows and velocities increase and can create flooding problems downstream. Through the development of the greenway system and detention ponds, downstream flooding can be mitigated and reduced.

Existing transportation network and existing road design: There are numerous older roads with narrow and limited shoulders. If traffic is kept to a minimum and speed limits enforced, then these roads are acceptable for Class III bicycle routes. As roads are improved, bicycle lanes and rights-of-way can be adjusted to accommodate this system and overcome this constraint.

Interstate 40: To some extent, Interstate 40 is a barrier to both pedestrian and bicycle mobility. Both Central Pike and Beckwith Road overpasses do not allow direct access to the interstate. This is an opportunity for both pedestrians and bicyclists because there are no lights or cross traffic. This could be taken advantage of in the future.

Lack of existing bicycle and pedestrian facilities: Presently, there are few existing bicycle and pedestrian facilities. Numerous existing roads in the north/south and east/west direction are safe enough to develop as Class III bicycle routes. Approximately one mile of Nonaville from Wind Tree Golf Course south to Lebanon Road (Hwy 70) could be classified as a Class II with bike lane on both sides of the road. The Class II lane could be



connected to Highway 70 which can be classified as Class III. Where Lebanon City limits meet Mt. Juliet's City limits along Highway 70, Lebanon has already classified Highway 70 as a Class III route.

The report also identified five major opportunities for bicycle and pedestrian facilities. They are:

- Existing roads
- Future transportation improvements
- Railroad corridor
- Stream corridors
- Utility corridors

Existing Roads: The report identified portions of Nonaville Road to be considered for Class II routes and Tates Lane for its scenic value. If Tates Lane could be acquired, it would make an excellent greenway connector between West Division Street and Highway 70. Tates Lane as it presently exists has a very rural character that may disappear if development adjacent to it continues.

Future transportation improvements: As identified in the Mt. Juliet 2020 Major Thoroughfare Plan & the Wilson County 2020 Major Thoroughfare Plan, the following improvement is to take place: Plans are being developed for the Beckwith - Interstate 40 interchange. As identified in the master plan, the interchange and thoroughfare are to have bike lanes. The scheduled completion date for construction is 2005 if funding continues. This interchange is an excellent opportunity to develop bicycle and pedestrian facilities for storage of bicycles, washrooms and changing facilities.

Railroad, stream and utility corridors: This plan makes use of these corridors in most cases, as they provide some of the best opportunities of connections across the City.

Plans are presently being completed for the widening of Mt. Juliet Road from Interstate 40 to Division Street. This road also requires bicycle lanes to be added as mentioned in the Master Plan. It is recommended as part of this new construction that a pedestrian multi-use underpass be constructed adjacent to Stoners Creek.

The Mt. Juliet Greenway Bike & Pedestrian Master Plan will focus on Mt. Juliet and identify and define the actual corridors for greenways and bicycle facilities.



TABLE 2.1 EXISTING ROADWAY CHARACTERISTICS
City of Mt. Juliet

Existing Road (Facility)	Measurement Taken	Width (feet)	# of Lanes	Shoulder	Ditch	Sidewalks	Slope	2000 ADT*
Belinda Pkwy.	Hidden Cove Rd.	50	4	Y	N	N	L	5,880
Belinda Pkwy.	Springdale Dr.	39	3	N	N	N	L	NA
Beckwith Rd. S.	Rutland Rd.	21	2	N	Y	N	M/S	NA
S. Rutland Rd. S.	Beckwith Rd.	22	2	N	Y	N	M	NA
Rutland Rd.	Central Pk.	24	2	N	Y	N	M	NA
Central Pk. S.	Rutland Rd.	22	2	N	Y	N	M	4,010
Central Pk.	Adams Ln.	20	2	N	Y	N	M	2,360
Adams Ln.	Central Pk.	20	2	N	Y	N	M/S	NA
Guill Rd.	John Hager Rd.	20	2	N	Y	N	M	NA
Chandler Rd.	Anthony Ln.	22	2	N	Y	N	S/M	840
Old Lebanon Dirt Rd.	Chandler Rd.	23	2	N	Y	N	M	NA
Old Lebanon Dirt Rd.	Julie Dr.	26	2	N	Y	N	M	1,920
Weston Dr.	Clearview Dr.	21	2	N	Y	N	L/M	NA
Old Mt. Juliet Rd.	Old Lebanon Dirt Rd.	20	2	N	Y	N	L	NA
Main St. W.	Division St.	11	2	N	Y	N	L	NA
W. Division St.	Main St.	22	2	N	Y	N	L	5,580
Curd Rd.	Mt. Juliet Rd.	20	2	N	N	N	L	NA
Woodridge Circle	Woodridge Ct.	23	2	N	Y	N	M/L	870
Hillview Dr.	Hillview Dr.	19	2	N	Y	N	M/S	NA
Faulkner Ln.	Bass Dr.	20	2	N	Y	N	S/M/L	NA
Bass Dr.	Faulkner Ln.	20	2	N	Y	N	L	NA
Charlie Daniels Pkwy.	Mt. Juliet Rd.	33	3	N	N	N	L	NA
Curd Rd.	Greystone Rd	21	2	N	N	N	L/M	NA
Benders Ferry Rd.	Mays Chapel Rd.	23	2	N	Y	N	M/S	2,530
Lebanon Rd.	Cooks Ct.	37	2	Y	Y	N	L/M	NA
Lebanon Rd.	Mt. Juliet Rd.	55	5	N	N	N	L	14,700
Nonaville Rd.	Lebanon Rd.	37	2	N	N	N	L/M	7,470
Nonaville Rd.	Mt. Juliet City Limits	24	2	N	Y	N	L/M	NA
Saundersville Rd.	Lucy Dr.	24	2	N	N	N	L/M	3,990
N. Green Hill Rd.	Hidden Ridge Dr.	22	2	N	Y	N	S/M	760
Tate Ln.	Tate Ln.	10	2	N	N	N	L/M	NA
Willoughby Station Blvd.	Willoughby Station Blvd.	38	2	N	N	N	L/M	NA
S. Green Hill Rd.	Virginia Hill Dr.	21	2	N	Y	N	M	4,170

Source: Tennessee Department of Transportation
Y=Yes, N=No, L=Level, M=Moderate, S=Steep, ADT=Average Daily Traffic Count



**TABLE 2.2 FUTURE TRANSPORTATION IMPROVEMENTS
City of Mt. Juliet**

Project	Begin Project	End Project	Improvement
I-40 Interchange	NA	NA	Add additional Interchange to I-40 between Mt. Juliet Rd. & Davidson County line
I-40 Interchange Modification @ Mt. Juliet Rd.	NA	NA	Construct required modifications to Existing interchange to improve operational efficiency
I-40 Interchange	NA	NA	Add additional interchange to I-40 at Beckwith Rd.
Mt. Juliet Rd. West Bypass/S. Green Hill Rd.	New I-40 Interchange	Lebanon Rd.	Construct a limited access facility to provide four lanes of capacity
Mt. Juliet Rd. East Bypass	Interstate 40 at Beckwith Road	Lebanon Rd.	Construct a new arterial to provide two lanes of capacity
Mt. Juliet Road Widening	Interstate 40	Division St.	Reconstruct to provide four lanes of capacity
South Mt. Juliet Road	Interstate 40	Central Pike	Reconstruct to provide four lanes of capacity
Belinda Parkway Connector	Belinda Parkway	S. Rutland Extension	Construct an extension to provide two lanes of capacity and improved local circulation
Division Street Connector	Division St.	Mt. Juliet East Bypass	Construct a connector to provide two lanes of capacity and improved local circulation
S. Rutland Road Extension	Mt. Juliet Rd.	S. Rutland Rd.	Construct an extension to provide two lanes of capacity and improved local circulation
Mt. Juliet Road East Connector	Mt. Juliet Rd.	Mt. Juliet East Bypass	Construct an extension to provide two lanes of capacity and improved local circulation
Saundersville Road Extension	Nonaville Rd.	Benders Ferry Rd.	Construct an extension to provide two lanes of capacity and improved local circulation
Needmore Road	North Green Hill Rd.	Lebanon Rd.	Construct an extension to provide two lanes of capacity and improved local circulation
Central Pike	Davidson County Line	Mt. Juliet Rd.	Reconstruct to provide four lanes of capacity
Nonaville Road	Mt. Juliet City Limits	Saundersville Rd.	Improved operational efficiency and safety through improved geometry

Source: Mt. Juliet 2020 Major Thoroughfare Plan & the Wilson County 2020 Major Thoroughfare Plan



• Chapter 3: Goals and Objectives

Goals and Objectives for the Mt. Juliet Greenway Bike & Pedestrian Master Plan

The following goals and objectives were adopted to guide the development of the Master Plan as well as the deliberations of the Greenway Advisory Committee.

- 1) Promote an attractive cost effective and convenient greenway system that connects public and private open and green spaces with sidewalks throughout Mt. Juliet.
- 2) Establishment of an ongoing mechanism to oversee design funding opportunities and economic development strategies with broad representation from the whole community.
- 3) Encourage private support and development for the greenway that will use planned and existing utility easements, road acquisition and construction etc. to minimize public cost of greenway development.
- 4) Plan the greenway system to be eligible for all private, local, state and federal funding programs including moneys available through the Intermodal Surface Transportation Efficiency Act (TEA 21) The Clean Air Act Amendments 1990, Recreational Access Funds and others as identified.
- 5) Describe public and private responsibilities to maintain an attractive, useful and safe greenway.
- 6) The greenway must contain a variety of features to attract and serve a wide range of diverse users.
- 7) Preserve and enhance all streams, wetlands and historic features and incorporate them as part of the greenway system.
- 8) Coordinate the greenway system with area storm water management.
- 9) Develop a comprehensive educational and enforcement program to promote the safe use of the greenway system and the personal safety of the users.
- 10) Create a greenway that enhances economic development and attracts tourists.

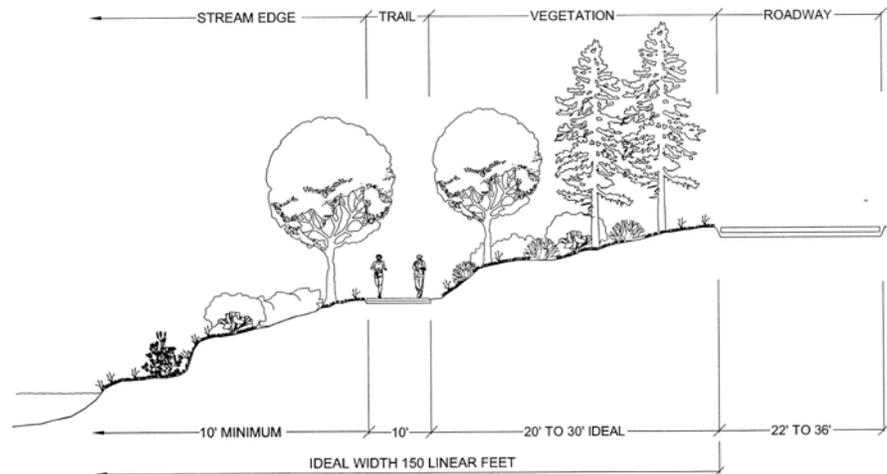


• Chapter 4: Design Guidelines

Numerous design guidelines were developed previously in the Lebanon, Mt. Juliet, Wilson County Bicycle & Pedestrian Master Plan. A thorough review has been conducted of the guidelines and it is felt additional recommendation and guidelines are required.

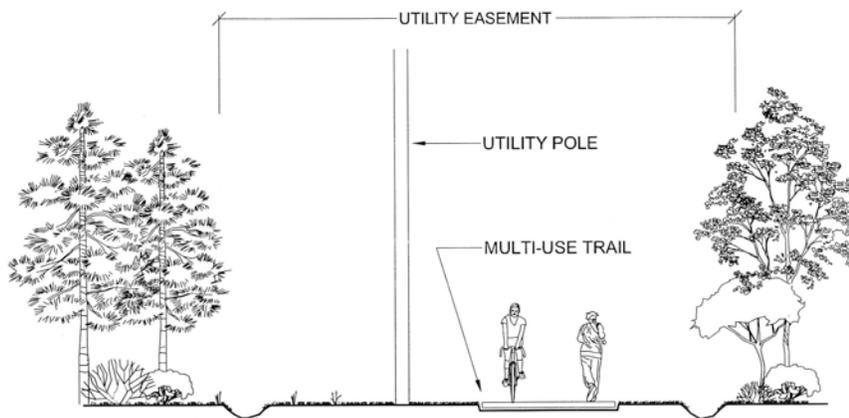
Floodway Trail with Buffer Zone

The design of trails developed within the floodplain must consider the preservation of buffer zones adjacent to streams. These vegetated buffers are important in preserving water quality and wildlife habitat. The accompanying graphic illustrates how trails should be developed within the flood prone areas, including minimum width requirements.



Utility Easement Trail

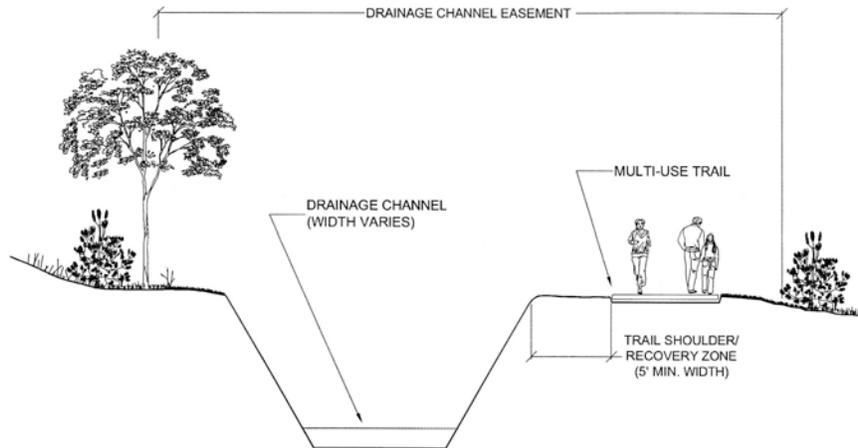
Utility corridors are similar to railroad corridors and can be utilized for multi-use trail development. Trails can be successfully implemented within overhead electric, sewer, fiber optic, cable and gas easements. These trails can accommodate both paved and unpaved trail systems and can serve a variety of users. There should be a 2 foot minimum shoulder separating the trail from any utility structures.



Drainage Easement Trail

Most major drainage ways within the City of Mt. Juliet have been preserved as natural areas. In some instances, drainage systems have been channeled to improve the stormwater capacity. Some have adequate clearances to construct a trail parallel to the channel.

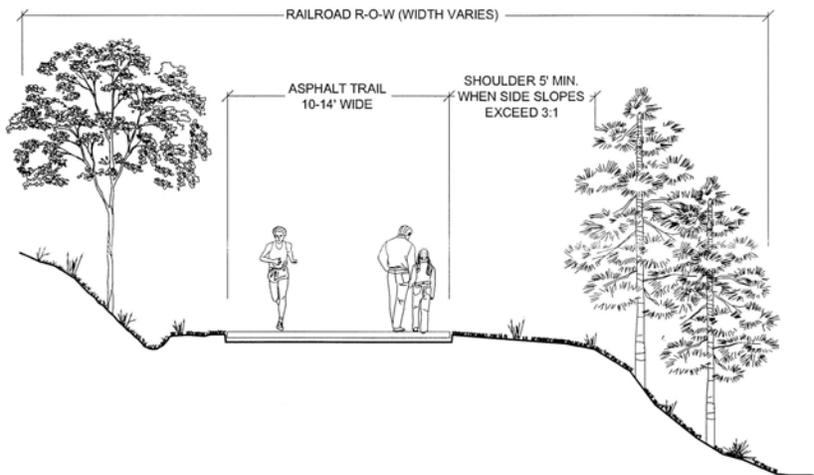
Trails utilizing drainage easements should be placed as far away (5' min.) from the channel as the easement allows. This will allow for a recovery zone between the trail user and a cyclist if an accident was to occur. Drainage easement trails that are part of an overall regional network should be paved. These types of trails should be developed in close coordination with Public Works or Stormwater Departments in order to develop a safe and user friendly trail environment. They should also be built to withstand the heavy loads of trucks and maintenance vehicles.



Abandoned Railroad ROW

No abandoned railroad rights-of-way exist in Mt. Juliet. Converting abandoned railroad corridors into multi use trails is very popular due to the accessibility of these corridors to neighborhoods. These corridors are ideal for recreation and transportation facilities because their grades and width are well within the Americans with Disabilities

Act (ADA) requirements. Due to their previous uses, the surface material is very stable and many of the bridges and structures along the railroad can be converted to pedestrian uses. A design issue that may affect rails and trails are the side slopes. Many railroad beds have steep side slopes to allow for good drainage and relatively flat slopes for travel. If the slopes are too steep they would have to be adjusted to a 3:1 horizontal to vertical slope. If this cannot be done, handrails would have to be incorporated into the design and slopes to meet ADA requirements.

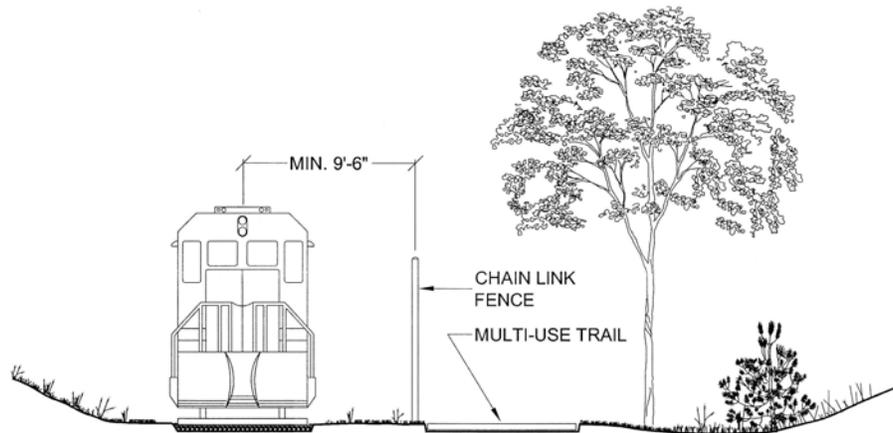


Trails and Active Railroad Corridors

Mt. Juliet has an active rail line (Nashville Eastern Railroad) located along Division Street. This corridor could be utilized for trail development.

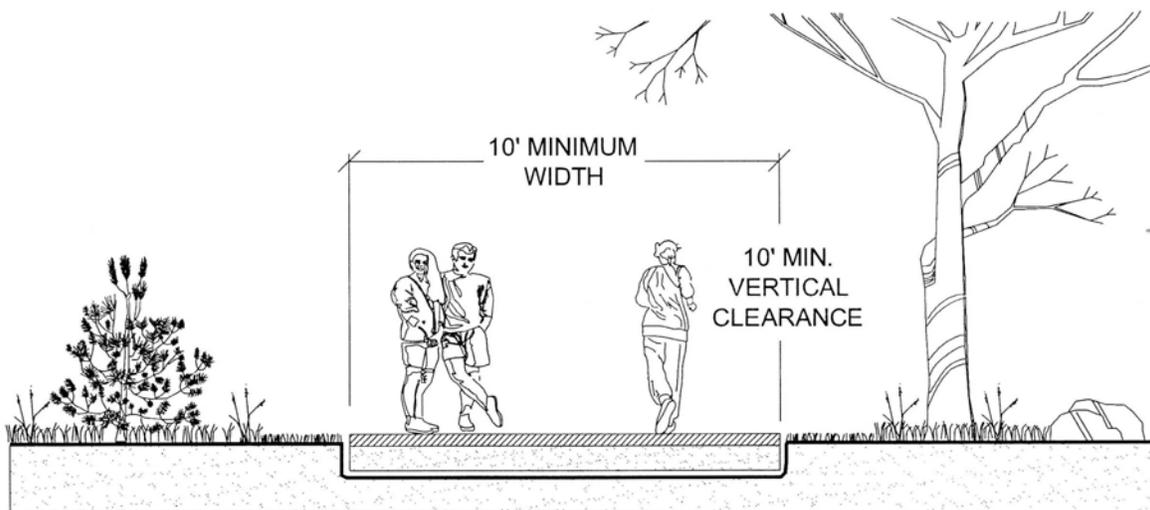
Proper design is key to developing a safe facility for trail users and minimizing liability risks for the railroad. These types of facilities should

incorporate grade separation, a buffer between the track and trail, few at-grade crossings, fencing or vegetative screens and warning or explanatory signs posted.



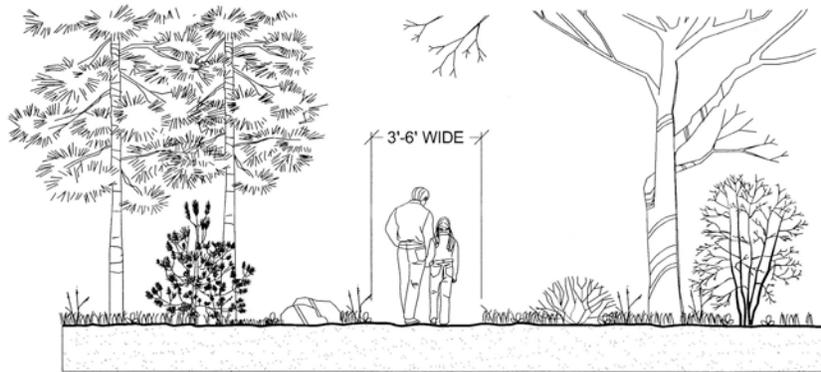
Unpaved Multi-Use Trail

An unpaved multi-use path is intended to accommodate a variety of users, including walkers, joggers, bicyclists and others. These pathways are intended for use in upland environments and do not withstand the effects of flooding well. As mentioned in the discussion of topography, the existing soils are prone to erosion. While less expensive to install and a good temporary measure, their long-term maintenance cost is higher. If traffic along the trail is minimal, an unpaved surface is tolerable. If usage increases as the trail system is developed with associated linkages, then a harder surface material will be required. Materials for surfaces could be soil cement, graded aggregate, granular stone and shredded wood fiber. Some of these materials do not accommodate certain users such as a road bicyclist, skaters and disabled people or some wheelchairs.



Footpath/Hiking Trail

Footpaths or hiking trails are designed to accommodate pedestrians and not intended for road cyclists or other narrow wheeled users. These surfaces are normally made of natural materials such as dirt, rock, forest litter, snow and other native materials. The pathway is often narrow and can be steep and sometimes strenuous.



Trail Culverts

Trail culverts are an important addition to any trail system. They direct stormwater in a specific direction and are usually located underneath trails. Three types of pipe may be used on the trail, depending on the depth of the pipe and weight of vehicles crossing over the top. Corrugated metal pipe (CMP), reinforced concrete pipe (RCP) and high density polyethylene pipe (HDPE) are all used with RCP being the most expensive. Required drainage flows will dictate the size of the pipe. If the pipe is very large and the flow line is 30" below the trail, a railing maybe required.

Bridges

Bridges are important to numerous greenway projects due to the need to cross water bodies, roads and railroads. Bridges can be a dominant feature in trail design and should blend into the natural environment. Bridges should be 10-12' wide and structurally strong enough to accommodate maintenance and emergency vehicles. They must be a minimum of 30" high yet must also allow views to the environment for children.

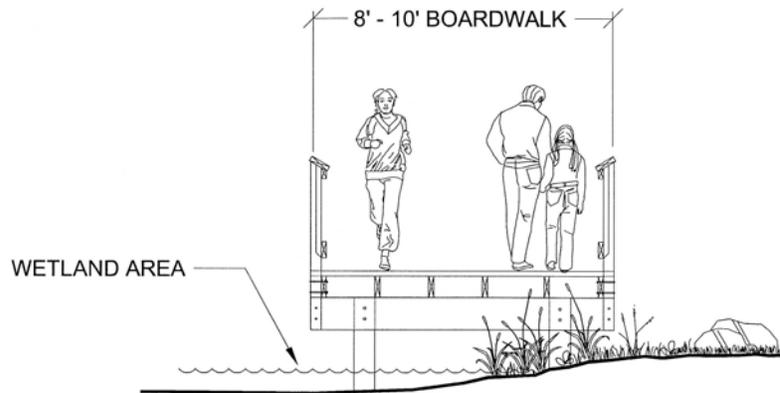


Board Walks

Boardwalks will be required over any area where the trail will be crossing a wetland or sensitive environmental area.

Boardwalks should be a minimum 8' wide and structurally strong enough to carry the load of a light maintenance vehicle such as a

four wheeler or small pick-up truck. The posts for the boardwalk must not release any toxins into the wetland but must also be durable. There are systems to support the deck such as heli-screws and concrete posts that are environmentally less damaging than traditional construction methods.



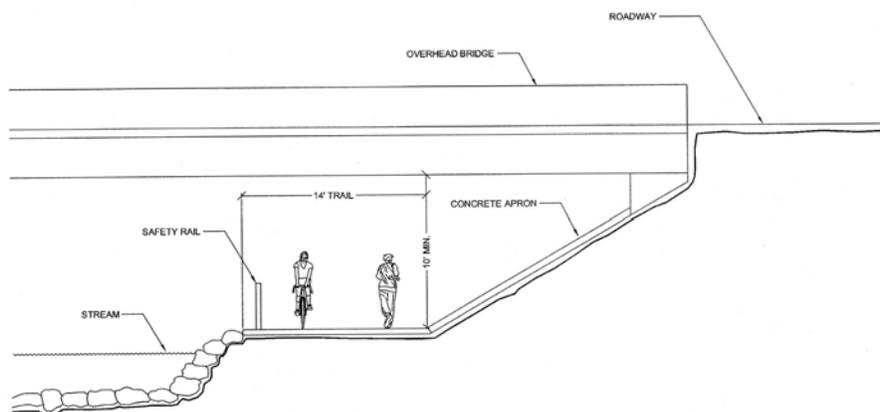
Fencing

Fences and railings are needed to protect people and property, guide people and provide limited access. Six foot wood privacy fencing may be required to screen views to adjacent properties. Other fences may be required to prevent vehicles from entering onto the greenway. Railings may also be required along elevated pathways or boardwalks, along steep banked sections of the trail and possibly along parking lots. The aesthetics of the fence or railing should be carefully considered when determining a type and location.

Trail Underpass

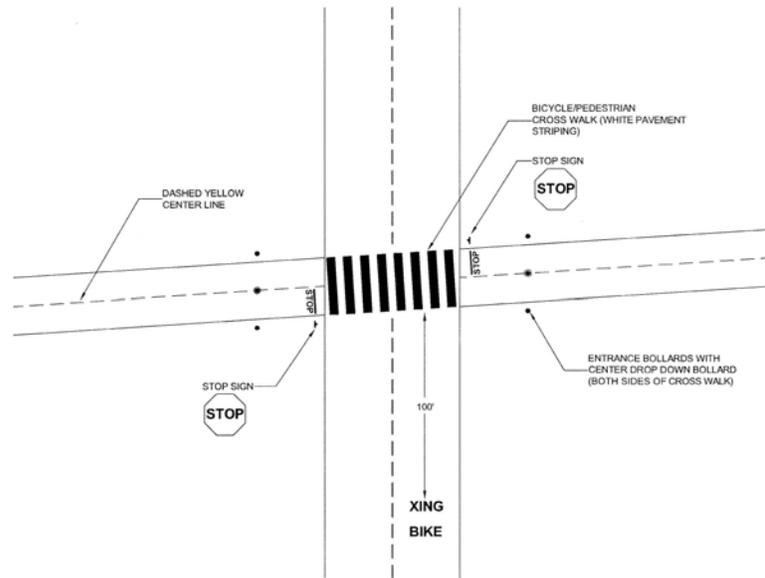
Separation of greenway users and vehicles at intersection is very important. Underpasses can accomplish this separation, primarily along creeks and rivers. These underpasses should have a vertical clearance of at least 10' and a 12' wide tread.

Underpasses should be lighted for safety and have proper drainage. The underpass surface material should be designed to allow for submersion for short periods of time.



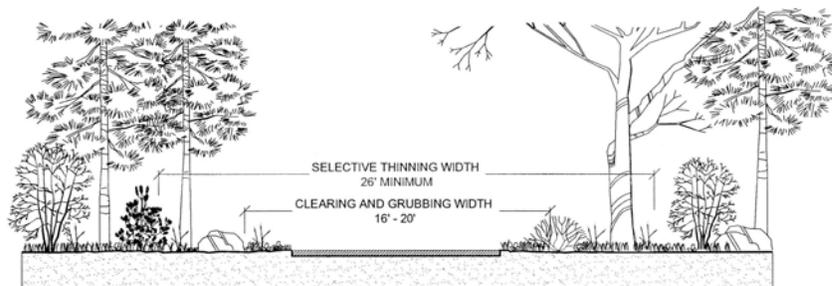
Greenway/Roadway Intersections

Greenway/roadways intersections can be dangerous conflict areas if not carefully designed. At grade crossings have the following design principles. Site the crossing area at logical and visible locations with substantial space for pedestrians to move around, provide warning signs and textured roadway surfaces to warn vehicles of pedestrians traffic, inform trail users of the upcoming intersection and maintain clear visibility between trail users and motorist.



Vegetative Clearing

All greenways require a certain amount of vegetative clearing. Hiking trails require less clearing than multi use trails. The amount of vegetative clearing will depend on the location of the trail, the need to provide a safe walking experience, how heavily used the trail will become and the type of vegetation along the trail edge. Certain ground covers can be invasive and require continuous clearing in contrast to a trail located in a woodlot.



Landscape Plantings

Landscaping along greenways will depend on the trail location and from project to project. Areas that may require landscaping would be trailheads and concession or restroom buildings. Plantings should be varieties that are native to the area and hardy. This will help in reducing the amount of maintenance required such as fertilizer, spraying for pests and pruning. Plantings should provide both habitat and food for wildlife. Trees that have an aggressive root system or drop debris such as sweet gums should be avoided or placed further away from the trail.



On Street Linkages

In order for the greenway to function as a complete system in the overall transportation network, linkages with the roadway system are required. It is not possible to provide off-road trails to every destination in the community. On road facilities must be used to provide linkages and fill in the gaps. The following guidelines offer ways to link the trail system with the community through bicycle lanes that can also be used as pedestrian walkways.

On-Road Bicycle Facilities

There are three types of on-road bicycle facilities. These are wide curb lanes, paved shoulders and bike lanes. Wide curb lanes are wider than the standard 12' travel lane for vehicles. Paved shoulders are an excellent way to accommodate bicycles and disabled motor vehicles. They also eliminate problems caused when pavement edges begin to deteriorate. Bike lanes should conform to the standards identified in AASHTO's Guide for the Development of Bicycle Facilities (1999).

Wide Curb Lanes

A wide curb lane should be a minimum of fourteen feet so that both bicyclist and vehicles can co-exist in the same travel lane. On stretches of roads with steep grades or roads that have a lot of curves a wider curb lane is preferred. At these locations the width of the road should be fifteen feet. Fifteen feet may also be required where drainage grates, raised reflectors or on-street parking will effect the maneuverability of a bicycle. In situations where more than 15' exists, striping of a bike lane should be considered. The major concern with wide curb lanes is that a motorist may increase speeds due to the wider lane.

Signage

There are no special "wide curb lane" signs available, however the City should install "Share the Road" warning signs (the standard bicycle warning plate with a sub-plate stating SHARE THE ROAD). On designated bicycle routes the standard BIKE ROUTE sign should be installed.

Intersection Design

When wide curb lanes approach intersections with turning lanes, the 14' wide lane should continue through the intersection as the outside through-lane.

Paved Shoulders

Paved shoulders for bicycle users serve the needs for bicyclists in rural areas. In urban areas, paved shoulders may be preferable to riding in a traffic lane for the advanced cyclist on arterial roadways with high speeds (over 45 mph). Paved shoulders in rural areas have the additional benefit of providing an area for pedestrian use when sidewalks are not available. The width of a paved shoulder should be a minimum of 4' wide. Shoulders that are 2-3' wide can improve conditions and are recommended in cases where 4' widths couldn't be achieved. If the shoulder is less than 4' it should not be identified as a bicycle facility. The cross-section of the shoulder



should be designed according to typical roadway cross-sections. Paved shoulders should have the same pavement thickness and sub-base as the adjacent roadway.

Signage

"SHARE THE ROAD" signs would be acceptable in these locations, since they would serve to warn motorists.

Bike Lanes

Bicycle lanes are an on-road type of facility. They should not be separated from other motor vehicle lanes by curbs, parking lanes, or any other obstructions. Bike lanes serve the needs of the experienced and inexperienced bicyclist and are located on both sides of the road. Through the use of this type of design, bicyclists are encouraged to follow the rules of the road, which requires them to travel in the same direction as traffic. Maintenance will be required of bike lanes and the City will need to provide sweeping and debris removal as safety precautions.

Width

Four feet is the minimum width for a bike lane. Where streets have parallel parking five feet would be the minimum width and should be located between the parking lane and the lane of travel. If traffic speeds are greater than 45mph the bicycle lane width should be six feet.

Signage

Standard bicycle signs are identified in the MUTCD and AASHTO's documents. In the MUTCD documents section 9B-8 the R3-16 sign should be used at the beginning of a designated bicycle lane. The MUTCD requires that the diamond lane symbol be used with both the R3-16 and R3-17 signs. Section 9B-11 of the same document identifies the R7-9 or the R7-9a signs that can be used along streets where motorists are likely to park or frequently pull into the bike lane.

Striping

All bicycle lane stripes should have a reflected surface, white and six inches wide. Stripes, arrows and symbols should all be skid resistant in both wet and dry conditions. Symbols should be installed at regular intervals, immediately after intersections and where bike lanes begin.

Intersections are a challenge when placing the stripes. Vehicular traffic will mix with the bicyclist and the motorist turning right will cross paths with any cyclist who intends to continue straight. Several intersection striping patterns are identified in both the AASHTO's Guide for the Development for Bicycle Facilities (1999) and the MUTCD documents.



Bicycle Routes

A bicycle route is a recommended way for a cyclist to get from a point of origin to a destination. Bike routes do not necessarily require physical improvement to the road to accommodate bicyclist. Bike routes can be preferable for cycling due to such reasons as directness, scenery, lower speeds and less congestion. All skill levels of cyclist could use bicycle routes provided that they feel comfortable with the route. In urban areas they are designated on collector or residential streets with low traffic volumes and are typically used to provide a through route within a community. In rural areas they are often located along scenic routes that are popular for touring or for long distance commuting.

Width

Requirements for bicycle routes are minimal, provided that the road width is a minimum of twelve feet with appropriate signage. The route designed needs to take into consideration traffic volumes, good sight distances and adequate pavement conditions. Traffic should not normally exceed the speed limit and there should be limited access for vehicles turning into commercial and retail areas. If a twelve foot pavement width is used, all unsafe drainage grates and angled railroad crossing must be revised to accommodate bicycles. Traffic signals should be either timed or activated by bicycles and the route should be part of a larger interconnected system of bicycle facilities.

Signage

Bicycle route signs should be in accordance MUTCD standards. Bicycle route signs should be placed at locations where new traffic enters the roadway. In urban areas, directional arrows and captions that identify nearby destinations are recommended.



TENNESSEE HISTORICAL COMMISSION
REVIEW AND COMPLIANCE SECTION
CHECKLIST

Initial Consultation, Area of Potential Effect
Determination, Historic Properties Identification

Federal agencies and applicants for federal funds, licenses and permits should provide the following information to the Tennessee State Historic Preservation Office to initiate Section 106 consultation and solicit assistance from the SHPO in their efforts to identify historic properties within Areas of Potential Effect: (SHPO authority to request such documentation is codified in the National Historic Preservation Act; Section 101(E-J) and at 36 CFR Part 800.2(c)(1) and 800.16(v))

1. A letter requesting Section 106 review of the undertaking which shall include:

(a) The identity of the federal agency funding, licensing, or permitting the undertaking, the name and/or position title of the "Agency Official" as defined at 36 CFR Part 800.2(a), and the name, address, and telephone number of the agency staff person who may be contacted regarding the project.

(b) If applicable, the identity of the applicant for federal funding, licensing, or permitting and the name, address, and telephone number of the staff

person employed by this applicant organization who may be contacted regarding the project. Please include documentation generated by the federal agency which authorizes the applicant to act as the federal agency's representative in the initial Section 106 review process as delineated at 36 CFR Part 800.2(c)(5).

(c) The location (address, city, and county) of the project; and the project's Area of Potential Effect as defined at 36 CFR Part 800.16(d).

(d) The identities of all other Consulting Parties invited to participate in consultation relative to the undertaking and the names, addresses, and telephone numbers of authorized representatives of these additional Consulting Parties who may be contacted regarding the project. Consulting Parties are enumerated at 36 CFR Part 800.2(c). Please include copies of all invitation letters to Consulting Parties and copies of any responses.

(e) A description of the agency's or applicant's formal procedure for involving the public in the Section 106 review process as delineated at 36 CFR Part 800.2(d).

(f) If applicable, a description of the formal process by which Section 106 review is to be melded into other appropriate federal and state environmental reviews as delineated at 36 CFR Part 800.2(a)(4), 800.3(b), and 800.8.

2. A USGS 7 1/2 minute series topographic map (be sure to include the name of the map) clearly indicating the boundary of the undertaking, the location of all project elements, and the project's Area of Potential Effect. Submit a USGS hard copy map or an 8" X 11" photocopy of a USGS hard copy map with the project's Area of Potential Effect, not a download from DeLorme, MapQuest, TopoZone, etc.

3. Other suitably scaled maps or site plans as necessary to depict the extent of the project and its locational relationship to its surroundings and environment.

4. A project narrative which describes the project in sufficient detail to enable a reader unfamiliar with the project or its location to gain a full understanding of the project and all of its elements and their potential to affect directly and indirectly any historic properties within the Area of Potential Effect.

5. Original chemical or digital photographs of the project Area of Potential Effect which are numbered and clearly keyed to one of the above maps or site plans.

6. Any available information including dates of construction of buildings either inside the project footprint or within view or sound of the project. Be sure to include photographs of buildings within the project's Area of Potential Effect.

7. If applicable, a discussion of the results of agency or applicant pre-consultation review of architectural, historical, or archaeological studies which have been previously produced. This should include:

(a) a list of historic properties located within the Area of Potential Effect which are either National Register of Historic Places listed or have been determined eligible for such listing. This list should include any above ground properties which appear marked on SHPO survey file maps.

(b) locations of such properties shown on one of the maps or site plans which are submitted.

(c) If pre-consultation review has not discovered eligible or listed properties, a statement to that effect should be included. Properties identified and evaluated as not eligible for listing in the National Register should be listed and mapped.

8. A discussion of any pre-consultation field-work, e.g., reconnaissance survey, which may have been undertaken.

9. Written results of any internal agency cultural resources staff review (for undertakings planned by land- or structure-controlling agencies with qualified cultural resources staffs).

10. The written results of any consultation with all additional Consulting Parties.

Additional documentation produced as a consequence of a written request from the Tennessee State Historic Preservation Office to the agency or applicant. This documentation must be prepared by a person or persons in the appropriate field who meets applicable professional standards and in consultation with this office (see "Standards and Guidelines for Archaeological and Architectural Resource Identification Studies") and definitions codified at 36 CFR Part 800.2(a)(1) and 800.2(a)(3):

1. Historic/Architectural Survey and Inventory.
2. Archaeological Site Survey and Inventory.

• Chapter 5: Greenway Amenities and Site Furnishings

There are many amenities that help to develop a quality greenway system. These must be taken into consideration during the design of each trail segment. These amenities, placed together, develop the theme of the greenway and help identify the system as the Mt. Juliet Greenway System. Amenities such as bike racks, trash receptacles, bollards and benches should have the Mt. Juliet logo or a specially designed greenway logo attached to their surface.

Trailheads

Trailheads will be needed throughout the greenway system and will be required to provide easy access to the trail system. Trailheads fall into two categories: primary and secondary. Both types of trailheads should be ADA accessible. Surface material for parking areas can be gravel or stone.

Primary trailheads usually provide parking, restrooms, concessions, drinking fountains, picnic areas, benches, trash receptacle, lighting, information kiosks and bike racks. Buildings at trailhead can also provide storage for maintenance equipment and supplies needed for the trail. Primary trailheads are typically found at key locations throughout the community along the trail and at the beginning or end of the trail. Primary trailheads can be located in parks and spaced approximately every five miles.

Secondary trailheads are needed more frequently than primary trailheads. Secondary trailheads are considered "rest stops" located between major destinations points. Typical secondary trailhead amenities include signage, benches, trash receptacles, picnic tables and sometimes parking. These trailheads are often placed in close proximity to major roadways. These trailheads should be located approximately 1-2 miles apart.

Signage

A comprehensive signage plan throughout the Greenway system will be needed to insure that information is provided to Greenway users regarding the safe and appropriate use of all facilities. Greenway signage is typically divided into informational, directional, regulatory and warning signs. Greenway signs should conform to the Manual on Uniform Traffic Control (MUTCD) and the American Association of State Highway Transportation Officials (AASHTO) manual.



Entry Signage

Entry signage is typically placed at the trailhead and greenway/roadway intersection. These signs are usually the largest signs in the system. They are used to provide information and are designed to be viewed from a vehicle as well as by the greenway users. These typically include the Greenway name and may have a map of the Greenway and surrounding area.



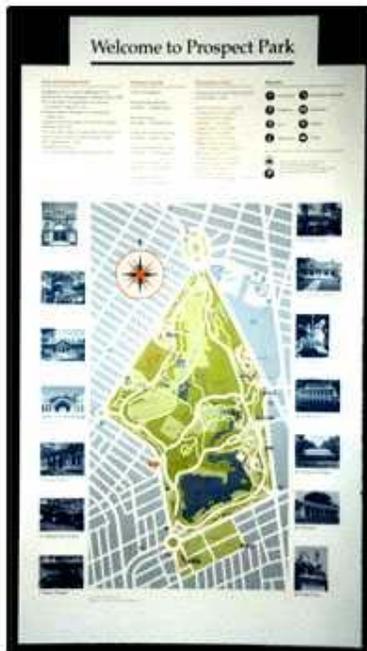
www.cylexsigns.com



www.cylexsigns.com

Directional/ Informational Signage

Directional and information signage is normally found at the trailhead as well as trail/trail and trail/roadway intersections. This type of sign is typically built at a pedestrian scale and is no more than 66" high. The information provided on these signs include: maps, greenway rules and regulations, greenway etiquette, mileage to destinations, directions to destinations, and directions to amenities such as restrooms or water fountains.



Directional/Informational Signage
www.winsorgraphics.com

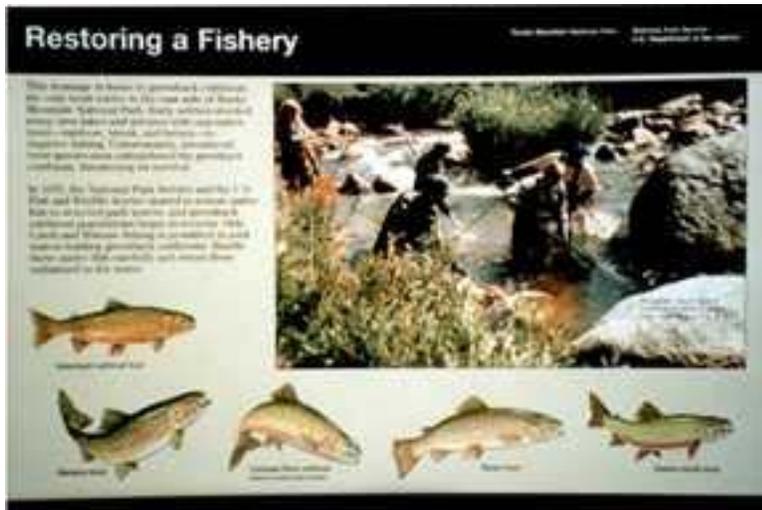


Directional/Informational Signage
www.winsorgraphics.com



Educational/Cultural Signage

Educational/Cultural signage is used when an element with educational or cultural value exists within or near a greenway corridor. These elements may include wetland or environmental features, historical structures or locations. These signs are designed to be viewed by pedestrians and can be mounted vertically or angled. These signs also can include photos, maps and text information.



Educational/Cultural Signage www.winsorgraphics.com

Distance Markers

Distance markers often consist of a post or pavement marking identifying the distance from the beginning of the greenway to the marker. Markers are usually done in 1/2 mile or 1/2 kilometer increments to indicate to the greenway user how far they have traveled. The standard for the Mt. Juliet Greenway System should be 1/2 mile post markers. Markers will be upright and approximately 3' in height and made of concrete for areas identified to be multi-use trails. Other markers will either be made of wood or metal to blend into the natural landscape.

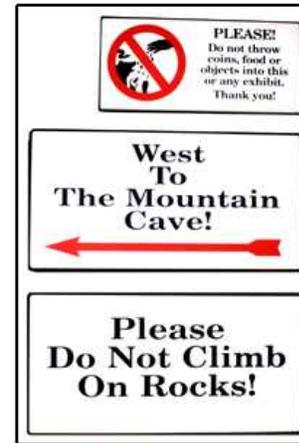


Distance Markers
www.winsorgraphics.com



Regulatory & Warning Signage

Regulatory and warning signs will display rules, regulations and warnings with respect to greenway use when transferring onto the utility corridor greenways. These signs should conform to MUTCD styles and mount to either a metal or wood post.



Regulatory/Warning Signage
www.winsorgraphics.com

Benches



Trail Bench, Mod No. 11

www.dumor.com



Ornamental Bench Mod. No. 143

www.dumor.com

Benches should be located at key points of interest, trailheads, concession and restroom facilities and along the trail. Bench design should be comfortable, resistant to vandalism and durable. The type of benches identified will conform to the overall characteristics of the master plan. Both trash receptacles and benches should complement each other and have the Mt. Juliet or Greenway logo on them. Benches should be 6' in length with plastic slats and a concrete pad beneath them. The Ornamental bench as shown should be located at trailheads and in the older areas of Mt. Juliet.



Bike Furnishings



Two Unit Bicycle Locker www.madrax.com



Three Hoop Bicycle Rack www.madrax.com



Bicycle Bollards www.madrax.com

Bicycle racks should be simple to operate and maintain. Bicycle racks should be usable by a variety of bicycles and locks. At locations such as Interstate 40 and Mt. Juliet Road, park and ride facilities and at the future Beckwith interchange, storage type units for bicycles should be installed. Identifying the number of bicycle racks at a specific location can not be completed until the actual construction documents are developed. The number and location should allow for future growth. All bicycle racks should be located on a concrete or asphalt surface near trail heads, schools or recreation centers. The racks should be located within 50' of building entrances and easily viewed from the main pedestrian walkway. They should also be placed to avoid pedestrian conflicts. Bicycle bollards can be placed at locations where only one or two bicycles will be located. Bicycle bollards also help with the control of vehicles entering the greenway.



Bollards



Concrete Bollards, Style No. 3

www.petersenmfg.com

Bollards facilitate the separation of vehicles and pedestrians using the trail. They are typically 3' in height and are either removable to allow maintenance and emergency vehicle access or non-removable. They must be strong and large enough to prevent vehicles from entering the trail system. Typically they are placed 3-4' apart so that ATV's and other four wheelers can't enter onto the trail system. Bollards located at trailheads and roadway linkages should have the City of Mt. Juliet or Greenway logo attached. The style of the Bollards should complement the other site furnishings and the environment they will be located in. Some Bollards, primarily located in rural or pastoral areas could be an 8" diameter treated wood post. These same posts could have a 1" diameter hole in the side to accommodate cables and linked together by the cables to provide a barrier for vehicles attempting to enter the greenway.



Custom Plaques



City Logo www.dumor.com



Donor Identification www.dumor.com

It is recommended that the City adopt two styles of plaques for the overall Greenway Bike & Pedestrian Master Plan. The Mt. Juliet City or Greenway logo should be placed on a circular plaque and placed at strategic locations such as trail heads, entry signage and where the greenway crosses major roadways. Smaller rectangular plaques are to be placed on a wall located at trailheads that would identify land or monetary donors. There should be three sizes of rectangular plaques that identifies the value of the donation with a minimum of \$500, a second level at \$1,500 and the third level over \$5,000.

Drinking Fountains



Drinking Fountain Mod. No. 3177 www.hawesco.com



Drinking Fountain Mod. No. 3150 www.hawesco.com

Drinking fountains should be placed at trailheads and at key roadway linkages approximately 2' off the main trail. It is recommended that a concrete pad be placed around the fountain so that trail user can access the fountain from all directions. Some of the fountains could have bottle or jug fillers for trail users. Drinking fountains should complement the environment, be ADA accessible and capable of being winterized. Drinking fountains need to be sturdy enough to withstand vandalism and do not require chilled water.



BBQ Grill

Grills are recommended to be located near major trailheads such as Mt. Juliet Road, Park Glenn Soccer Park and the Gun Range. Additional grills could be located along the trail provided that fire hydrants are accessible. All grills should have a 4' x 4' concrete pad for people to stand upon and so hot embers do not fall on the grass. The grills should rotate to prevent smoke from being a problem. The grill should be adjustable to allow for various heat settings. Associated with grill locations should be picnic tables, trash receptacles and possibly a small pavilion.



BBQ Grill www.dumor.com

Pavilions



OCT 20 MR shown with Optional Cupola

Trailhead Octagonal Pavilion www.poligon.com



SQR 16 MR

Greenway Pavilion www.poligon.com

Two types of pavilions are recommended for installation along the greenway. The large octagonal shaped pavilion could be placed near the trailhead with picnic tables beneath it. The smaller pavilion could be placed at key locations along the greenway in areas such as look out areas and at trail crossings. Two picnic tables could be positioned beneath the smaller pavilion. The pavilions should be open and accessible from all sides. This allows for floodwaters to flow through. Also, the pavilion should have a concrete pad to place picnic tables on. The support posts are recommended to be square steel tubing with the roof made of metal to provide durability and color.



Picnic Table

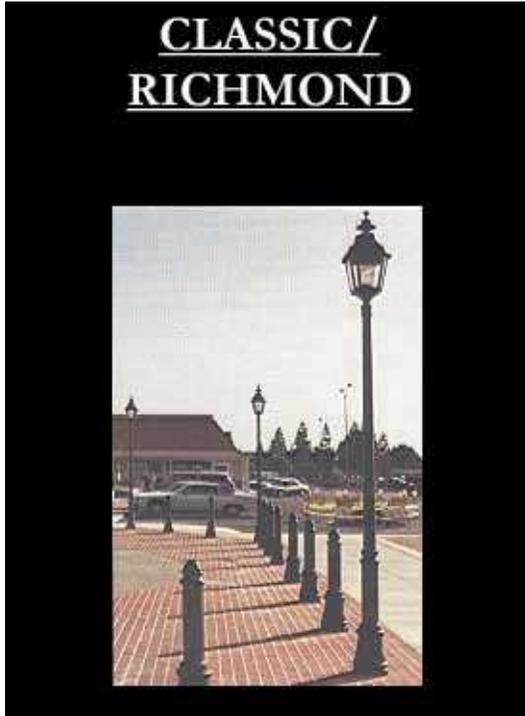


Greenway Picnic Table www.dumor.com

Picnic Tables are recommended to be located throughout the greenway. They should be located on a concrete pad either beneath pavilions or out in the open. Some could have a grill located near by. In areas where the greenway is designed for ADA accessibility, a ramp or sidewalk must lead up to the picnic table. The table should also allow for access by a wheel chair. The picnic table is recommended to be 6' in length with recycled plastic for the bench and table. The supports are metal powder coated with the color of the table and supports to be determined depending upon the exact location of the table.



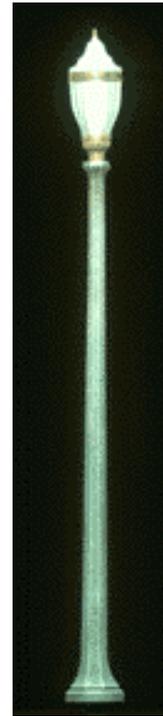
Greenway Lighting



Trailhead & Old Town Lighting www.sternberg.com



Greenway Lighting Victoria Style II & V
www.ameron.com



Adequate lighting of a trail system can improve the users comfort zone and make trails much more accessible at all times, however, lighting for multi-use trails should be considered on a case by case basis. Lighting of trails especially during the winter months when children and adults are walking to and from schools or work is important. If lighting of specific trails is initiated, the City must make a commitment to maintenance. In general, a spacing of 100-150' for pedestrian light fixtures is required to provide 0.5 footcandles on the trail surface. The light standard and fixture should complement all other site furnishings. The pedestrian light fixture should have a height of 12-16' and be durable enough to withstand vandalism.



Trash Receptacles



Ornamental Trash Receptacle located at trail heads & Old Town area Mod. No. 124 www.dumor.com



Trail Trash Receptacle mod. No. 44 www.dumor.com

Trash receptacles are recommended for all areas along the trail. Their design should complement the natural character of the greenway and other site amenities such as benches and picnic tables. They should be a minimum of 32-gallon size with a top or cover to prevent moisture and insects from entering the trash. An attachment to a post with a chain for easy removal for maintenance is recommended. They should be light enough for one person to empty. Trash receptacles should be located 2' off the edge of the trail and adjacent to all seating areas. Additional ornamental trash receptacles should be located at trailheads, concessions and restroom buildings and bridges as well as in the older sections of Mt. Juliet along the greenway. These will complement the ornamental bench and light fixtures.



• Chapter 6: Description of Proposed Trail System & Bicycle Routes

Once the Mt. Juliet Greenway Bike & Pedestrian Master Plan is fully implemented, all areas of Mt. Juliet will be within one mile of the greenway. All major roadways will have bicycle lanes or routes identified and will all be interconnected to the greenway system. Trailheads will be located throughout Mt. Juliet mainly in existing parks or along major highway corridors. One goal of the Greenway is to provide circular routes for users of the Greenway system. This will allow residents the opportunity to visit other areas of the community and not be required to double back on a specific section of the greenway.

Greenways

Stoners Creek Greenway

Stoners Creek bisects the City and flows in a northwest direction. It is approximately eight miles long with the headwaters located south of Rutland Road near Rutland Elementary School. Stoners Creek flows to the Davidson County line and westward to Stones Creek. In general the section that flows through Mt. Juliet is shallow and averages 1-4 feet of water depth. Near Rutland Elementary School the creek is approximately 4-6 feet wide whereas near the Davidson County Line it is 25-30' wide. The creek flows through a number of neighborhoods and schools, beginning with Belinda City and Rutland Elementary, then passing Stoners Creek Elementary and Mt. Juliet Jr. High, running adjacent to Stonebrook Subdivision and finally, near Chandler Point and the Davidson County Line. The character of the creek is one of numerous rock outcrops with stream banks of 1-6 feet in height. Associated with the creek are presumed wetlands and flood plains that are located throughout its length. Stonebrook has a neighborhood common area directly adjacent to the creek that could potentially be used as a secondary trailhead.

Cedar Creek Greenway

Cedar Creek flows in an almost due north direction beginning near the Wilson Electrical Substation and flows through Mt. Juliet into the Cumberland River or Old Hickory Lake over a length of approximately 6 miles. The character of the creek is different than that of Stoners Creek. Cedar Creek meanders throughout its length with numerous possible wetlands and flood plain areas. It is approximately 8-12' wide when it enters the Mt. Juliet growth area. The first major neighborhood along its length is Woodridge Place near Curd Road. Here, the creek is approximately 10-15' wide and 1 to 3 feet deep. The banks on both sides of the creek are 2-6' in height. Woodridge Place has a common area located adjacent to the creek. Further north is another subdivision with a common area adjacent to the creek. There are four parks or public facilities located adjacent to the creek; these are the Glen Soccer Facility, Charlie Daniels Park, Little League Park and the Gun Range. Near Highway 70, Cedar Creek flows north through large parcels of farmland. Windtree Golf Course is located on the west bank of Cedar Creek just before the creek flows onto the Army Corps of Engineers Property.



Belinda City Greenway

Belinda City Greenway is a very short greenway, approximately 1/4 mile that would connect at the intersection of Rutland Road, Stoners Creek and Sunnymeade Drive. This area is flood prone and a trailhead could be developed at this location. The Greenway travels in a easterly direction from Sunnymeade along the creek to Rutland Elementary School. This Greenway would help to connect the eastern portion of Belinda City to the Stoners Creek Greenway system. This connection would also serve the Rutland Road bicycle route.

Green Hill Greenway

The Green Hill Greenway is approximately one mile in length and would serve an area located south of Lebanon Road below the retail and commercial area beginning east of Nonaville Road and running eastward to Cedar Creek. This greenway would provide an important link to the retail and commercial area and connect to both Mt. Juliet Road and Lebanon Road. This linkage would also provide for safe passage of both pedestrians and bicyclists by allowing them the opportunity to travel off of both Mt. Juliet and Lebanon Roads.

Nashville Eastern/Division Street Greenway

The Division Street Greenway would be classified as a "Rails and Trails Greenway." Portions of this greenway are adjacent to the Nashville Eastern Railroad. There are numerous access points to the Stoners Creek Greenway and one access point to the Cedar Creek Greenway. Using the Columbia Gulf pipeline easement, a shorter connection can be made to the Cedar Creek Greenway. Through the development of this greenway, bicyclists and pedestrians would have an alternate route and remain off of Division Street.

Columbia Gulf Greenway

This is another short greenway that is approximately 3/4 miles long. This greenway begins near I-40 and Mt. Juliet Road and proceeds in a northeast direction towards Stoners Creek. The Columbia Gulf Greenway would connect residential areas to the Stoners Creek Greenway. By making this connection, residents do not have to walk along Mt. Juliet Road to access Stoners Creek Greenway. Another section of the Columbia Gulf Greenway connects with Cedar Creek. This section is approximately one mile in length and when future development occurs in this area, these easements should be negotiated for greenway development.

TVA Greenway

Certain sections of this Greenway may be hard to develop due to existing land uses, but in the future, arrangements should be made to acquire land or greenway easements associated with the TVA easement for greenway purposes. One such area is Clearview



Estates which is located adjacent to Stoners Creek. Other sections should be addressed as development occurs. The TVA Greenway would make an excellent connector from the Triple Crown Parkway area. This area is opening up to development and access to the greenway is very important to allow bicycle and pedestrian connections to the community.

Willoughby Greenway

The Hickory Hill - Willoughby Station neighborhoods have seen a substantial amount of development. A greenway connection from these neighborhoods to Stoners Creek can be accomplished through undeveloped land north of West Division Street. The Willoughby Greenway will connect to Stoners Creek near the new Wilson County School and be located adjacent to the stream that has its headwaters northward to the southern property lines of Willoughby Station. From this location the greenway could connect to a number of residential streets and common areas.

Proposed On-Street linkages

Numerous roads can presently be identified as Class III bicycle routes. This type of designation requires signs identifying the road as a bicycle route. Some of these roads are Lebanon Road, Woodridge Place, Charlie Daniels Parkway, Belinda Parkway and possibly Tates Lane. There are two existing roads that can be identified as Class II bicycle routes. This would be a section of Nonaville Road from Lebanon Road to Wind Tree Golf Course and a section of Old Lebanon Dirt Road from Mt. Juliet Road to Julie Drive. When improvements to both existing and proposed roads take place, it is important that pedestrian and bicycle facilities are taken into consideration. All roads identified for bicycle usage should either be classified Class II or Class III routes. The sidewalk ordinance was reviewed and addressed previously in the Bicycle and Pedestrian Master Plan. The existing Mt. Juliet zoning regulations identify sidewalk size and locations. The intent of roadway linkages is to provide access to the greenway system.

Lebanon Road / Highway 70 Linkage is a major east west corridor that is associated with the “Trail of Tears.” Lebanon Road traverses the City of Lebanon on the east and Nashville to the west. The entire road is classified as a Class III bicycle route. In Mt. Juliet, Lebanon Road crosses Cedar Creek near Little League Park. A trailhead could potentially be developed on the Little League Park property.

Tates Lane Linkage: If developed as a Class I route, Tates Lane would make an excellent north/south linkage located on the west side of Mt Juliet. This would develop connectors to Lebanon Road and the Rails and Trails Greenway located on West Division Street.

South Green Hill Road would also make an excellent north/south connector if improvements were implemented to the road. The road is identified as a Class II route when future widening takes place. If this connection is completed, it would link West Division Rails and Trails Greenway to Stoners Creek Greenway.



Green Hill Road Extension is south of West Division Street and is part of a proposed connection to Radford Road. It is also classified as a Class II route, and is part of a future road project. This linkage would allow for bicycle access from Old Lebanon Road to Stoners Creek.

Mt. Juliet West By-Pass is anticipated to be a future connection from West Division Street to Central Park. It is a Class II route with connections to both Stoners Creek near West Division Street and the TVA easement.

Central Park Linkage is to connect with the Davidson County portion of the Class II bicycle route and future road widening project. Central Park links both the West Mt. Juliet bypass and Mt. Juliet south of I-40. There is no access to Central Park from I-40.

Mt. Juliet Road is scheduled to be a Class II bike route and is part of both future and existing road widening projects. The Mt. Juliet Road bike route will connect to Central Park in the south, Belinda Parkway and an existing Park and Ride facility. Mt. Juliet Road also crosses Stoners Creek near West Middle School. This location would be ideal for a trailhead linking Mt. Juliet Road with the Stoners Creek Greenway. Mt. Juliet Road also crosses the Green Hill Greenway, which connects to the Cedar Creek Greenway. The connection to the Green Hill Greenway would allow for safe and easy access to Nonville Road which is projected to become a Class II bike route.

Belinda Parkway is identified as a Class III bike route. Both Belinda Parkway and Lebanon Road could be identified and classified as Class III bike routes immediately. This requires the addition of signs to identify the road as a bike route. Belinda Parkway connects to a Park and Ride facility located at Mt. Juliet Road and I - 40 on the west and South Rutland Road on the east. Belinda Parkway also crosses the Stoners Creek Greenway.

South Rutland Road: Rutland Elementary School is located on Rutland Road. Rutland Road is classified as a Class II bike lane and is part of a future road-widening project. Adjacent to the school is a connector greenway to the Belinda City neighborhoods. This connector also serves the Belinda City Greenway and connects to the Stoners Creek Greenway, which is approximately 1/4 mile in away.

Rutland Road Extension is a future road project that is identified to have a Class II bicycle facility. This portion of Rutland Road will connect to Mt. Juliet Road on the west and Rutland Road on the east. Rutland Road extension will also connect to both the Stoners Creek and Belinda City Greenway.

Beckwith Road Linkage is to connect South Rutland Road with the future Mt. Juliet East Bypass. Presently the Beckwith Road, I- 40 overpass is being redesigned to allow for vehicular access to I-40. As part of this project, Beckwith Road is identified to have Class II bike lanes. It is suggested that another Park and Ride facility be designed at this location to serve the east side of Mt. Juliet.



Mt. Juliet East By-Pass, when developed, is identified to have Class II bike lanes. Its connection to the future Beckwith interchange and Benders Ferry Road to the north will allow for connections to the Cedar Creek Greenway, the Columbia Gulf Greenway and the Nashville Eastern Greenway. The eastern bypass will open up the entire east side of Mt. Juliet to future development.

Division Street Linkage is located east of Mt. Juliet Road and is classified as a Class III bicycle route. The Division Street Linkage connects to the Nashville Eastern Greenway at the Nashville Eastern Railroad

Woodridge Place Linkage is an ideal linkage Class III route that connects both the Cedar Creek Greenway and Curd Road to Mt. Juliet High School. Woodridge subdivision has large common open areas adjacent to Cedar Creek. Woodridge Subdivision is also adjacent to the Park Glen Soccer Facility.

Curd Road Linkage is an important future Class II linkage to the Park Glenn Soccer Facility with numerous new neighborhoods being developed along its route. Presently Curd Road is very dangerous as a bicycle route. It is very narrow with numerous curves and steep shoulders. Once Curd is redeveloped it will make an excellent connector to Lebanon Road and the Cedar Creek Greenway.

Charlie Daniels Parkway Linkage is classified as a Class III route. It is short in length but an important connector to the High School, Charlie Daniels Park and Cedar Creek.

Benders Ferry Road is presently outside the City limits but within its future growth area. It provides a very important Class III link from Old Hickory Lake to the community of Mt. Juliet and Highway 70. This road could presently have signage identifying it as a Bicycle Route.

Saundersville Road Extension Linkage is identified as a Class II bicycle route and is part of a future road project. The linkage it forms is very important because of its connection to Nonville Road, Cedar Creek Greenway, Army Corps of Engineers property and Benders Ferry Road.

Saundersville Road Linkage is part of Saundersville Road Extension. This is classified as a Class II route for future widening. Presently it is outside the City limits but within its urban growth boundary. If a connection to the eastside of Cedar Creek could be developed, this route could be considered a Class III route that would connect to Benders Ferry Road.

Nonville Road Linkage can have portions already identified as a Class II bicycle Route. As mentioned previously, this can be implemented from Lebanon Road to the Wind Tree Golf Course. From Wind Tree Golf Course north the road will have to be improved to accommodate Class II usage. Nonville Road will make an excellent linkage on the west side of the community. It will connect numerous neighborhoods to commercial development along Lebanon Road.



Belinda Parkway Connector will connect Rutland Road Extension with Belinda Parkway. This connector is classified as a Class II bicycle route and is part of a future road.

Division Street Connector connects the eastern bypass with Division Street. This connector could be developed in conjunction with the TVA easement greenway that crosses Division Street and Mt. Juliet Road and travels in a northeasterly direction.

Mt Juliet East Connector is located between Mt. Juliet Road and the eastern bypass. Portions of this route have been completed (Oakhall and Truman Street). When Oakhall is connected to Truman Street, the connector would tie into Curd Road and eventually the eastern bypass. In the future, this route is classified as a Class II bicycle route but could presently be considered a Class III route.

Devonshire Drive Connector is a wide road with a middle lane. It is recommended that the City remove the middle lane and develop bike lanes on both sides of the road to classify the street as a Class II bike lane. This connection would provide a connection from Hickory Hills with both Highway 70, Willoughby Station, Willoughby Greenway and Stoners Creek Greenway.

Trailheads

In order to access greenways, trailheads are designed and developed as the “on” and “off” ramps. These facilities are designed for vehicles, horse trailers, bicycles and pedestrians. Trailheads are located at strategic locations along the greenway such as road crossings, parks and schools. Trailhead locations must take into consideration distances from each other, location along roadways for easy access and the amount of land required for their development. Both Wilson County School Board and the City of Mt. Juliet have facilities located along the greenways providing unique opportunities to develop trailheads at various locations along both Stoners Creek and Cedar Creek. All of the trailheads identified are within 1.5 - 2 miles from each other. Certain trailheads such as Belinda City Trailhead (Springdale), Mt. Juliet Road and Division Street (Tates Lane) are all located on the Stoners Creek Greenway and Wilson, Little League and the Gun Range are located on Cedar Creek. These should be a first priority for development. The other trailheads identified below could be built as the future dictates. The Mt. Juliet and the Cedar Creek Trailheads should be considered as prominent fixtures in the community due to their locations adjacent to major highway corridors, their location in the community and their significance's to outdoor activities and schools.

Stoners Creek Trailheads

Belinda City (Springdale Drive) Trailhead

Springdale Drive Trailhead would be located on Springdale with access to Rutland Elementary School. The site is in the general vicinity of the TVA corridor and north of Rutland Elementary School. The site is approximately 1 acre, flat and mowed regularly.



Due to its location in a residential neighborhood all utilities are accessible. The site could accommodate parking for 10 vehicles, bicycle storage, concessions and restrooms. Overflow parking could occur at Rutland Elementary during the weekends and evenings.

Mt. Juliet Trailhead

With the future widening of Mt. Juliet Road, this trailhead should be one of the first trails heads to be developed and should be the "marquee" trailhead. This trailhead is located in close proximity to Mt. Juliet Road, Stoners Creek Elementary School, West Middle School and a retail plaza. This trailhead would provide an excellent opportunity for the 1500 students to learn about the natural environment and our relation to the environment. Various types of science classes and experiments could be undertaken and monitored. A vehicular entry point to the trailhead could possibly occur from the drive to both schools. The area identified could accommodate a number of cars, bicycles, restrooms, concessions and horse trailers if required. Sewer, water and any other required utilities should be accessible from Mt. Juliet Road.

Tates Lane Trailhead

The Tates Lane Trailhead is proposed to be located south of Division Street and east of Tates Lane. The general area is located near parcel 18 on page 73 as identified on the tax maps. The site is approximately 5 acres. The location is ideal due to such factors as allowing greenway users to access the Stoners Creek Greenway, the Nashville Eastern/Division Street Rails and Trails Greenway, Tates Lane bicycle route, and residential areas.

New School Trailhead

A new school is being proposed in the area of parcel 35 on page 73 of the tax maps. It is recommended that a joint venture between Wilson County Schools and the City of Mt. Juliet be implemented to develop a trailhead at this location. This trailhead would connect the Nashville Eastern/Division Street Rails and Trails and Willoughby Greenway to the Stoners Creek Greenway. It would provide a safe walking experience for students and allow for outdoor classroom activities. All required utilities are accessible from Division Street.

Cedar Creek Trailheads

Wilson Trailhead

Wilson trailhead would be located at the TVA's Wilson Substation. All conversations with TVA personal have been positive with respect to a trailhead at this location. Presently the Wilson Substation is not within the City limits but is part of the urban growth boundary. The Wilson trailhead is located at the headwaters of Cedar Creek and the Nashville Eastern Railroad. The Nashville Eastern Railroad corridor has been identified as part of the overall greenway system. The property that the Substation is located on is a large tract of land that is owned by the TVA. Portions of this property have gravel-parking areas that could accommodate vehicles. It is not known if public water and sewer is available. Any design concepts must take into account the requirements developed and requested by the TVA.



Park Glenn Trailhead

This trailhead would be located almost midway between Little League Park and the Wilson Substation adjacent to Curd Road. This trailhead is close to the eastern bypass and in an area that is opening up for residential development. This trailhead is also located across the creek from Woodridge Place. With the installation of a 70-100' bridge easy access could be obtained to the Glenn Park Soccer Complex from the Woodridge Place common areas. Utilities are accessible from Curd Road.

Cedar Creek (Little League) Trailhead

The Cedar Creek Trailhead could be located in the park adjacent to Highway 70/Lebanon Road and Cedar Creek. There is an existing parking lot along Highway 70 that could possibly be used. This trailhead could be very important due to its proximity to Highway 70. Highway 70 is classified as a Class III bicycle route and is also part of the "Trail of Tears" that travels across Tennessee. All utilities required for the construction of a facility are accessible along Highway 70.

Gun Range Trailhead

This trailhead would be located on the gun range property. This would be the last trailhead along Cedar Creek above Cedar Creek Recreation area, which is Army Corps of Engineers property. Adjacent landowners have land leasing agreements with the Army Corps. The Gun Range Trailhead would be located approximately 1.5 miles from the Little League Trailhead and approximately 3 miles from the Cedar Creek Recreation Area. The Gun Range facility has electricity and water. It is assumed that sewage disposal is through a septic system. The trailhead should be located near Cedar Creek. There is an island located in Cedar Creek that could be used for a bridge to the west bank of the creek. The west bank of Cedar Creek has numerous residential developments that could benefit from a bridge connection.

The primary greenways in Mt. Juliet are Stoners and Cedar Creek. These two greenways are the longest and have the most impact on the community. They flow through numerous residential neighborhoods and retail areas. As part of the first phase in greenway development, it is recommended that the Cedar Creek Greenway be developed from Park Glenn soccer facility to Little League Park. This route includes numerous neighborhood common areas, a park and land owned by both Mt. Juliet and Wilson County. Stoners should be developed from Mt. Juliet Road located south of Division Street to Mt. Juliet Road south of the retail center. There are both undeveloped land and commercial properties that may have an interest in seeing this implemented because of the impact a greenway could have on future land values and retail sales. Any other development of the greenway system should occur as funding and land donations are available. It is recommended that greenway development become the responsibility of the landowners when development plans are presented for approval. This benefits both the developer and the community by increased land values and taxes. It is recommended that copies of the Greenway, Bike and Pedestrian Master Plan be made available to developers since the report identifies design guidelines and specific amenities.

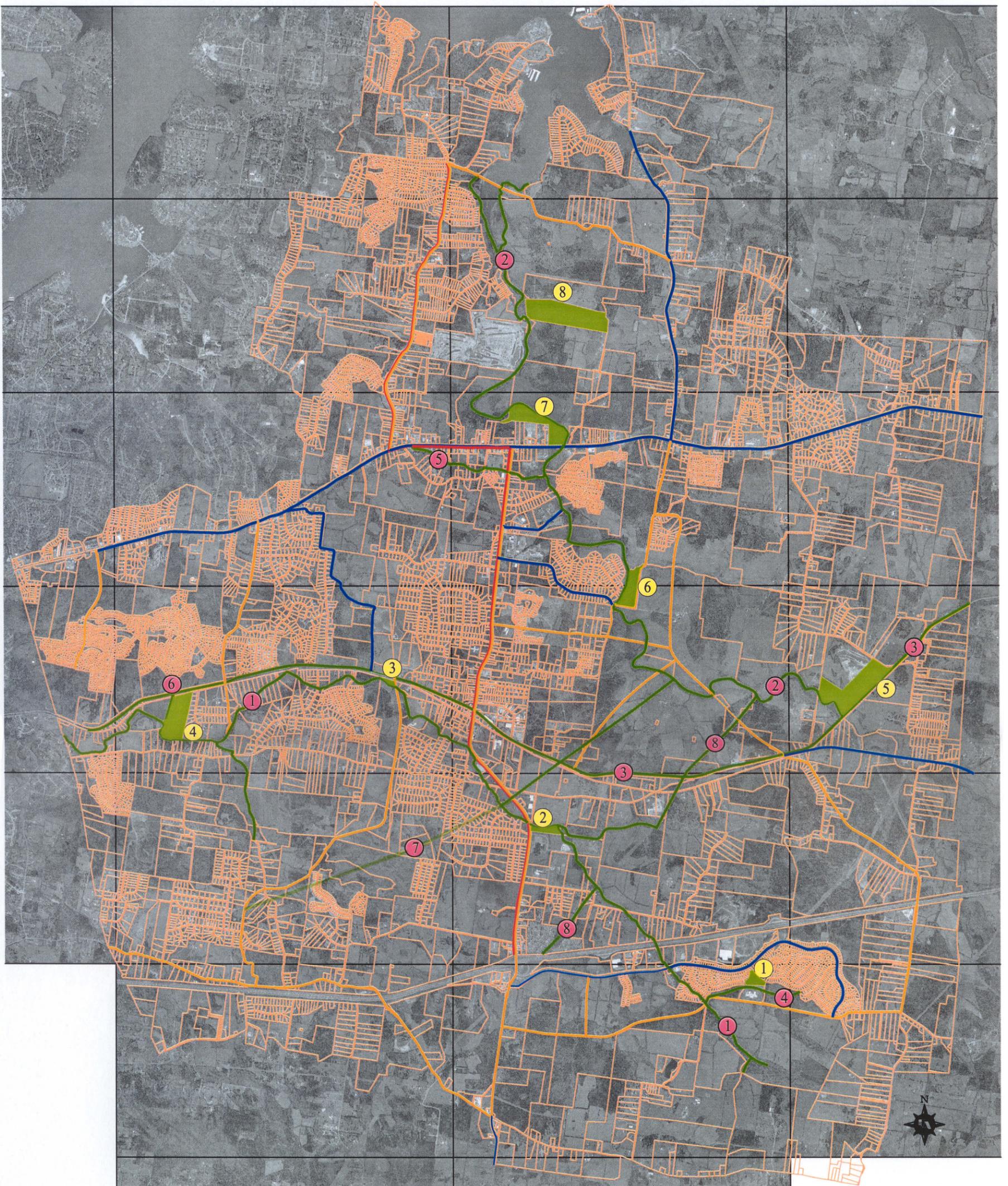


As part of the first phase of implementation it is recommended that two trailheads be built. One is located near the Little League Park and Highway 70 on Cedar Creek and the other at Mt. Juliet Road and West Middle School along Stoners Creek. These two facilities are located along two major transportation routes through the City. These facilities could also be developed as information centers for tourists visiting Mt. Juliet. Both of these trailheads are located midway on their respective Greenways.

Future development and funding of the remaining trailheads will determine their completion and scheduling. If donations and funding occurs, Tates Lane Trailhead and Park Glen should be an early priority. Both of these trailheads are located in residential areas and would be the next connections for Little League Trailhead and Mt. Juliet Trailhead.

Associated with trailhead development would be the required on-street linkages. As a trailhead is developed, it is recommended that the Class II and Class III linkage be implemented. This type of development would help bring the community together because it would allow all residents an opportunity to have access to the greenway.





1 TRAILHEADS

- 1 - BELINDA CITY TRAILHEAD
- 2 - MT. JULIET TRAILHEAD
- 3 - TATES LANE TRAILHEAD
- 4 - NEW SCHOOL TRAILHEAD
- 5 - WILSON PLAN TRAILHEAD
- 6 - PARK GLENN TRAILHEAD
- 7 - LITTLE LEAGUE TRAILHEAD
- 8 - GUN RANGE TRAILHEAD

1 GREENWAY TRAILS

- 1 - STONERS CREEK GREENWAY
- 2 - CEDAR CREEK GREENWAY
- 3 - NASHVILLE/EASTERN GREENWAY
- 4 - BELINDA GREENWAY
- 5 - GREENHILL GREENWAY
- 6 - WILLOUGHBY GREENWAY
- 7 - TVA GREENWAY
- 8 - COLUMBIA-GULF GREENWAY

LEGEND

- GREENWAY (CLASS I) —
- BIKELANE (CLASS II) —
- BIKEROUTE (CLASS III) —
- SIDEWALK TRAILHEAD —

DATE: 04-18-03

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MASTER PLAN

• Chapter 7: Funding Sources & Ownership Options

Overview

The most successful method of funding greenways is to combine private sector funds with local, state and federal sources. Many communities involved in trails and greenways will seek to leverage local money with outside funding sources to increase the resources available to trail and greenway acquisition and development. To implement greenways and trails throughout the City of Mt. Juliet, local advocates and City staff should pursue a variety of funding sources. The City of Mt. Juliet should review available sources to determine the best funding for specific projects based on funding availability, application deadlines and probability of success. The funding sources listed in this chapter represent some of the greenway and trails funding opportunities that have been typically pursued by other communities.

Federal Public Funding Sources

Several federal programs offer financial aid for projects that aim to improve community infrastructure, transportation, housing and recreation programs. Some of these federal programs that may be considered to fund the bicycle and greenway system in the City of Mt. Juliet are:

Urban and Community Forestry Grants Assistance Program (GAP) - These funds were authorized by the U.S. Congress through the 1990 farm bill. This legislation enables the U.S.D.A. Forest Service to provide funds to the Tennessee Department of Agriculture.

Transportation Equity Act for the 21st Century (TEA 21)

The primary source of federal funding for greenways is through the Transportation Equity Act of 1998 (TEA 21), formerly the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA provided millions of dollars in funding for bicycle and pedestrian transportation projects across the country and will provide millions more as TEA 21 or TEA 3 or perhaps with other, more modern names.

There are many sections of TEA 21 that support the development of bicycle and pedestrian corridors. The Tennessee Department of Transportation (TDOT) can utilize funding from many of these subsets of TEA 21. Those sections that apply to the creation of greenways and trails include:

Transportation Enhancement (TE) activities continue to be funded through a 10% set-aside from STP funds. These funds can be used for bicycle and pedestrian facility construction or non-construction projects such as brochures, public service announcements, and route maps. The projects must be related to bicycle and pedestrian transportation and must be part of the Long-Range Transportation Plan.

The eligibility of National Highway System (NHS) funds includes pedestrian walkways, safety and educational activities.



The Tennessee Department of Transportation is the funding administrator for all Transportation Enhancement funds distributed by the Federal Highways Administration. Approximately \$15 million is available annually statewide to City or county governments and other state agencies to construct non-motorized pedestrian and bicycle trails that provide transportation alternatives. The match for funding of these projects is 80% Federal, 20% local agency.

Grant Applications

Grant applications are reviewed annually and must be submitted prior to July 1. For an application, contact: Marilyn Holland, Enhancement Coordinator, Department of Transportation, Office of Local Programs, Suite 600, James K. Polk Bldg. Nashville, Tn. 37243-0341; Phone number (615) 532-3184.

Within the Tennessee Department of Environment and Conservation there are grant programs that are administered through the Recreational Education Services Division.

Local Parks and Recreation Fund (LPRF) Grants - Recreational Education Services (RES) has been awarding grants to eligible local governments for the acquisition, development and rehabilitation of parks and recreational land and facilities since 1992. Approximately \$7 million is available every other year. A 50% match is required, but in-kind matches are allowed within certain guidelines.

Land and Water Conservation Funds (LWCF) Grants - Approximately \$4 million has been allocated for 2001-2002. This federal grant program is for the purpose of funding state and local government outdoor recreation projects. Projects require a 50% match and the requirements are similar to LPRF Grants.

Recreation Trails Program (RTP) - This program is a federal grant-in-aid program under TEA-21 and had received increased funding in the last few years. For the year 2003, Tennessee has been allocated \$933,924.

LPRF, LWCF and RTP Grant Applications

The next application deadline for the next formal grant round has not been established, but will be either 2003 or 2004. For an application Contact: Tennessee Department of Environment and Conservation, Recreation Educational Services Division, Alice Burk, Grants Administrator, 10th floor L & C Tower, 401 Church Street, Nashville, Tn 37243-0439; phone number (615) 532-0748.

Grants may also be obtained through the Tennessee Department of Agriculture, Division of Forestry

Urban and Community Forestry Grants Assistance Program (GAP) - Tennessee Department of Agriculture will provide funds for development of local Community & Urban Forestry programs. Within this program three grant categories are available. The Federal share of the project's financial support may be up to 50%. These categories are:



Personnel - How a person will enhance/initiate urban forestry in the community and what partnerships may be formed/enhanced by establishing this position.

Program Development, Education/Training Volunteer Development – The project must show how it will initiate or build local urban forestry program capability. Inventories, tree management plans, ordinances are examples. Education and training may be directed at the local or general public. Videos, brochures, posters and displays are examples of education and training projects.

Tree Planting - This grant has a \$5,000 limit and any tree planting must be accomplished on public lands.

Tennessee Parks and Greenways Foundation - This grant is available to non-profit organizations, groups, City or county government agencies in Middle Tennessee. The project must be a part of a connection to a state park or in a state park. The grants vary from \$500 - \$2,500 and must have a 50/50 match of either cash or in-kind services.

Land Owners Options to Donate Land

There are numerous options for landowners to protect their land permanently from development and still have the opportunity to use it for farming or recreation. Some of these options can be combined with other opportunities to help reduce property, estate or inheritance taxes. There are four basic ways to protect the land from development.

Conservation Easement - The land remains in private ownership yet is regulated and the protection can be stronger than zoning or state regulations. Each conservation easement is unique to the characteristics of individual properties. The limitations prescribed in the easement limit the number and location of structures and the types of commercial and industrial activity. Its versatility allows it to range from wild easements to easements allowing limited residential use. The size of the easement can vary depending on the requirement.

Mutual Covenant - Neighboring landowners with a common interest in conservation may sign an agreement containing mutually beneficial protective covenants controlling the future of their land. The agreement is recorded in the county records and is binding upon subsequent owners just as an easement. The covenants are enforceable by any or the landowners that entered into the mutual agreement or by any future owners of the land.

Mutual covenants are useful when a conservation easement is not feasible, either because there is not an agency or organization interested in accepting the easement or the landowner does not want to enter into an agreement with an agency. Mutual covenants are different from conservation easements in that easements are permanent and often provide tax advantages. The nature of the enforcer is different. The conservation easement is enforceable by a conservation agency or organization whereas the mutual covenant is enforceable by a group of people.



Normally, enforcement of the terms of the covenants by a neighboring landowner is not legally mandatory.

Greenbelt Registration - In 1976, the Tennessee General Assembly passed the Agricultural, Forest, and Open Space Land Act (Greenbelt Law). The Act was passed to protect land that is threatened by pressure from urbanization, scattered residential and commercial development. The Greenbelt law allows certain land to be taxed on its value based on its present use (TCA 67-5-1001).

To qualify for greenbelt registration, agricultural land must be 15 acres or more and must produce at least \$1500 per year over a three-year period in gross income. Forestland must be 15 acres or more and the tax assessor will consider the type of timber and its growth rate to determine eligibility. Open space land must be determined by a county planning commission or state planning office to be classified as open space. The minimum size is three acres and the need to preserve the land in light of adjacent development.

Lease - A lease allows for unrestricted and exclusive use of the land by the agency for a given number of years, and may need to be recorded with the county register of deeds. By granting a short or long term lease to a land management agency, landowners can make sure their land is managed carefully.

A lease provides an alternative for those who may not want to transfer their land to a conservation agency or organization, but want to see it protected by such a group for a period of years. A lease also allows the landowner to determine an agency's ability to manage the property and it gives the landowner time to determine a more permanent protection strategy. Various clauses can be attached to the lease agreement so that the land is used according to the landowners wishes. Some landowners choose not to receive lease payments.

Donating Land for Conservation - Donating land relies on the landowner being willing to protect his or her land at the cost of giving it away, without direct financial compensation. The financial benefits of donating land are straightforward. The donor does not pay real estate taxes, income taxes are reduced and the estate is reduced in size, thereby reducing estate taxes. In addition, if the donation is to a government agency or a publicly supported private charity the donor can claim a federal income tax deduction of the market value of the land as determined by a qualified appraiser. In some cases, the landowner may want to donate the land over a number of years to maximize the tax advantage.

Donating Land for Trade - Property without significant natural, cultural or recreational value may still be important to a conservation organization for resale value with the resulting funds used to help purchase special resource lands or special programs. The organization may even trade the donated land for natural lands in need of protection. The owner is entitled to a charitable deduction equal to the fair market value of the property.

Donation by Bequest - A gift of land may be made at the time of death by designating the gift as part of the will. The advantage of a donation by bequest is that the owner retains full use and control of the land until his death. Financially, a landowner can reduce the estate and inheritance



taxes by removing the land from the estate. The bequest can qualify as a charitable transfer that entitles the estate to a deduction equal to the value of the property, at the time of death. The owner remains responsible for paying real estate taxes during their lifetime

Reserved Life Estate - A landowner may donate property to a landholding agency or non-profit organization with a reserve life estate. The landowner has the benefit of knowing that the land has been accepted and can still enjoy the use of all or part of the property during their lifetime. The reserve life estate also allows immediate family members to use the land throughout the family members' lifetimes.

The donor must usually pay the real estate taxes on that portion of the land retained for his own use. A transfer of property with a reserved life estate can result in the value of the property being included in the gross estate for federal estate tax purposes.

The possible tax benefit is that the value of the gift can qualify as a one time charitable deduction. The value of the gift can not include the value of the life estate but more than one life estate can significantly reduce the possible income tax deduction.

Donation of a Partial Interest - In some cases when a landowner doesn't want to donate the entire interest in a parcel of land, a partial interest can be accomplished. A conservation easement is a partial interest. Landowners may choose to share property rights and responsibilities by donating an undivided interest. Each person owns a percentage of the property as a whole. An undivided interest is tax deductible and may be made over a period of time to take advantage of the deduction.

Donating to Establish a Life Income - A landowner may be able to contribute his or her interest in property in exchange for a life income agreement. By transferring property in exchange for a charitable gift annuity or other deferred charitable gifts the owner of the property establishes a source of income for life, receives significant income and estate tax savings, and eliminates his or her responsibility to manage the property.

In addition, these life income options may be beneficial to donors who wish to support an organization financially with gifts of appreciated assets, needed life income and want to avoid the capital gains taxes involved in the normal sale of assets.

Donating Land as Payment of Inheritance Tax - A little known provision of the Tennessee law is the "Payment of Transfer Taxes in Kind Act" [TCA 67-8-701 - 67-8-705]. It allows estate heirs, under certain circumstances, to pay inheritance tax owed, in kind, by transferring land to a state or local government agency that has "recreational, cultural, conservation or wildlife value or value to the state for public purposes." By donating inherited land in payment of inheritance tax, heirs can target their tax dollars for conservation purposes.



• **Chapter 8: Implementation Plan**

Implementation of the Mt. Juliet Greenway Bike and Pedestrian Master Plan offers tremendous opportunities to improve the quality of life for community residents. The greenway system will improve access to areas of Mt. Juliet and eventually the region. This plan will also improve access to outdoor resources, link people to destinations, expand opportunities for education, and shape community growth throughout the 21st Century. All of this is possible as the greenway is implemented over the coming years and beyond the 20 years that the Implementation Plan identifies. The key to this success is implementation. This chapter describes a strategic plan for building, managing and operating the Mt. Juliet Greenway Bike & Pedestrian Master Plan.

Preparation of this master plan is a small step in the future development of the Mt. Juliet Greenway System. More detailed design work is required before the actual trail tread is constructed and residents are able to use the trail corridors. It is important that involvement of citizens, business and neighborhood homeowners associations continues, as this is vital to the ongoing development of a successful design. This Chapter and Chapter 4, Design Guidelines, are intended to provide step-by-step process for building segments of the Greenway Bike & Pedestrian Master Plan.

Each trail corridor and/or segments of each corridor will require a more detailed design to determine the appropriate alignment of the actual trail tread. Additionally, the location of trail amenities, such as trail furniture, landscaping, drinking fountains, parking and lighting need to be defined and located throughout the corridor.

This Master Plan proposes the development of an interconnected system of asphalt and concrete paved trails and on street linkages within each of the eight corridors defined in Chapter 6, Description of Trail System. Detailed site plans and design development documents should be prepared for all trail segments. Staff resources and professional design consultants with previous experience in trail and on-street bike route design should be employed to prepare the necessary detailed design documents for each corridor.

Phasing Strategy for the Mt. Juliet Greenway Bike & Pedestrian Master Plan

With limited trail resources and 79 miles of proposed multi-use trails and on-street linkages, it is important to determine a logical order for the implementation of the trails and linkages. Each category has been ranked 1-10 with 10 being the highest.

Recreation/Destination Served: Trails that connect important parks and recreation destinations can offer the public a safe opportunity to access these facilities and they can serve as trailheads. The higher the number of parks and recreation destinations served by a trail the higher the ranking.

Right-of-Way Availability: The availability of rights-of-way or easements to construct trails is a critical cost and timing factor. If rights-of-way or easements cannot be secured voluntarily to construct a trail within a corridor, the trail cannot be built unless rights or property can be purchased. Purchasing rights of way can be very expensive and in many



cases can make constructing a trail cost prohibitive. Corridors which have the necessary rights of ways in the public domain have the highest ranking.

Timelines and Opportunity: In some instances, the trail corridors identified are the same corridors in which other public improvements will be or have been built such as streets, highways, water lines and drainage channels. In cases where a trail can be constructed in conjunction with these types of projects, the trail construction will be expedited and great cost saving can result. Cost for constructing the trail at a later date could be higher. Corridors in which future public improvements are funded or planned receive higher ranking than those corridors without public improvements.

Total Population Served: One of the best indicators of how well a trail will be utilized is the number of people living in close proximity to the trail along its entire length. For this evaluation, the population within one mile of the trail corridor was used.

Average population Served: Another method of looking at the potential number of trail users is the average population served per mile of trail. Again, the population within one mile of the trail corridor was used. Shorter trails within densely populated areas may rank the highest.

Schools Served: Trails that connect schools offer the community a safe opportunity for children to walk or ride their bikes and can serve as a logical trailhead. The higher the number of schools served by a trail corridor, the higher the ranking.

0 - 5 Year Phase: This is used to describe those corridors for which the design can be started within two years and constructed within a five year period. Most trails in this category will have high scores in the first three evaluation criteria.

5 - 10 Year Phase: This is used to describe those corridors for which design can commence within the next five years and constructed within ten years.

10 - 20 Year Phase: This is used to describe those corridors for which design can commence within next ten years and constructed within twenty years.

Phasing Strategy for Mt. Juliet Sidewalks

It is helpful to determine the priorities for the implementation of 8.3 miles of proposed sidewalks. The proposed sidewalks are along Mt. Juliet Road extending from south of Interstate 40 north to Lebanon Road. Also, along Lebanon Road from Cedar Creek westward to Nonaville Road and from Lebanon Road north along Nonaville Road to Saunderville Road.

Connection to Existing Sidewalks: A proposed sidewalk is considered more useful if it makes connections to other existing sidewalks than one which makes no connections. Proposed sidewalks that connect to existing walks received a higher ranking.



Length of Proposed Sidewalk within Segment: Filling in gaps between existing sidewalks is important in creating an accessible, continuous and complete sidewalk segment. Shorter total lengths of proposed sidewalks within each segment to fill in these gaps receive a higher ranking. Reviewing the requirements for implementation of sidewalks, the highest priority should be given to installing sidewalks along Lebanon Road. This would accommodate pedestrian traffic throughout the commercial area. Any other areas should have sidewalks installed as part of a road-widening project such as the Mt. Juliet road widening.

Trail Phasing

With 25.23 miles of proposed trails within the City of Mt. Juliet, the first two question are "Which trail gets built first?" and "What section?" The following "Trail Evaluation Matrix" applies the above criteria of the 8 proposed trail corridors. Each Corridor is objectively compared to all other corridors with the resulting ranking order established for all trails. The various phases described in the following matrix are meant to provide a relative time frame only and are not absolute. The process of implementing trails within the City will be dynamic and as opportunities arise and conditions change, corridors may be developed in a different order than indicated in the phasing matrix.

RANK	NAME	ROW AVAILABLE	TIMELINESS/ OPPORTUNITY/PRIORITY	TOTAL POPULATION SERVED	POPULATION SERVED PER MILE	SCHOOLS SERVED	RECREATION/ DESTINATION	TOTAL SCORE
1	Stoners Creek Greenway	1	6	9	9	9	8	42
2	Cedar Creek Greenway	7	7	8	7	0	9	38
3	Nashville/Eastern Greenway	6	6	4	8	8	6	38
4	Belinda City Greenway	1	4	7	8	8	1	29
5	Green Hill Greenway	1	5	5	9	0	8	28
6	Willoughby Greenway	0	3	8	8	8	1	28
7	TVA Greenway	3	3	6	2	0	8	22
8	Columbia Gulf Greenway	5	4	4	3	0	1	17

Linkage Phasing

With 53.8 miles of proposed on-street linkages within the urban growth boundary of Mt. Juliet, developing priorities for implementation is needed. The following spreadsheet applies the same criteria utilized for the trails to each of the various on-street linkages corridors. Since each on-street linkage is within existing or proposed road rights-of-way, all corridors received the maximum score for right of way availability.



RANK	NAME	ROW AVAILABLE	TIMELINESS/OPPORTUNITY/PRIORITY	TOTAL POPULATION SERVED	POPULATION SERVED PER MILE	SCHOOLS SERVED	RECREATION/DESTINATION	TOTAL SCORE	PHASE
1	Lebanon Road/HWY 70	9	9	9	9	4	7	47	0-5 Years
2	Woodridge Place Linkage	9	9	5	7	8	8	46	
3	Charlie Daniels Pkwy Linkage	9	9	3	7	7	8	43	
4	Nonaville Rd. Linkage	9	9	7	7	3	8	43	
5	Division Street Linkage	8	8	7	6	3	5	37	
6	Belinda Parkway	7	8	6	8	0	8	37	
7	Mt. Juliet Road	4	7	8	8	6	5	36	
8	South Greenhill Road	3	4	6	6	0	5	24	5-10 Years
9	Benders Ferry Rd.	8	8	1	1	0	6	24	
10	Central Park Linkage	2	5	3	6	0	7	23	
11	Green Hill Road Extension	3	4	3	6	0	5	21	
12	Beckwith Rd. Linkage	8	3	3	3	0	3	20	
13	Curd Rd. Linkage	5	5	3	1	0	6	20	
14	Tate Lane Linkage	3	5	3	3	0	5	19	
15	Saundersville Rd. Linkage	7	1	1	1	0	6	16	10-20 Years
16	Mt. Juliet West By-Pass	0	1	3	6	0	5	15	
17	South Rutland Road	0	2	1	2	4	6	15	
18	Belinda Parkway Connector	1	1	3	1	0	5	11	
19	Division Street Connector	1	1	3	1	0	5	11	
20	Mt. Juliet East Connector	1	1	3	1	0	5	11	
21	Mt. Juliet East By-Pass	0	1	1	3	0	5	10	
22	Rutland Rd. Ext.	0	2	1	2	0	4	9	
23	Saundersville Rd. Ext. Linkage	0	1	1	1	0	6	9	

Estimated Costs for Facility Development

Cost estimates have been prepared for all corridors defined. The cost estimates are general in nature and are based on industry standards for Tennessee. A listing of industry standards that were used to determine "low" or "high" estimates are provided on the following pages. Additional input was provided with respect to the location of a facility and its impact on the environment. Also, economic conditions at the time of construction will impact the cost for the greenway system. The purpose of these cost estimates is to provide general guidance for the purpose of budgeting and developing trail segments. In today's dollars, the estimates are reliable to the extent that a general expectation can be derived from their use. Specific site development factors unique to each corridor will influence final design development cost. More detail costs



should be developed as part of the corridors specific conceptual plans. Final construction cost estimates should be based on final design plans.

Typical Cost for Off-Road Trail Facilities

Preliminary construction costs are provided in this chapter for 1-5 years, 5-10 years and 10-20 year and linkages projects. The unit costs defined below and on the following pages are provided for budgeting purposes only. Adjustments will have to be made to these costs on a project by project basis to compensate for changes in unit price trends over time.

Category/Description of Facility	Unit	Unit Cost
<u>Trail Treads</u>		
6-foot Bare Earth Hike/Mtn. Bike Trail	Linear Feet	\$5
8-foot Bare Earth Woodchip Pedestrian Trail	Linear Feet	\$10
10-foot Aggregate/Stone Trail	Linear Feet	\$15
10-foot Asphalt Multi-Purpose Trail	Linear Feet	\$25
10-foot Concrete Multi-Purpose Trail	Linear Feet	\$35
10-foot Wood Deck/Board Trail	Linear Feet	\$250
<u>Signage</u>		
Information signs	each	\$2,000
Directional signs	each	\$250
Warning signs	each	\$200
Mile markers	each	\$250
<u>Site Furnishings</u>		
Benches	each	\$1,300
Trash receptacles	each	\$750
Security bollards	each	\$450
Bicycle racks	each	\$1,000
Bicycle storage units (2 bikes)	each	\$1,500
Fencing (board 6' height)	linear foot	\$20
Post & cable barriers	linear foot	\$10
Gates	each	\$1,500
Drinking fountains	each	\$3,000
<u>Trailhead Facilities</u>		
Restroom building	1,000 sq. ft.	\$100,000
Concessions building	850 sq. ft.	\$85,000
Interpretive Center or Information	1,000 sq. ft.	\$100,000
Gravel parking facility (0.5ft thk.)	Square yard	\$1
Asphalt parking facility	Square yard	\$12



Typical Cost for Bicycle & Pedestrian Facilities

In certain circumstances, it may be necessary to install additional on-road bicycle facilities in order to connect to the greenway system. Itemized below are costs for facilities that would most likely be needed to provide this linkage.

Restriping

Conducted as part of a regularly scheduled roadway resurfacing project and does not include Right-of-Way acquisition and changes to signal actuation.

Bicycle Lanes (both sides of road)	\$5,000/mi
Wide Outside Lanes (both sides of road)	\$4,300/mi

Independent Projects

The listing below is for development of various types of facilities as independent projects. These do not include Right-of-Way acquisition because of fluctuations in real estate values. Real estate values will have to be considered on a parcel by parcel basis.

Share the Road Bike Routes (signage, pavement symbols, Bicycle Actuated Signals)	\$15,000/mi
Urban Bike Lanes (4' wide, both sides)	\$110,000/mi
Rural Bike Lanes (4' wide, both sides)	\$75,000/mi
Paved Shoulders (4' wide both sides)	\$75,000/mi
Wide Curb Lane (14' wide, both sides)	\$45,000/mi

Other Bicycle Facilities

Class I Bicycle Parking (Bicycle Lockers - per 2 bicycles)	\$1,500
Class II Bicycle Parking (Secure wheels and frame - per bike)	\$100
Class III Bicycle Parking (bollards or rail racks - per bike)	\$75
Bike Route "Share the Road" Signs (each)	\$250

Typical Cost for Pedestrian Facilities

Sidewalks (5' wide, 2 sides)	\$200,000/mi
Pedestrian Signal Heads (for 2 corners)	\$1,800 each
Pedestrian Signal Heads (for 4 corners)	\$3,600 each

Other Pedestrian Facilities

Prefabricated Pedestrian Bridge (8' wide)	\$400/linear foot
Constructed Bridge (8' wide)	\$450/linear foot
Crosswalk Striping	\$250 each
Post lighting	\$2,900 each



Developing the Greenway Bike & Pedestrian Master Plan

If interest is developed and sustained over the next 20 years, the Mt. Juliet Greenway, Bike & Pedestrian Master Plan could implement over 79 miles of multi-use trails and on-street linkages. The miles constructed throughout each phase breaks down as follows:

Short Term: 1-5 Years Trail Cost

Rank "A"	Greenway Name	Length	Low Cost	High Cost
1	Stoners Creek Greenway	1.23 mi.	\$1,097,892	\$1,317,470
2	Cedar Creek Greenway	1.8 mi.	\$1,378,671	\$1,654,405
3	Nashville/Eastern Greenway	1.89 mi.	\$580,899	\$697,078
4	Belinda City Greenway	0.60 mi.	407,302	\$490,762
5	Green Hill Greenway	NA	0	0
6	Willoughby Greenway	0.90 mi.	\$105,692	\$126,830
7	TVA Greenway	NA	0	0
8	Columbia Gulf Greenway	NA	0	0
	Short Term total	5.85 mi.	\$3,570,456	4,286,545

Mid Term: 5-10 Years Trail Cost

Rank "B"	Greenway Name	Length	Low Cost	High Cost
1	Stoners Creek Greenway	2.95 mi.	\$1,128,043	\$1,466,455
2	Cedar Creek Greenway	1.7 mi.	\$789,571	\$1,026,442
3	Nashville/Eastern Greenway	0.74 mi.	\$277,698	\$361,007
4	Belinda City Greenway	NA	0	0
5	Green Hill Greenway	0.90 mi.	608,815	\$791,459
6	Willoughby Greenway	NA	0	0
7	TVA Greenway	NA	0	0
8	Columbia Gulf Greenway	0.53 mi.	\$100,592	\$130,769
	Mid Term total	6.82 mi.	\$2,904,719	\$3,776,132



Long Term: 10 - 20 Years Trail Cost

Rank "C"	Greenway Name	Length	Low Cost	High Cost
1	Stoners Creek Greenway	1.65 mi.	\$399,742	\$559,638
2	Cedar Creek Greenway	2.6 mi.	\$906,921	\$1,269,689
3	Nashville/Eastern Greenway	3.48 mi.	\$523,858	\$733,401
4	Belinda City Greenway	NA	0	0
5	Green Hill Greenway	NA	0	0
6	Willoughby Greenway	NA	0	0
7	TVA Greenway	3.1 mi.	\$592,056	\$828,878
8	Columbia Gulf Greenway	1.73 mi.	\$281,658	\$394,321
	Long Term total	12.56 mi.	\$2,704,235	\$3,785,927

Linkage Cost

Short Term: 1-5 Years Linkage Cost

Rank	Linkage Name	Class	Length	Low Cost	High Cost
A	Lebanon Road/HWY 70	III	4.1 mi.	\$2,500	\$3,250
B	Woodridge Place	III	1.0 mi.	\$1,000	\$1,500
C	Charlie Daniels Pkwy Linkage	III	0.25 mi.	\$500	\$1,000
D	Nonaville Rd. Linkage	II	2.3 mi.	\$148,000	\$192,400
E	Division Street Linkage	III	5.4 mi.	\$3,000	\$3,900
F	Belinda Parkway	III	3.5 mi.	\$2,000	\$2,600
G	Mt. Juliet Road	II	5.6 mi.	\$616,000	\$800,800
	Total Short Term Cost		22.15 mi.	\$773,000	\$1,005,450

Mid Term: 5-10 Years Linkage Cost

Rank	Linkage Name	Class	Length	Low Cost	High Cost
H	South Green Hill Road	II	1.3 mi.	\$143,000	\$193,050
I	Benders Ferry Rd.	III	5.9 mi.	\$2,950	\$4,130
J	Central Park Linkage	III	3.5 mi.	\$1,750	\$2,275
K	Green Hill Road Extension	II	0.6 mi.	\$66,000	\$95,700
L	Beckwith Rd. Linkage	II	2.3 mi.	\$253,000	\$303,600
M	Curd Rd. Linkage	II	1.3 mi.	\$143,000	\$171,600
N	Tates Lane Linkage	II	1.7 mi.	\$243,100	\$316,030
	Total Mid Term Cost		16.6 mi.	\$852,800	\$1,086,385



Long Term: 10-20 Years Linkage Cost

Rank	Linkage Name	Class	Length	Low Cost	High Cost
O	Saunderville Rd. Linkage	III	0.25 mi.	\$500	\$1,000
P	Mt. Juliet West By-Pass	II	2.5 mi.	\$275,000	\$375,500
Q	South Rutland Road	II	1.5 mi.	\$165,000	\$214,500
R	Belinda Parkway Connector	III	0.4 mi.	\$1,000	\$1,500
S	Division Street Connector	III	1.2 mi.	\$1,500	\$2,000
T	Mt. Juliet East Connector	II	1.5 mi.	\$165,000	\$214,500
U	Mt. Juliet East By-Pass	II	4.5 mi.	\$495,000	\$594,000
V	Rutland Rd. Ext.	II	1.6 mi.	\$176,000	\$211,200
W	Saunderville Rd. Ext. Linkage	II	1.65 mi.	\$181,500	\$254,100
	Total Long Term Cost		15.1 mi.	\$1,460,500	\$1,868,300



OPERATIONS AND MANAGEMENT

Operating, maintaining and managing the Mt. Juliet Greenway Bike & Pedestrian System will require a coordinated effort among city departments, private sector organizations and individuals. Key elements of the operations and management program include trail access easements, trail facility operational policies, land management, safety and security, trail rules and regulation, an emergency response plan, and a risk management plan. All this information is discussed in greater depth in Chapter 9 of this report.

Maintenance and management of the greenway system should be the responsibility of the City of Mt. Juliet and any of its partners. The City will eventually be required to develop an operations budget to manage and maintain the greenway system. The following maintenance and management costs are provided as a guide. It may be possible to lower the cost of maintaining the greenway through development of an Adopt-a-Trail program. Through an Adopt-a-Trail program, volunteers have proven effective in performing some of the routine maintenance activities that are listed below.

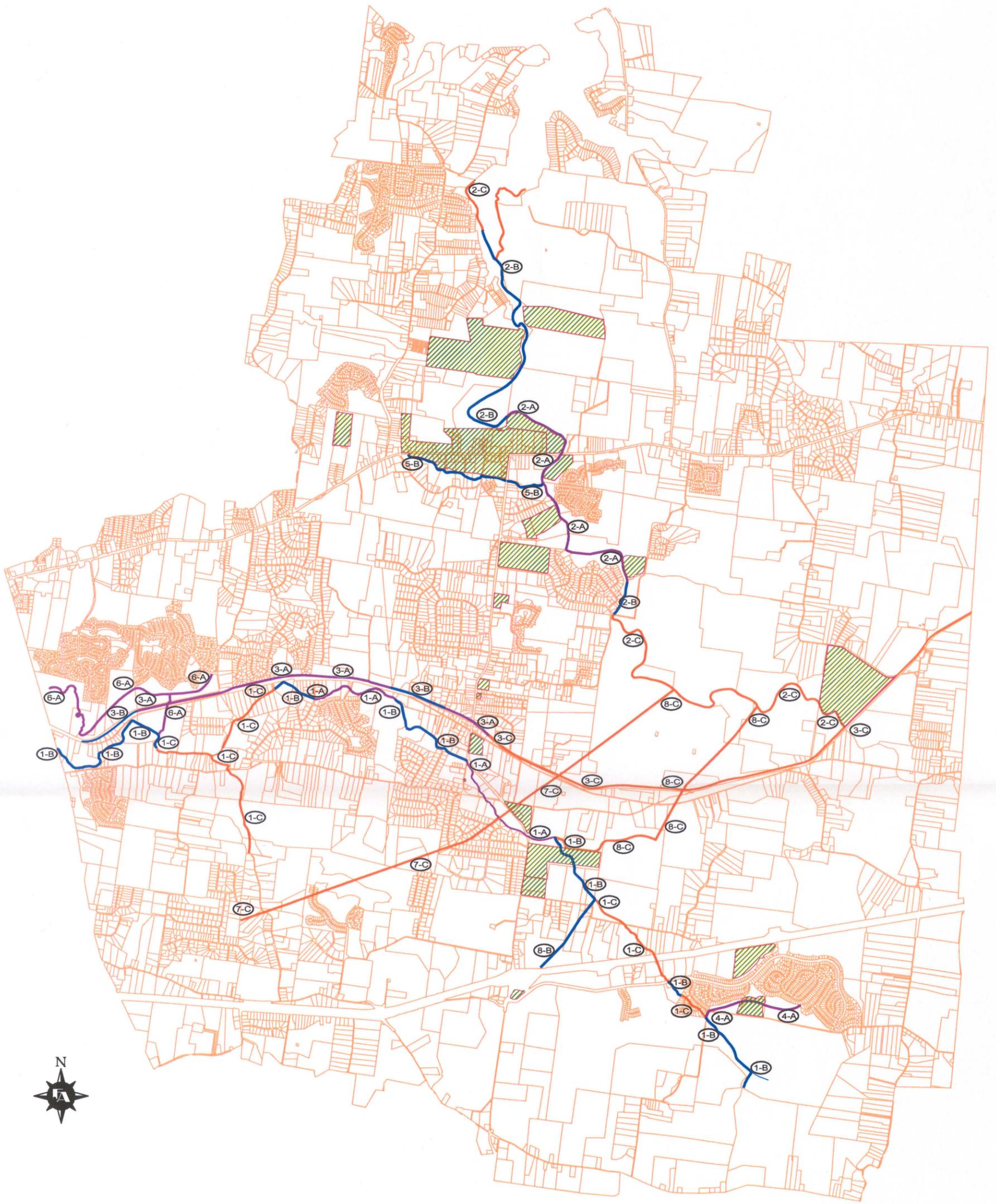
Typical Maintenance Cost (1-mile paved trail segment per year)

Drainage and storm channel maintenance (4 x/yr)	\$700
Sweeping/blowing debris off trail tread (24 x/yr)	\$1,600
Trash pick-up and removal (24 x/yr)	\$1,600
Weed control and vegetation management (10 x/yr)	\$1,350
Mowing of 3' grass safe zone along trail (24 x/yr)	\$1,750
Minor repairs to trail furniture/safety features	\$500
Maintenance supplies for work crews	\$300
Equipment fuel and repairs	\$800
Estimated Maintenance cost per mile per year	\$8,600

Re-Surfacing

Re-surfacing of the asphalt trail tread (20 year cycle)	\$53,000-60,000/mile
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GREENWAY PHASING PLAN

LEGEND

- SHORT TERM PHASE (1-4 YEARS) —
- MID TERM PHASE (5-10 YEARS) —
- LONG TERM PHASE (11-25 YEARS) —
- POINTS OF INTEREST

GREENWAY & PHASE

(1-B)

GREENWAY TRAILS

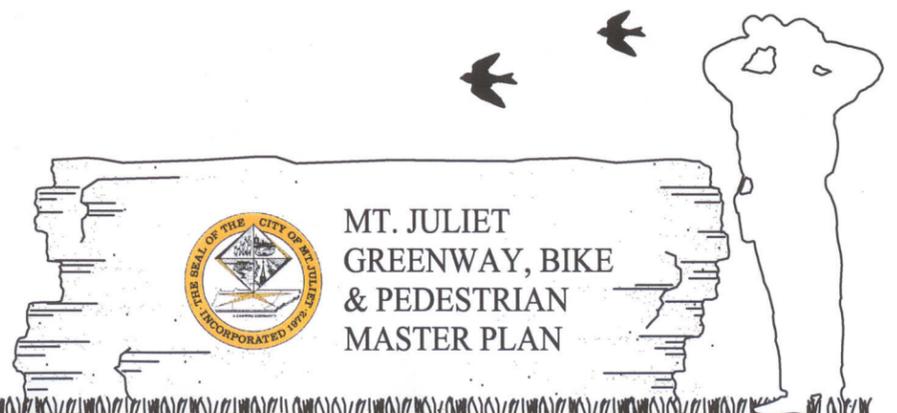
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- 2 - CEDAR CREEK GREENWAY
- 3 - NASHVILLE/EASTERN GREENWAY
- 4 - BELINDA GREENWAY
- 5 - GREENHILL GREENWAY
- 6 - WILLOUGHBY GREENWAY
- 7 - TVA GREENWAY
- 8 - COLUMBIA-GULF GREENWAY

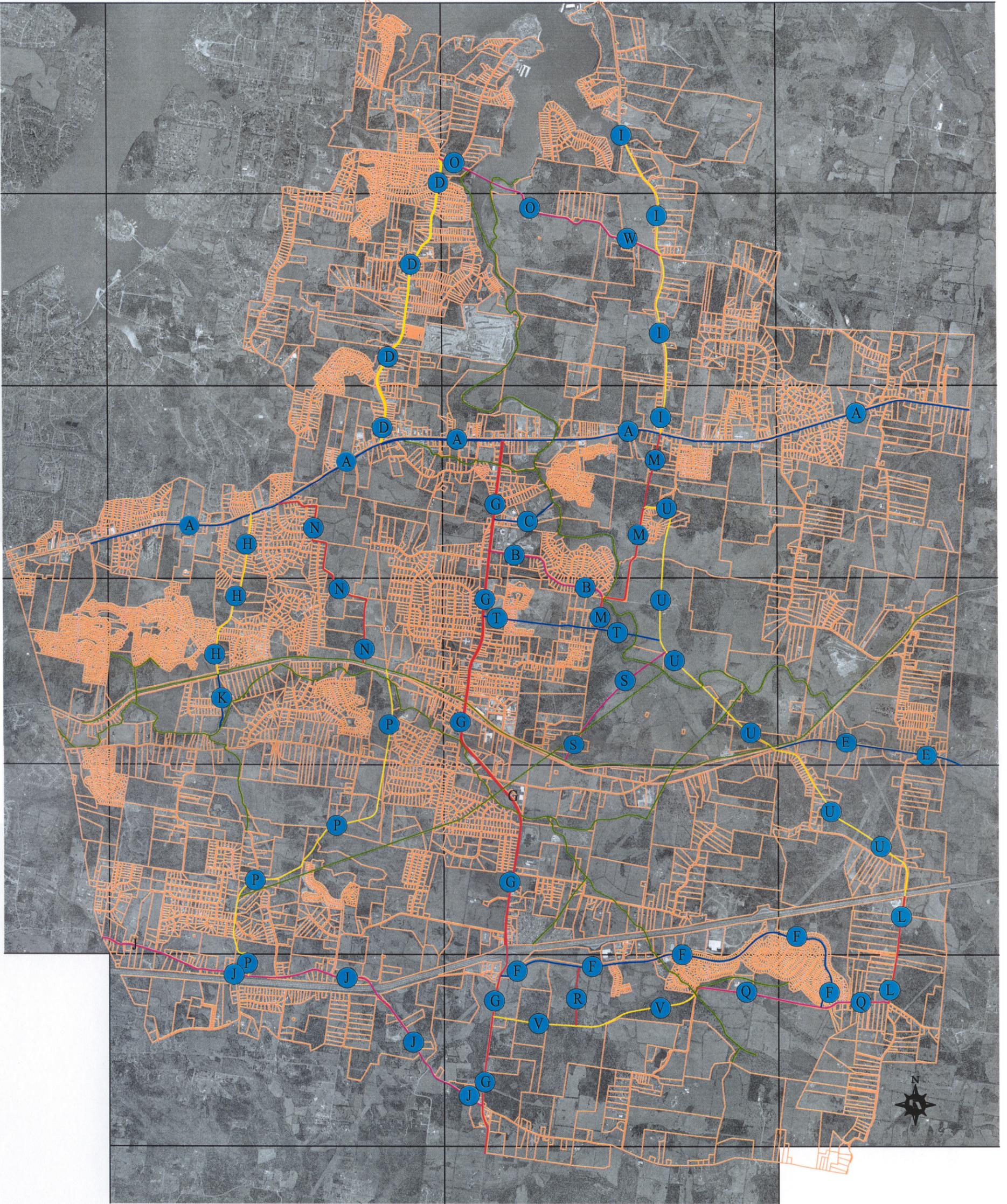
DATE: 04-18-03



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N LINKAGES

- | | |
|-----------------------------|------------------------------------|
| A - LEBANON RD./HWY 70 | M - CURD RD LINKAGE |
| B - WOODRIDGE PLACE LINKAGE | N - TATES LANE |
| C - CHARLIE DANIELS PKWY. | O - SAUNDERSVILLE RD. EXTENSION |
| D - NONAVILLE RD. LINKAGE | P - MT. JULIET WEST BYPASS |
| E - DIVISION ST. LINKAGE | Q - SOUTH RUTLAND ROAD |
| F - BELINDA PARKWAY | R - BELINDA PARKWAY CONNECTOR |
| G - MT. JULIET RD. | S - DIVISION ST. CONNECTOR |
| H - SOUTH GREENHILL RD. | T - MT. JULIET EAST CONNECTOR |
| I - BENDERS FERRY RD. | U - MT. JULIET EAST BYPASS |
| J - CENTRAL PARK LINKAGE | V - RUTLAND RD. EXTENSION |
| K - GREENHILL RD. EXTENSION | W - SAUNDERSVILLE RD. EXT. LINKAGE |
| L - BECKWITH RD. LINKAGE | |

DATE: 04-14-03

LINKAGE PLAN

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**MT. JULIET
 GREENWAY, BIKE
 & PEDESTRIAN
 MASTER PLAN**

• **Chapter 9: Operations, Maintenance & Management**

Overview

Over time, a variety of operational and management issues will be encountered that are important to the successful management and operation of the Mt. Juliet Greenway Bike & Pedestrian Master Plan. The following policies are defined to assist the City and the Mt. Juliet Advisory Committee in responding to the typical trail implementation issues. More specific problem and issues may arise during the long-term implementation of the greenway system that result in additional policies being considered and adopted.

Public Access Easement Policy

Private individuals or neighborhood associations currently own the majority of land that is included within the Mt. Juliet Greenway System. For those lands in private ownership and developed, the City of Mt. Juliet will need to negotiate with the property owners for the use of their land for trail purposes. For planned trail corridors within the limits of proposed subdivisions, the City should require that all easements have the provisions for public access. For planned trails where properties are platted and currently undeveloped, the City should require public access as part of the site plan review process. The City of Mt. Juliet or certain non-profit organizations can accept donation of public access easements for the trail system in accordance with existing policies and codes pertaining to the acquisition of park land, transportation corridors and land for water and wastewater facilities. The City should consider requiring public access provisions in all new easements.

Private Construction of Trails Policy

Construction of planned trails within all new developments should be considered the responsibility of the developer. In the same way that a developer is required to construct utilities to his site, he should be responsible for the construction of the trails through his site which are part of the Mt. Juliet Greenway Bike & Pedestrian Master Plan System. The developer should be required to conform to trail design standards as identified in Chapter 4 "Design Guidelines."

Right of Public Access and Use of Trail Lands Policy

The general public should have free access to and use of all trail lands that are owned by the City of Mt. Juliet. All access and use should be governed by existing local City policies and also by a Mt. Juliet Trails Ordinance. The use of all trails is limited to non-motorized uses (except maintenance vehicles), including hiking, bicycling, running, jogging, wheelchair use, skateboarding, rollerblading, mountain biking and other uses that are determined to be compatible with the Mt. Juliet Greenway System.

Trail Naming Policy

The majority of trails within the Mt. Juliet Greenway Bike & Pedestrian Master Plan System should be named for the significant natural features that are found within the trail corridor.



Some trails are named for historic routes of travel. Trails can be named for an individual or individuals if these persons are truly distinguished with the community, or if these persons have contributed a gift equal to more than 50% of the value of trail development within that corridor segment.

Fencing and Vegetative Screening Policy

The City should work with landowners on an individual basis to determine if fencing and screening is required and appropriate. The City may agree to fund the installation of a fence or vegetative screen. However, it shall be the responsibility of the adjacent property owner to maintain the fence or vegetative screen in perpetuity, including the full replacement of such fence or screen in the event of failure or deterioration due to any circumstance.

Adopt-a-Trail Program Policy

An Adopt-a-Trail Program should be established by the Mt. Juliet Greenway Advisory Committee to encourage community groups, families, businesses, school groups, civic clubs and other organizations to join in managing the Mt. Juliet Greenway Bike & Pedestrian Master Plan System. The Mt. Juliet Greenway Advisory Committee will need to work closely with the Planning Department to ensure that all Adopt-a-Trail Program groups manage and maintain trails in a manner that is consistent with other land use objectives. Adopt-a-Trail entities will be assigned a specific section of the Greenway System, defined by location or milepost. The activities of each organization involved in the Adopt-a-Trail program will be monitored by the City. Agreements for management can be amended or terminated at any time by either party by giving 30 days written notice.

Management Agreements

Management agreements should be established between the City and private organizations wishing to assist with the management of the designated segments of the Mt. Juliet Greenway Bike & Pedestrian Master Plan. The objective of these agreements is to find compatible management practices with existing land management activities especially where the greenway intersects with public or private properties and rights-of-ways. The management agreement would spell out specific duties, responsibilities and activities of the City and public or private organizations that wish to assist the City with management activities. These can be amended or terminated at any time by either party, giving 30 days notice.

Cross Access Agreements Policy

The City can use cross access agreements to permit private landowners who have property on both sides of the trail corridor total access to facilitate operation and land use activities. Adjacent land owners would have access at any time but could not block the right-of-way for trail users other than for a temporary measures such as permitting livestock or agricultural equipment to cross. Adjacent landowners would be responsible for acts or omissions which may cause injury to a third party using the trail. If a landowner must cross the trail or use portions of the trail on a regular basis then signage must be installed to warn users of the trail.



Crossing of abandoned or active rail lines, utility corridors and roads will require the execution of agreements with companies, local, state or federal agencies and organizations that own the rights-of-ways. These crossings must provide clearly controlled, recognized and defined intersections in which the user will be warned of the location. The crossing will be signed with the appropriate regulatory, warning and information signs in accordance with the American Association of State Highway Transportation Officials (AASHTO) and the Manual on Uniform Traffic Control Devices (MUTCD).

Land Management

Safety must be maintained both for use and security and must be a priority for all trail facilities. All trail facilities should be managed by the Mt. Juliet's Parks Department. Trailheads, points of access, rest areas and other activity areas should be maintained in a clean and useable condition at all times. The primary concern with respect to maintenance should always be public safety. Trail maintenance should include the removal of debris, trash, litter, obnoxious and unsafe manmade structures and other foreign matter. Native vegetation should be maintained in a systematic and thorough manner. The objective in controlling the growth vegetation should be to maintain clear and open lines of sight along the edge of the trail, and eliminate potential hazards that could occur due to natural growth, severe weather or other unacceptable conditions.

All trail surfaces should be maintained in a safe and usable manner at all times. Rough edges, severe bumps or depressions, cracked and uneven pavement, gullies, rills and washed out tread shall be repaired immediately. Volunteer vegetation occurring in the tread of the trail should be removed in such a manner so that the trail surface is maintained as a continuous, even and clean surface. The Parks Department shall strive to minimize the number of areas where ponding water occurs yet they can not be held liable for areas of casual or intermitted use.

Property owned or used by the City of Mt. Juliet for the Greenway System should be maintained in a condition that promotes safety and security for all trail users and adjacent property owners. The property should also be maintained in a manner that enables the trail to fulfill multiple functions such as stormwater management, alternative transportation and passive recreation. Vegetation along each trail corridor should be managed to the extent of promoting safety, maintaining wildlife habitat, buffering public trail use from adjacent private property and preserving the unique aesthetic value of the natural landscape. To promote safe usage, the trail system should have all vegetation removed at least 10' from each edge. Three feet from the trail edge should be mowed on a regular basis and the balance selectively cleared. A minimum sight distance of 300 feet should be maintained in front of and behind the user from any position on the trail. The only exception to this policy should occur where terrain or properties are limiting factors. The City or the designated agents will be responsible for cutting and removal of vegetation. Removal by any other entity should be deemed unlawful and subject to fines and prosecution.



Safety and Security

Safety is required for all public facilities. For Mt. Juliet to provide a standard of care that is reasonable the City should develop and implement a Safety and Security Program. This program should consist of the following: a well-defined safety and security policy; the identification of trail management; law enforcement, emergency and fire protection agencies. The program should consist of the proper posting, notification and education of the trail users policies; and a system that offers timely response to the public for issues or problems that are related to safety and security.

Important components of the safety and security program should include:

- 1) Work with law enforcement agencies in the City. A committee should be established to discuss management of the trail system.
- 2) Prepare a Trail Safety Manual and distribute this to management agencies and post it at all major trailheads.
- 3) Post User Rules and Regulations at all public access points to the trail.
- 4) Work with the various agencies to develop Trail Emergency Procedures.
- 5) Prepare a Safety Checklist for the trail system, and utilize it monthly during field inspection of trailheads.
- 6) Prepare a Trail Users Response form for complaints, comments and compliments and provide copies at all trailheads.
- 7) Work with law enforcement and emergency agencies to develop a system for reporting accidents for analysis.
- 8) Conduct a regular maintenance and inspection program.
- 9) Coordinate other public information programs that can provide information about trail events and activities.
- 10) Conduct an ongoing evaluation of trail program objectives.

Trail Rules & Operation Regulations

The Mt. Juliet Greenway Bike & Pedestrian Master Plan System shall be open 365 days a year to any person wishing to use the facility for transportation or recreation purposes. No organization shall be permitted to use any portion of the Greenway System for commercial purpose unless written permission has been obtained. The City should also discourage the general public from using any segment of a trail that is under construction. Trails should not be officially opened for public use until such time as a formal dedication ceremony.

The Greenway System shall be operated like any other park within the local jurisdiction, open for public use from sunrise to sun set, 365 days a year, except as specifically designated. Individuals who are found to be using unlighted facilities after dusk and before dawn should be deemed in violation of these hours of operation and treated as trespassers. Where trails are lighted for night-time use the rules established shall govern permitted uses and activities.



Risk Management Plan

The purpose of a Risk Management Plan is to increase safety for the users of the Greenway System and reduce the potential for accidents to occur within the system or on lands adjacent to the system. Implementation of a plan is an important step that is necessary to reduce liability and improve safety. A Risk Management Plan establishes a methodology for trail management that is based on current tort liability and case law in the United States related to development, operation and management of public use trail lands and facilities.

The ultimate responsibility for managing the Mt. Juliet Greenway Bike & Pedestrian Master Plan System as defined within this plan is with the City of Mt. Juliet. The City is considered the Risk Management Coordinator for the greenway system. A Risk Management Plan has its major goals:

- 1) Risk identification: determining where risk (threat to safety or potential loss) exists within the corridor.
- 2) Risk Evaluation: conducting appropriate examination of areas defined as a risk and determining the factors that contribute to risk.
- 3) Risk Treatment: defining and implementing an appropriate solution to the areas of risk in accordance with one of the four options.
 - a) Risk avoidance-prohibiting use of risk area.
 - b) Risk reduction-limit use of area and repair risk area immediately.
 - c) Risk retention-obtain waivers from all potential users of the risk area.
 - d) Risk transfer-transfer risk area (property) to agency better suited to manage the area.

The following fifteen step plan should be considered for implementation by the City of Mt. Juliet.

- 1) Develop a policy statement about risk management.
- 2) Determine goals and objectives for risk management - what is acceptable and not acceptable management levels.
- 3) Develop specifications for site and facility development.
- 4) Establish a clear and concise program for risk management
- 5) Define supervision and responsibility for risk management.
- 6) Define appropriate rules and regulations that govern the use of the trail system.
- 7) Conduct routine/systematic inspections and investigations of the trail system.
- 8) Develop an accident reporting and analysis system.
- 9) Establish procedures for handling emergencies.
- 10) Develop appropriate release waivers and agreements for use and management.
- 11) Identify best methods for insuring against risk.
- 12) Develop a comprehensive in-service training program for employees of the City of Mt. Juliet.
- 13) Implement a public relations program that can effectively describe the risk management program and activities.



- 14) Conduct periodic reviews of the Risk Management Plan by outside agents to ensure that the plan is up to date.
- 15) Maintain good legal and insurance representation.

Liability

The design, development, management and operations for the City of Mt. Juliet's Greenway System must be carefully and accurately executed in order to provide a resource that protects the health and welfare of the public. Liability may occur when a facility is under designed to handle its intended volume of use, when management of the facility is poor, or when unexpected accidents occur because the greenway manager failed to recognize the possibilities of a potentially hazardous situation. To reduce the possibility and exposure to liability, the City should have in operation the following measures prior to opening the first segment of the trail:

- 1) A thorough Maintenance Program that provides the appropriate level of care to greenway users.
- 2) A Risk Management Plan that appropriately covers all aspects of the greenway system, and necessary adjacent landowners.
- 3) A comprehensive working knowledge of public use law and recent case history applicable to Tennessee.

Existing municipal insurance programs should be adequate to protect the City from financial loss that might occur through the development and operation of a public use greenway system. Greenways are no greater liability to the community than a park or any recreational facility. The City should review current policies and check coverages to be certain that all aspects of its policies are up to date with respect to a greenway system.



Appendix A: Lot Ownership Key

GREENHILL LOT NO.	GIS REF.	MAILING ADDRESS	CITY	STATE	ZIP CODE	OWNER
G-01	095053 07600	156 SUNSET DRIVE	MT JULIET	TN	37122	JONES ROBERT A. ETUX
G-02	095053 08500	134 SUNSET DRIVE	MT JULIET	TN	37122	HARRIS FRANK O JR
G-03	095054 13800	126 SUNSET DRIVE	MT JULIET	TN	37122	HAMMOCK DAVID ALLEN ETUX
G-04	095054 14800	126 SUNSET DRIVE	MT JULIET	TN	37122	HAMMOCK DAVID ALLEN ETUX
G-05	095054 14900	128 SUNSET DRIVE	MT JULIET	TN	37122	CAMPBELL WILLIAMS H ETUX
G-06	095054 15000	125 SUNSET DRIVE	MT JULIET	TN	37122	GREEN JIMMIE D ETUX
G-07	095054H A 00100	116 SUNSET DRIVE	MT JULIET	TN	37122	BRASHER PHILLIP M JR ETUX
G-08	095054 13208	128 SUNSET DRIVE	MT JULIET	TN	37122	CAMPBELL WILLIAMS H ETUX
G-09	095054H B 00400	PO BOX 160526	NASHVILLE	TN	37215	CONN MARY L (TRUST)
G-10	095054H B 00500	PO BOX 160526	NASHVILLE	TN	37215	CONN MARY L (TRUST)
G-11	095054 13200	4110 N MT JULIET ROAD	MT JULIET	TN	37122	SJJ CORPORATION
G-12	095054 12301	4116 N MT JULIET ROAD	MT JULIET	TN	37122	NATIONWIDE CARPET LLC
G-13	095054 12400	PO BOX DRAWER O	CLARKSVILLE	TN	37041	BATSON DEVELOPMENT CO INC
G-14	095054 12200	4147 N MT JULIET ROAD	MT JULIET	TN	37122	ADAMS MICHAEL D ETUX
WILLOUGHBY LOT NO.	GIS REF.	MAILING ADDRESS	CITY	STATE	ZIP CODE	OWNER
S-021	095073 03500	2165 W DIVISION ST	MT JULIET	TN	37122	WILLOUGHBY D J
W-01	095074 00300	1400 SUNNYMEADE DR	NASHVILLE	TN	37216	RICHARDSON EVA
W-02	095074 00400	3513 CLAYTON RD	BONIFAY	FL	37122	STARK MARGUERITET
W-03	095074 00500	3374 W DIVISION ST	HERMITAGE	TN	37076	SHARPE HUGH ETUX
W-04	095074 00600	291 LARSON DRIVE	MT JULIET	TN	37121	WAYNICK MARK ETUX
W-05	095073 00300	2770 W DIVISION ST	HERMITAGE	TN	37076	HENDRIX ALTON ETUX
W-06	095073 00603	2165 W DIVISION ST	MT JULIET	TN	37122	WILLOUGHBY D J CHARLES E
CEDAR CRK. LOT NO.	GIS REF.	MAILING ADDRESS	CITY	STATE	ZIP CODE	OWNER
C-049	095049 07200	283 PARADISE DR	MT JULIET	TN	37122	NIXON MARVIN ETUX
C-052	095049 07300	PO BOX 745	MT JULIET	TN	37122	WALDEN WILLIAM B
C-053	095049 07600	PO BOX 450233	ATLANTA	GA	31145	LINKS CORP TN FOUR
C-054	095049 06901	995 YORK RD	MT JULIET	TN	37122	MCLEVAIN JESSE D
C-055	095054 01700	1450 WALNUT GROVE ROAD	LEBANON	TN	37087	JOHNSON ANGIE
C-056	095054 00100	11679 LEBANON ROAD	MT JULIET	TN	37122	SEARCY HARVEY
C-057	095054 00500	11555 LEBANON ROAD	MT JULIET	TN	37122	CASEY MARTHA G
C-059	095054 12601	GENERAL DELIVERY	MT JULIET	TN	37122	CITY OF MT JULIET
C-060	095054 10203	1805 HIDDEN RIDGE CIR	MT JULIET	TN	37122	SCHUNK THOMAS ETUX (TR)
C-061	095054 12600	GENERAL DELIVERY	MT JULIET	TN	37122	WEST WILSON UTILITY DIST
C-062	095054 12500	PO BOX 475	CLARKSVILLE	TN	37041	BATSON GROUP
C-063	095054G D 00100		MT JULIET	TN	37122	CYPRESS GLEN HOMEOWNERS
C-065	095054 12201	402 E SPRING STREET	LEBANON	TN	37087	BRYANT DR JOE
C-066	095054 01701	RT 1	MT JULIET	TN	37122	MT JULIET LEAGUE INC
C-067	095054I A 01600	127 CREEKWOOD DRIVE	MT JULIET	TN	37122	CAPPS RONNIE D ETUX
C-068	095054I A 01500	125 CREEKWOOD DRIVE	MT JULIET	TN	37122	BARBER ROBERT L ETUX
C-069	095054 11401	MT JULIET CITY HALL	MT JULIET	TN	37122	CITY OF MT JULIET
C-070	095054 10400	241 MAIN ST	HARTFORD	CT	6106	STS/BAC JOINT VENTURE
C-071	095054 11410	1551 SANDSPUR RD	MAITLAND	FL	32751	WOODLAND ARMS APTS LTD
C-072	095054 10500	241 MAIN ST	HARTFORD	CT	6106	STS/BAC JOINT VENTURE
C-073	095054 11408	1551 SANDSPUR RD	MAITLAND	FL	32751	WOODLAND ARMS APT LTD
C-074	095054O E 01300	1285 N MT JULIET RD	MT JULIET	TN	37122	PUCCIARELLI JOANN
C-075	095054O B 04700	1606 WRENWOOD WAY	MT JULIET	TN	37122	WOODLAND PLACE HOMEOWNERS
C-076	095054O C 04200	1502 POST OAK POINT	MT JULIET	TN	37122	GILES ART
C-077	095054O C 04300	1453 TRAILRIDGE CIR	MT JULIET	TN	37122	MEALS GORDON D JR
C-078	095054 10601	1951 CURD ROAD	MT JULIET	TN	37122	BAKER KAREN SIGNE
C-079	095054O C 04400	1455 TRAILRIDGE CIR	MT JULIET	TN	37122	KOTORA TIMOTHY E ETUX GAIL
C-080	095054O C 04500	1457 TRAILRIDGE CIR	MT JULIET	TN	37122	BURCH RICHARD L ETUX
C-081	095054O A 02400	1145 WOODRIDGE PLACE	MT JULIET	TN	37122	COX GERALDINE H ETAL
C-084	095071 05100	2877 E DIVISION ST	MT JULIET	TN	37122	LINVILLE CHARLES ETUX
C-085	095071 00300	1734 BECKWITH RD	MT JULIET	TN	37122	WARREN KEVIN ETAL
C-086	095071 04900	BECKWITH ROAD	MT JULIET	TN	37122	TENNESSEE VALLEY
C-087	095071 05000	3047 E DIVISION ST	MT JULIET	TN	37122	CLARIDAY JACK ETAL

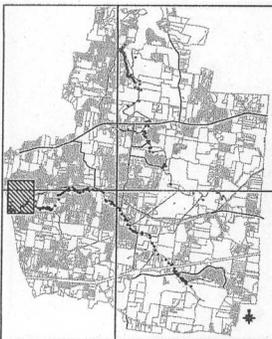


STONERS CRK. LOT NO.	GIS REF.		MAILING ADDRESS	CITY	STATE	ZIP CODE	OWNER
S-001	095074	01200	3385 W DIVISION ST	HERMITAGE	TN	37076	CLAYTON HERSHEL O ETUX
S-004	095074	01300	3223 LAKESHORE DR	OLD HICKORY	TN	37138	BRAUNSCHEIDEL DAVID C
S-005	095074	01502	1001 OLD LEBANON DIRT RD	MT JULIET	TN	37122	BROWNELL CHARLES L ETUX
S-006	095074	01500	3225 W DIVISION ST	HERMITAGE	TN	37076	PEERCY G B
S-007	095074	01504	PO BOX 256	MT JULIET	TN	37122	CITY OF MT JULIET
S-008	095074	01505	1323 OLD LEBANON DIRT RD	MT JULIET	TN	37122	WHITLOW-CROOK CYNTHIA S
S-010	095074	01503	3155 W DIVISION ST	HERMITAGE	TN	37076	PEERCY JOSEPH ALTEN
S-011	095074	01700	3093 W DIVISION ST	HERMITAGE	TN	37076	FULENWIDER GEORGE A SR
S-012	095073	03900	304 OLD LEBANON DIRT RD	HERMITAGE	TN	37076	HAGER PATRICIA K
S-013	095074	01800	105 JONESBOROH CT	NASHVILLE	TN	37214	COSS JIMMY
S-014	095073	08110	104 PASCAL RD	MT JULIET	TN	37122	KYLE STEPHEN H
S-015	095073	03800	3011 W DIVISION ST	HERMITAGE	TN	37076	ALLEN ALENE A ETAL
S-016	095073	03701	3005 W DIVISION ST	HERMITAGE	TN	37076	PIERCE ROY E ETUX
S-017	095073	03700	2975 W DIVISION ST	HERMITAGE	TN	37076	TAYLOR JAY LANCE JR
S-018	095073	03800	3011 W DIVISION ST	HERMITAGE	TN	37076	ALLEN ALENE A ETAL
S-019	095073	08100	1715 OLD LEBANON DIRT RD	MT JULIET	TN	37122	SEXTON MICHAEL J ETUX
S-020	095073	00400	2760 W DIVISION ST	HERMITAGE	TN	37076	HENDRIX ALTON
S-021	095073	03500	2165 W DIVISION ST	MT JULIET	TN	37122	WILLOUGHBY D J
S-022	095073	08116	1665 OLD LEBANON DIRT RD	MT JULIET	TN	37122	DASSAU DAVID M
S-023	095073	08118	1835 OLD LEBANON DIRT RD	MT JULIET	TN	37122	HELM G WAYNETTE
S-024	095073	08119	104 PASCAL DR	MT JULIET	TN	37122	KYLE STEPHEN H ETAL
S-025	095073	08114	1850 DOUBLE LOG CABIN RD	LEBANON	TN	37087	LANE JERRY B
S-026	095073	04000	1941 OLD LEBANON DIRT RD	MT JULIET	TN	37122	KENT ANDY T
S-027	095073	04131	608 JEFFERSON DR	MT JULIET	TN	37122	BINKLEY ODELL REGG
S-028	095073	04102	1995 OLD LEBANON DIRT RD	MT JULIET	TN	37122	REELS OSCAR ETUX JOYCE
S-029	095073	04132	609 JEFFERSON DR	MT JULIET	TN	37122	BINKLEY MARY E
S-030	095073	04133	2019 OLD LEBANON DIRT RD	MT JULIET	TN	37122	GOINS JAMES C ETAL
S-031	095073	04100	2055 OLD LEBANON DIRT RD	MT JULIET	TN	37122	CHAFFIN SHERRIE L ETAL
S-032	095073	04200	2091 OLD LEBANON DIRT RD	MT JULIET	TN	37122	INGRAM TIMOTHY A
S-033	095073	04101	1119 SYDNEY TERRACE	MT JULIET	TN	37122	FEENER HAROLD D
S-034	095073	04201	2121 OLD LEBANON DIRT RD	MT JULIET	TN	37122	CLOYD BARRY L ETUX
S-035	095073	04202	2141 OLD LEBANON DIRT RD	MT JULIET	TN	37122	NEAL GEORGE S ETUX
S-036	095073	04206	2171 OLD LEBANON DIRT RD	MT JULIET	TN	37122	HAINES JERRY ETUX
S-037	095073	03316	2315 OLD LEBANON DIRT RD	MT JULIET	TN	37122	MIDDLETON WHITWELL N
S-038	095073	03314	BOX 167	MT JULIET	TN	37122	HOPPER LILLIE J (LE)
S-039	095073	03300	PO BOX 167	MT JULIET	TN	37122	HOPPER LILLIE J (LE)
S-040	095073	03313	1985 W DIVISION ST	MT JULIET	TN	37122	YATES JANET H
S-041	095073	03312	1953 W DIVISION ST	MT JULIET	TN	37122	GRAGG ARNOLD A ETUX
S-042	095073	03311	1895 W DIVISION ST	MT JULIET	TN	37122	COX RICHARD A ETUX
S-043	095073	03310	1885 W DIVISION ST	MT JULIET	TN	37122	DANT JAMES W ETUX
S-044	095073	03309	407 TERRY PLACE	HERMITAGE	TN	37076	FITE CHARLES G ETUX JEAN
S-045	095073	03308	208 WILDON DR	HERMITAGE	TN	37076	HAMMER MELVIN D ETUX
S-046	095073	03307	1737 W DIVISION STREET	MT JULIET	TN	37122	MILLER ERIC J
S-047	095073	03306	1707 W DIVISION ST	MT JULIET	TN	37122	DERRYBERRY ELMER ETUX
S-048	095073	03305	1657 W DIVISION ST	MT JULIET	TN	37122	SCOTT DAVID R
S-049	095073	03304	1655 W DIVISION ST	MT JULIET	TN	37122	GUNNELS JAMES E
S-050	095073	03301	1585 W DIVISION ST	MT JULIET	TN	37122	DUTTON HUBERT W III
S-051	095073	03201	1635 W DIVISION ST	MT JULIET	TN	37122	ARMSTRONG RAY ETUX
S-052	095073	03200	1491 W DIVISION ST	MT JULIET	TN	37122	CARNES JOHN ETAL
S-053	095073K B 00400		290 LARSON DR	MT JULIET	TN	37122	STORKSON MARK E
S-055	095073K B 00500		291 LARSON DR	MT JULIET	TN	37122	WAYNICK MARK
S-056	095073F A 00200		1445 W DIVISION ST	MT JULIET	TN	37122	KLIPA DONALD ETUX NAOMI
S-057	095073F A 00300		1415 W DIVISION ST	MT JULIET	TN	37122	HOWLAND HARRY ETUX
S-058	095073F A 01300		108 PASCAL DR	MT JULIET	TN	37122	CLARK DAVID
S-059	095073K A 00100		110 PASCAL DR	MT JULIET	TN	37122	CANTRELL WAYNE
S-060	095073K A 02700		109 PASCAL DRIVE	MT JULIET	TN	37122	WOODS GEORGE A JR ETUX
S-061	095073F A 01200		107 PASCAL DRIVE	MT JULIET	TN	37122	WALLER TIMOTHY L ETAL
S-062	095073K F 03600		BROOKSTONE DR	MT JULIET	TN	37122	BROOKSTONE HOMEOWNERS
S-063	095073	03100	1165 W DIVISION ST	MT JULIET	TN	37122	PASCAL LUCILLE
S-064	095073	03118	1125 W DIVISION ST	MT JULIET	TN	37122	PULLEY JO D ETVIR EDWARD
S-065	095073	03117	1165 W DIVISION ST	MT JULIET	TN	37122	PASCAL LUCILLE
S-066	095073K D 05900		750 OLD HICKORY BLVD	BRENTWOOD	TN	37027	BROOKSTONE HOMEOWNERS INC
S-067	095073K D 05900		750 OLD HICKORY BLVD	BRENTWOOD	TN	37027	BROOKSTONE HOMEOWNERS INC
S-068	095073	01800	PO BOX 125	MT JULIET	TN	37122	DENSON H C ETUX NELLE
S-069	095073	03119	P O BOX 711	MT JULIET	TN	37121	ROBINSON PROPERTIES LP
S-070	095073	02800	5760 OLD LEBANON DIRT RD	MT JULIET	TN	37122	JONES ROBERT A



S-071	095073	02900	2019 SANFORD DR	MT JULIET	TN	37122	WILSON MATTHEW W
S-072	095073	02901	655 W DIVISION ST	MT JULIET	TN	37122	COLE MICHAEL G ETUX
S-073	095073	02600	591 W DIVISION ST	MT JULIET	TN	37122	CHURCH CUMBERLAND
S-074	095073	02700	421 MAIN STREET	MT JULIET	TN	37122	RUSSELL FAMILY TRUST
S-075	095073	02704	425 WILLIS PASS EXT.	MT JULIET	TN	37122	KAUL KARL F ETUX
S-077	095073L B	00500	PO BOX 70	MT JULIET	TN	37121	JORDAN SAM E
S-078	095073L B	00600	PO BOX 565	MT JULIET	TN	37121	BURNS WINFORD H ETUX
S-079	095073	02703	1430 S BASS DR	MT JULIET	TN	37122	BAKER BUTCH ETUX
S-080	095073L B	00800	P O BOX 1603	MT JULIET	TN	37121	W C VENTURES II LLC
S-081	095073L B	01900	P O BOX 135	MT JULIET	TN	37121	PAGE JAMES L ETUX
S-082	095073L B	01901	P O BOX 248	MT JULIET	TN	37121	MT JULIET CHURCH OF CHRIST
S-083	095073L B	02700	1940 N MT JULIET RD	MT JULIET	TN	37122	MT JULIET CHURCH OF CHRIST
S-084	095073L B	02800	108 STONEY CREEK RD	MT JULIET	TN	37122	CRAWFORD LOUIS W
S-085	095072P A	01400	PO BOX 113	MT JULIET	TN	37122	EVERETTE MELVIN C
S-086	095072P B	00100	1710 N MT JULIET RD	MT JULIET	TN	37122	JOHN DEAL CO INC
S-087	095072P B	01600	156 SUNSET DR	MT JULIET	TN	37122	JONES ROBERT A ETAL
S-088	095072P B	01700	4347 OLD LEBANON DIRT RD	MT JULIET	TN	37122	COTTON EARL ANDREW
S-089	095072P B	01601	623 W MAIN ST	LEBANON	TN	37087	WILSON BANK & TRUST
S-090	095077	02700	4370 OLD LEBANON DIRT RD	MT JULIET	TN	37122	BRUMMITT OLEN H
S-090A	095077	02600	4470 OLD LEBANON DIRT RD	MT JULIET	TN	37122	POWELL RANDY E ETUX
S-091	095077	02801	ONE CUMBERLAND SQUARE	LEBANON	TN	37087	CUMBERLAND UNIVERSITY ETAL
S-092	095077H D	01800	1510 FAIRVIEW DR	MT JULIET	TN	37122	CHESTER VICTOR E
S-093	095077H D	01900	1509 FAIRVIEW DR	MT JULIET	TN	37122	OFFICER WAYNE R ETUX
S-095	095077H D	02900	1205 WESTON CT	MT JULIET	TN	37122	ANDERSON JAMES M
S-096	095077H D	03000	1204 WESTON COURT	MT JULIET	TN	37122	BURNS BILLY F ETUX VICKY
S-097	095077H D	03100	1203 WESTON CT	MT JULIET	TN	37122	CLARK GARY F ETUX SHARON
S-098	095077	02803	1098 WESTON DR	MT JULIET	TN	37122	BOND MEMORIAL CHAPEL LLC
S-099	095077	02300	8485 LEBANON ROAD	MT JULIET	TN	37122	MCFARLAND T L JR LIFE ES
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S-101	095077	02201	5404 OLD LEBANON DIRT ROAD	MT JULIET	TN	37122	HOLLIS JAMES HAROLD
S-101A	095077	02201	5404 OLD LEBANON DIRT ROAD	MT JULIET	TN	37122	HOLLIS JAMES HAROLD
S-102	095077	04200	RT 3	MT JULIET	TN	37122	WILSON COUNTY BOARD OF
S-103	095077	04500	373 NW RUTLAND RD	MT JULIET	TN	37122	VIVRETT JOHN BELL
S-104	095077	04601	489 NW RUTLAND RD	MT JULIET	TN	37122	GOODMAN JAMES
S-105	095077	04600	529 NW RUTLAND RD	MT JULIET	TN	37122	GOODMAN RICHARD L
S-106	095077	04700	631 NW RUTLAND RD	MT JULIET	TN	37122	MCCULLOCH FORREST M
S-107	095077	05800	908 NW RUTLAND RD	MT JULIET	TN	37122	BURTON JOE R SR
S-108	095077	05702	1100 NW RUTLAND RD	MT JULIET	TN	37122	HUGGINS JAMES N ETUX
S-109	095077	05706	1134 NW RUTLAND ROAD	MT JULIET	TN	37122	LEMME LUCIANA
S-110	095077	05703	1172 NW RUTLAND RD	MT JULIET	TN	37122	CAPPS JAMES D ETUX ANNE
S-111	095077	05806	P O BOX 94	HERMITAGE	TN	37076	1ST SUB WATER UT DIST
S-112	095077	05809	302 ADAMS LANE	MT JULIET	TN	37122	A H JOHNSON CO LLC
S-113	095096	01106	302 ADAMS LANE	MT JULIET	TN	37122	A H JOHNSON CO LLC
S-114	095077	05807	1718 CRYSTAL SPRING LANE	HERMITAGE	TN	37076	KUCZMA JOHN J JR
S-115	095096	01100	5120 VIRGINIA WAY/STE C-12	BRENTWOOD	TN	37027	BELINDA CITY INC
S-116	095096	01104	201 BELINDA PKWY	MT JULIET	TN	37122	CHURCH VILLAGE
S-117	095096	01101	8330 CARRIAGE HILLS DR	BRENTWOOD	TN	37027	HAYES JOHN COLEMAN JR
S-118	095096C A	00900	205 CREEKVIEW DR	MT JULIET	TN	37122	SHERER MARY AL
S-119	095096C A	03900	202 CREEKVIEW DR	MT JULIET	TN	37122	WATTS BRIAN K
S-120	095096C A	04000	115 SUNNYMEADE DR	MT JULIET	TN	37122	RIDER TIMBERLY ETVIR
S-121	095096C A	04100	117 SUNNYMEADE DR	MT JULIET	TN	37122	LANDREY JACK A SR
S-122	095096C A	03800	204 CREEKVIEW DRIVE	MT JULIET	TN	37122	ROSE JAMES R
S-123	095096C A	03700	206 CREEKVIEW DR	MT JULIET	TN	37122	HEATHERLY ROBERT L ETUX
S-124	095096C A	04200	1032 MIRES ROAD	MT JULIET	TN	37122	TAYLOR JEFFREY SCOTT
S-125	095096C A	03600	208 CREEKVIEW DR	MT JULIET	TN	37122	STEPHENSON LARRY V
S-126	095096C A	03500	210 CREEKVIEW DR	MT JULIET	TN	37122	MILLER DAVID W
S-127	095096C A	03400	212 CREEKVIEW DR	MT JULIET	TN	37122	BEGLEY TONY M ETUX
S-128	095096C A	04300	1035 WALLACE RD	GALLATIN	TN	37066	COCKRILL PASCHAL L ETAL
S-129	095096C A	03300	119 SUNNYMEADE DR	MT JULIET	TN	37122	ADAIR JOHNNY L
S-130	095096C A	04400	123 SUNNYMEADE DR	MT JULIET	TN	37122	LOVE TAMMY B
S-131	095096C A	03200	216 CREEKVIEW DR	MT JULIET	TN	37122	ARTHUR KEVIN M ETUX
S-132	095096C A	04500	125 SUNNYMEADE DRIVE	MT JULIET	TN	37122	ADAMS NICHOLAS ETAL
S-133	095096C A	03100	218 CREEKVIEW DR	MT JULIET	TN	37122	CAUSEY VICTORIA CHRISTIAN
S-134	095096C A	03000	127 SUNNYMEADE DR	MT JULIET	TN	37122	WRIGHT NORMAN D ETUX
S-135	095096C A	02700	231 CREEKVIEW DR	MT JULIET	TN	37122	JENKINS RICKY DALE ETUX
S-136	095096C A	02600	229 CREEKVIEW DR	MT JULIET	TN	37122	OVERBY HENRY ETUX
S-137	095096C A	02800	131 SUNNYMEADE DR	MT JULIET	TN	37122	HOLLIS EARL E
S-139	095095	00100	5120 VIRGINIA WAY/STE C-12	BRENTWOOD	TN	37027	VLGS OF MT JULIET (LP)
S-140	095095	00100	5120 VIRGINIA WAY/STE C-12	BRENTWOOD	TN	37027	VLGS OF MT JULIET (LP)
	095049	00300	1277 LIBERTY CHAPEL RD	MT JULIET	TN	37122	HOWELL DAVID FLOYD





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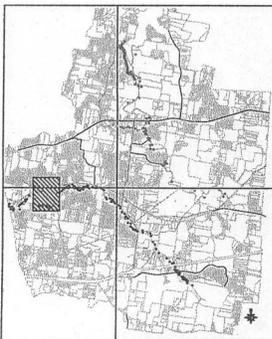
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- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION

- (S-1)
- (C-1)
- (G-1)
- (W-1)

**LOT OWNERSHIP
LOTS S-1 TO S-20
LOTS W-1 TO W-5**





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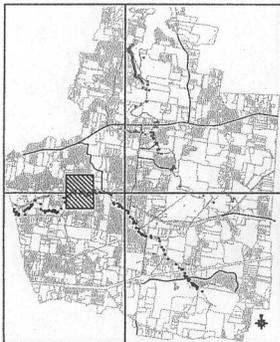
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- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS S-21 TO S-41

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& PEDESTRIAN
MASTER PLAN**



MAP KEY

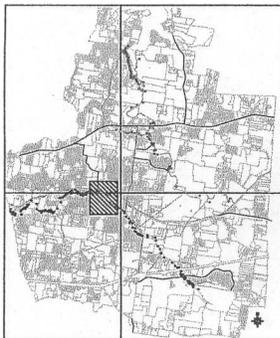
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- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS S-41 TO S-64



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MAP KEY

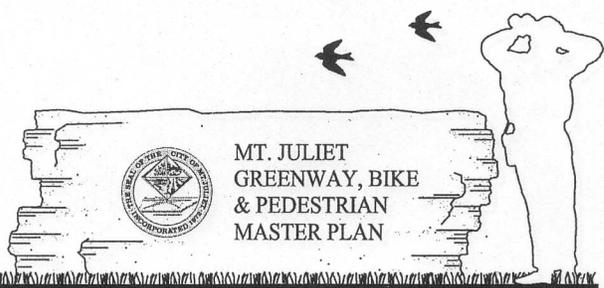
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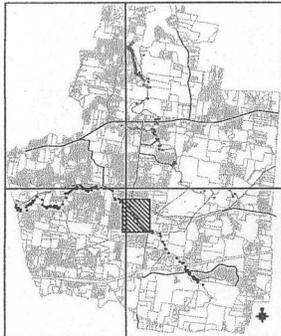
LOT OWNERSHIP LOTS S-65 TO S-79



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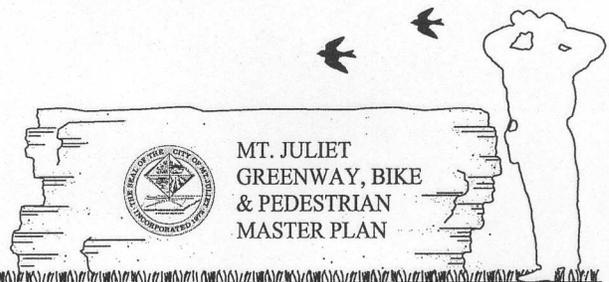


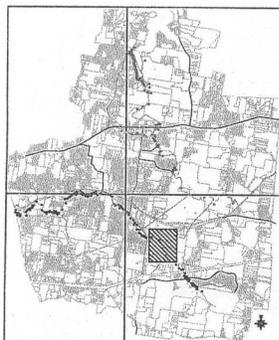
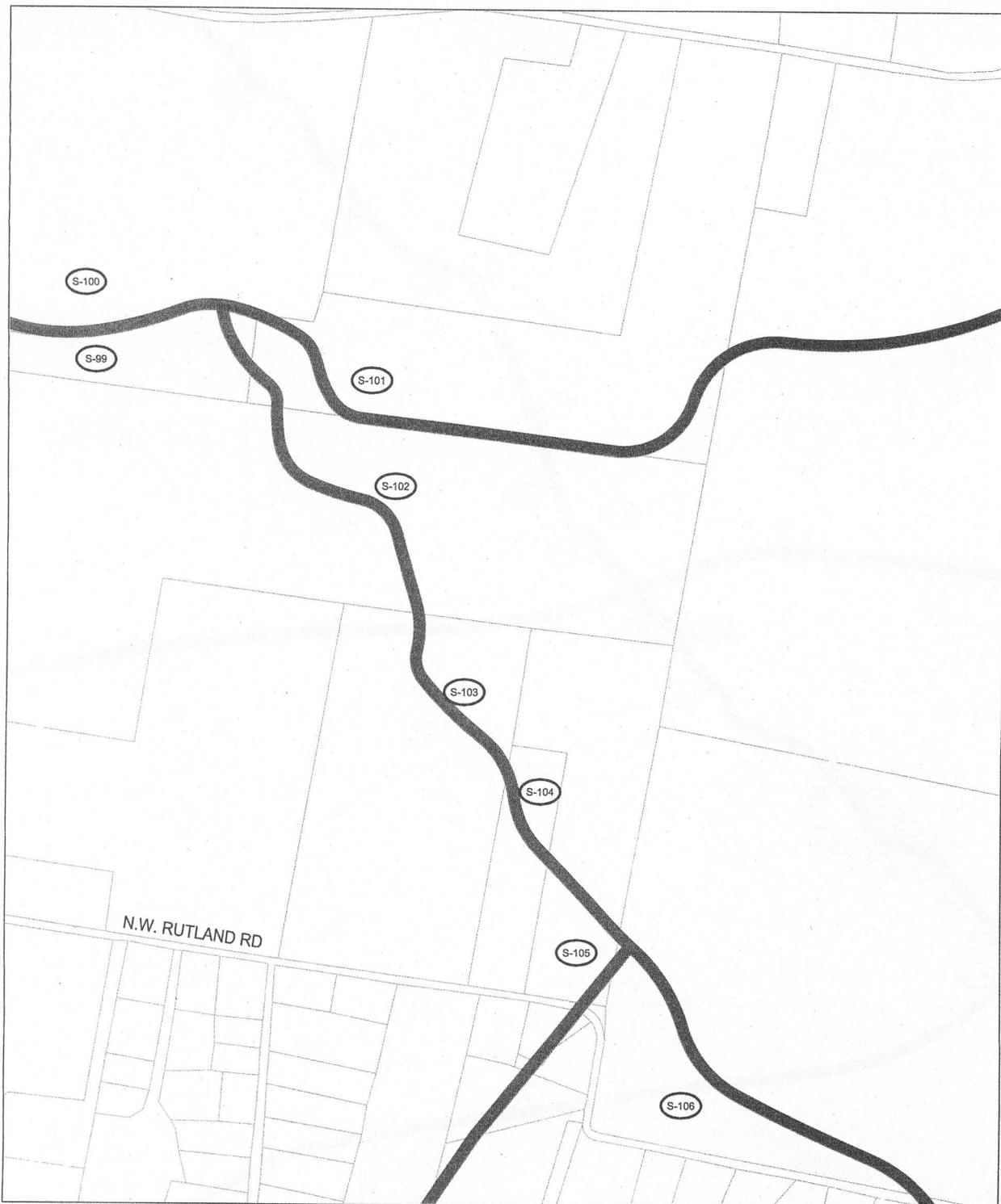
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- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION G-1
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION W-1

LOT OWNERSHIP LOTS S-80 TO S-98





MAP KEY

LEGEND

- GREENWAY
 - STONERS CREEK GREENWAY OWNERSHIP IDENTIFICATION
 - CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION
 - GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION
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- (S-1)
 - (C-1)
 - (G-1)
 - (W-1)

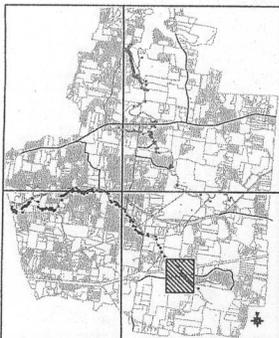
LOT OWNERSHIP LOTS S-99 TO S-106



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MAP KEY

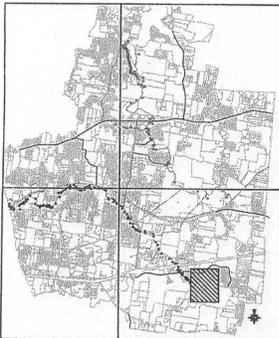
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- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION (C-1)
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS S-107 TO S-139

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MAP KEY

LEGEND

- GREENWAY
- STONERS CREEK GREENWAY OWNERSHIP IDENTIFICATION (S-1)
- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION (C-1)
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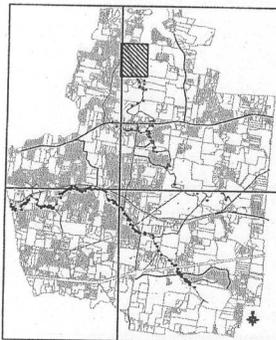
LOT OWNERSHIP LOT 140



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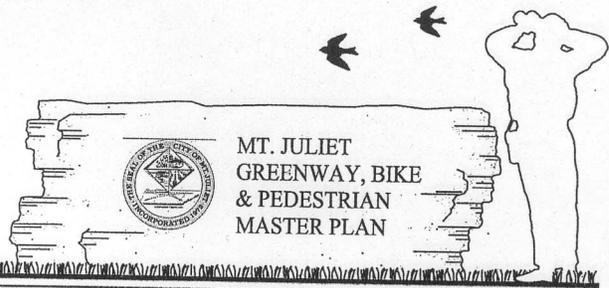


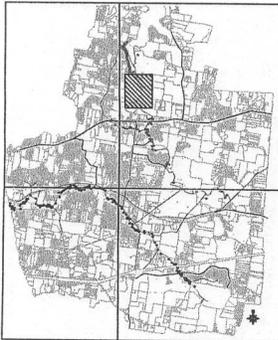
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LEGEND

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 - CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION
 - GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION
 - WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION
- S-1
 - C-1
 - G-1
 - W-1

LOTS C-1 TO C-40





MAP KEY

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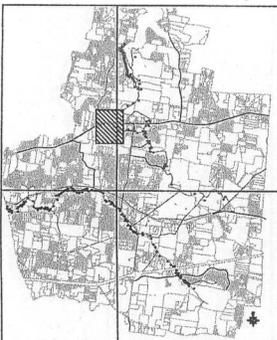
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- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION

- (S-1)
- (C-1)
- (G-1)
- (W-1)

LOTS C-41 TO C-57

LOT 5G-110-9-5





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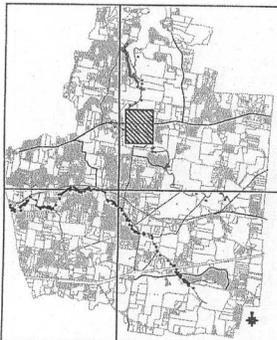
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- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS G-1 TO G-5



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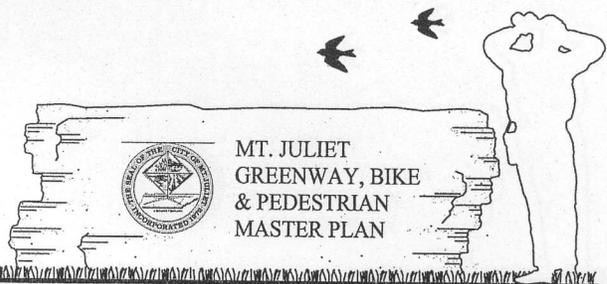


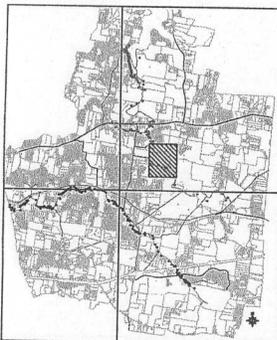
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- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

**LOTS C-58 TO C-71
LOTS G-6 TO G-14**





MAP KEY

LEGEND

- GREENWAY
- STONERS CREEK GREENWAY OWNERSHIP IDENTIFICATION (S-1)
- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION (C-1)
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS C-72 TO C-81

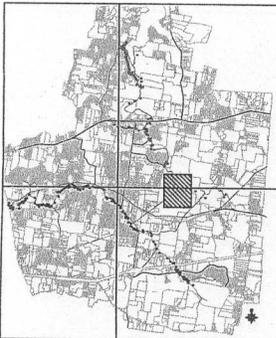
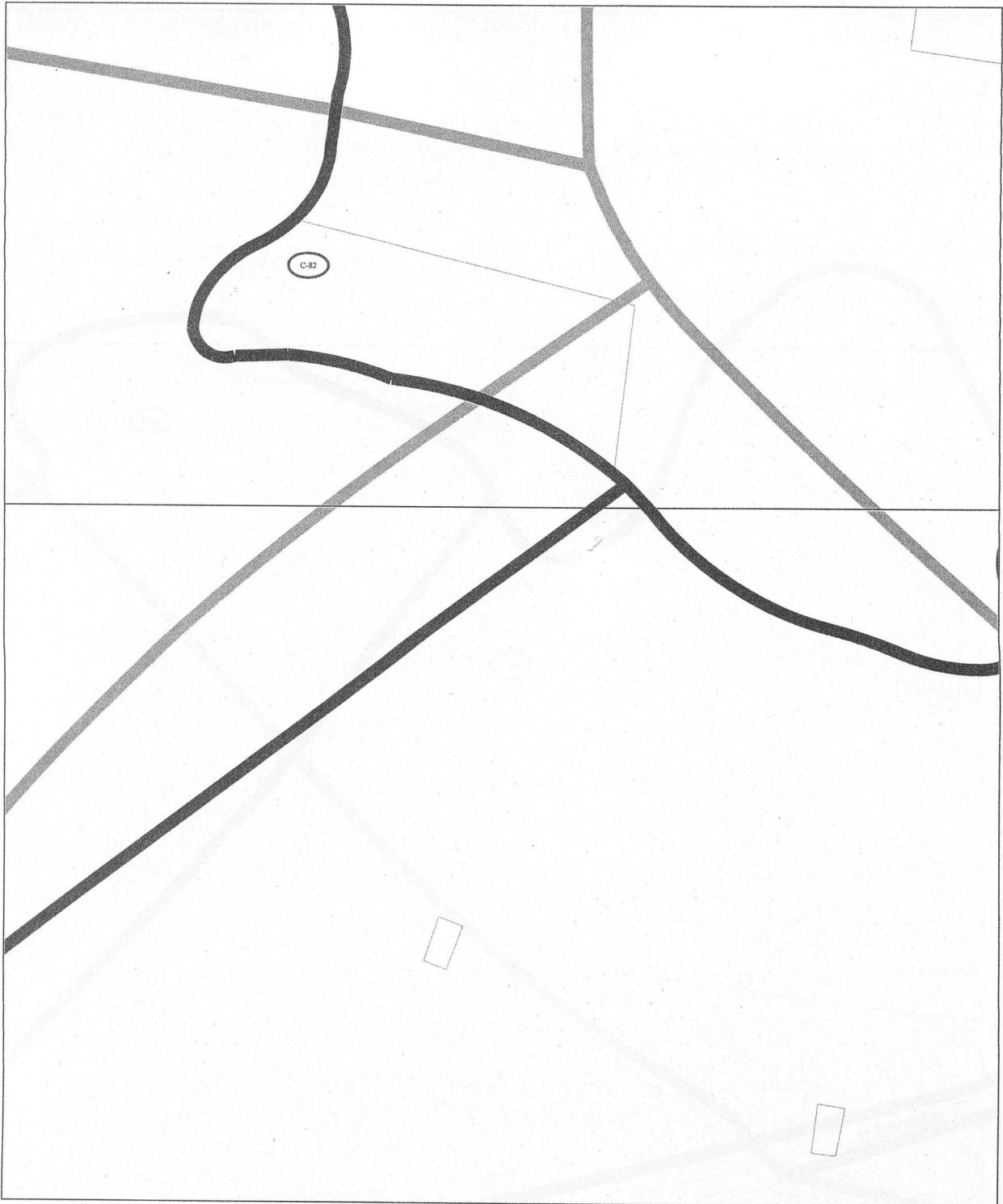


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MAP KEY

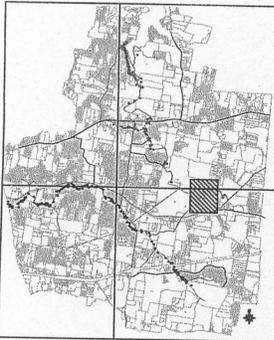
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- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION (C-1)
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOT C-82




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MAP KEY

LEGEND

- GREENWAY
- STONERS CREEK GREENWAY OWNERSHIP IDENTIFICATION (S-1)
- CEDAR CREEK GREENWAY OWNERSHIP IDENTIFICATION (C-1)
- GREENHILL CREEK GREENWAY OWNERSHIP IDENTIFICATION (G-1)
- WILLOUGHBY CREEK GREENWAY OWNERSHIP IDENTIFICATION (W-1)

LOT OWNERSHIP LOTS C-83 & C-84



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Appendix B:

Meeting Notes and Schedule

Schedule of Meetings and Presentations

Kick off Meeting	June 18, 2002
First Advisory Meeting	September 26, 2002
Second Advisory Meeting	October 9, 2002
Third Advisory Meeting	November 14, 2002
First Public Meeting	December 4, 2002
Fourth Advisory Meeting	January 30, 2003 (Revised)
Second Public Meeting	January 30, 2003
Fifth Advisory Meeting	March 19, 2003
Third Public Meeting	March 27, 2003



Fisher & Arnold, Inc.
3205 Players Club Parkway

38125 Memphis, Tennessee
fax (901) 748-3115 (901) 748-1811
jvdrplym@fisherarnold.com

PROJECT NAME:	Mt. Juliet Greenway, Bike & Pedestrian Master Plan
Public meeting	December 4, 2002
Project No:	AN 4214.6
Date:	4.16.03
Phone No.	Na
Prepared By:	Joe Vanderpluym, ASLA
Prepared For:	File

On December 4th 2002, a public meeting was held to inform the citizens of Mt. Juliet About the master planning for a greenway system that would link all areas of Mt. Juliet. After the presentation the consultants addressed the concerns of property owners. Questions dealt with;

- Liability of the greenway and neighboring residences adjacent to the greenway.
- Crime and it's impact on the neighborhood
- property values
- private property rights
- maintenance of the greenway
- privacy
- landuse

Liability for adjacent land owners to the greenway is limited. If greenway users remain on the trail there should be no conflicts.

It has been proven in various reports that no public safety issues could be directly linked to trails. Graffiti and tagging does occur but there has been no incidents focused toward trail users. Also residential robberies would be harder due to the length of the trails and the need for "get away" vehicles. In other words it be very hard to carry stolen items along a trail without being observed.

Property values have also been studied in these same reports and the conclusion has been that trails actually have increased the value of adjacent properties.

(Evaluation of the Burke-Gilman Trail's effect on Property Values and Crime; 1987, The effects of Greenways on Property Values and Public Safety; 1995)

Property owners have rights. The City can only "take" property-owners land, thought legal means such as condemnation or eminent domain. Both of these require just cause.

Privacy will be maintained through the use of fencing, landscape screens or by varying the elevation of the trail.



Fisher & Arnold, Inc.
3205 Players Club Parkway

38125 Memphis, Tennessee
fax (901) 748-3115 (901) 748-1811
jvdrplym@fisherarnold.com

PROJECT NAME:	Mt. Juliet Greenway, Bike & Pedestrian Master Plan
Public meeting	January 30, 2003
Project No:	AN 4214.6
Date:	4.16.03
Phone No.	Na
Prepared By:	Joe Vanderpluym, ASLA
Prepared For:	File

The second public meeting was held on January 30th, The meeting was very similar to the first public meeting with approximately 15-20 citizens attending. The concerns raised at this meeting were also similar as the first meeting. These concerns were:

- Protection of personal property
- Protection of the flood plain
- Personal liability issues with regards to trail users.

These concerns have been raised by property owners located primarily along the western portion of Stoners Creek and whose properties the creek divides. Further east, one person has a peach orchard and is concerned about theft and over-spraying of pesticides and his liability. It was mentioned that trail users should not be on his property. Theft can be minimized by placing fencing along his property. When spraying is being conducted signage should be placed notifying trail users.

Other issues brought up aside from the greenways location was the sewer easement located along Stoners Creek. Citizens were concerned that if the greenway is constructed construction equipment would enter and damage their property similar to the construction of the sewer line. They were never given notice when construction was to take place and that when construction does take place they are damaging private property. These people were told to contact the Public Works Department, their elected representative or the contractor.



Fisher & Arnold, Inc.
3205 Players Club Parkway

38125 Memphis, Tennessee
fax (901) 748-3115 (901) 748-1811
jvdrplym@fisherarnold.com

PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan
Public meeting April 3, 2003
Project No: AN 4214.6
Date: 4.16.03
Phone No. Na
Prepared By: Joe Vanderpluym, ASLA
Prepared For: File, Report

The final public meeting was held on April 3th, The attendance at the final presentation was similar to the other meeting with approximately 14 people present.

The presentation began with the history of Greenways in Tennessee and their benefit to both man and the environment. It was explained that eventually the greenway would connect with the Nashville - Davidson County greenway along Stoners Creek and with both Lebanon's and eventually Wilson Counties. Questions were asked as to when this would take place and it was mentioned that this was a long way off even though work has begun near the Hermitage located on Stones Creek. This greenway would eventually connect to the Stoners Creek Greenway.

Questions were asked as to what sections would be built first and it was mentioned that in areas that are undeveloped the City would require the developer to undertake development of the greenway in those locations. In other areas the City would have to purchase land or have it donated. One area that the City is hoping to get approval and begin construction within the next five years is located on West Division Street between Green Hill Road and Mt. Juliet Road. Part of this greenway is the Nashville Eastern Railroad lands. Connections could be made to a future commuter railhead and the greenway. Also Federal grant monies could be used for this connection.

The presentation ended on a positive note with all attendees in favor of the Greenway, Bike and Pedestrian Master Plan.



Fisher & Arnold, Inc.
3205 Players Club Parkway

38125 Memphis, Tennessee
fax (901) 748-3115 (901) 748-1811
jvdrplym@fisherarnold.com

**PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan**

Greenway Advisory Meeting 09.26.02

Project No: AN 4214.6

Date: 4.16.03

Phone No. Na

Prepared By: Joe Vanderpluym, ASLA

Prepared For: File

Attendees:

Bobby Franklin	City Planner
Ed Hagerty	City Commissioner
Paul Deyo	City Commissioner
Dorinda Wolentarski	Committee Member
Marlin Keel	Fisher & Arnold
Joe Vanderpluym	Fisher & Arnold

The first Greenway Advisory Committee meeting began with introductions.

Fisher & Arnold presented the Greenways Advisory Committee's Duties and Responsibilities for review and comment.

After that review F & A presented the Goals and Objectives for the Mt. Juliet Greenway Bike, and Pedestrian Plan for review and comment.

The final review was the Mt. Juliet, Lebanon and Wilson County Bicycle & Pedestrian Master Plan. This plan was discussed and had been adopted by Mt. Juliet. F & A was requested to look for additional areas that require greenway or bicycle routes.

A completion date for the Master Plan and Report was discussed. It was suggested that the report be completed prior to the submittal date for TDOT funding for greenway and trails.



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**PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan**

Greenway Advisory Meeting 10.09.02

Project No: AN 4214.6

Date: 4.16.03

Phone No. Na

Prepared By: Joe Vanderpluym, ASLA

Prepared For: File

Attendees:

Paul Deyo	City Commissioner
Marlin Keel	Fisher & Arnold
Joe Vanderpluym	Fisher & Arnold
Bobby Franklin	City Planner

Fisher & Arnold began the meeting by updating the members on the Tennessee Governor's Council on Greenways and Trails seminar. F & A explained funding sources and what other communities are doing.

Members of the Advisory Committee were asked if there were any questions or comments with regard to the GAC's Duties and Responsibilities and the Goals and Objectives. No comments or changes were made to the document.

A schedule was developed and approved for all future GAC and Public meetings.



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3205 Players Club Parkway

38125 Memphis, Tennessee
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jvdrplym@fisherarnold.com

**PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan**

Greenway Advisory Meeting 11.06.02

Project No: AN 4214.6

Date: 4.16.03

Phone No. Na

Prepared By: Joe Vanderpluym, ASLA

Prepared For: File

Attendees:

Paul Deyo	City Commissioner
Ed Hagerty	City Commissioner
Dorinda Wolentarski	Committee Member
Linda Elam	Vice Mayor
Marlin Keel	Fisher & Arnold
Joe Vanderpluym	Fisher & Arnold

Fisher & Arnold began by presenting the greenway on the Aerial provided by the City of Mt. Juliet. Potential locations for trailhead were identified. Important sites associated with the greenway such as schools, retail areas, cemetery's, parks, church's and subdivisions with common areas were identified and show how they connect to the community.

The questionnaire for the first public meeting was presented and discussed. No changes were made to the questionnaire.

F & A discussed their findings with respect to other local community greenways and trails. F & A showed the future connection to the Nashville Davidson County Greenway along Stoners Creek. Both Wilson County and Lebanon had not implemented any portion of their plans but because of the county plan future connections could be made.

F & A mentioned that phone calls to TVA, Wilson County and the Army Corp of Engineers were all positive to the development of the greenway provided that their guidelines for trail development be met. Documents would have to be submitted to the individual agency for approval.

F & A mentioned that both environmental and historical/archeological documentation of the trail would have to be developed once a known section of trail was to be designed and constructed. This was a requirement for any state or funding of the projects. The Committee decided that any trail development by the developer would require both environmental and historical/archeological documentation.

F & A was requested to look at developing a greenway from Willoughby Station to Stoners Creek. F & A also suggested developing a greenway behind the retail area located on the south side of Hwy 70. A greenway was also proposed to connect the Triple Crown Subdivision area with Stoners Creek through a greenway and residential street route.



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38125 Memphis, Tennessee
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jvdrplym@fisherarnold.com

**PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan**

Greenway Advisory Meeting 01.30.03

Project No: AN 4214.6

Date: 4.16.03

Phone No. Na

Prepared By: Joe Vanderpluym, ASLA

Prepared For: File

Attendees:

Linda Elam

Bobby Franklin

Tom Brashears

Russ Adsit

Marlin Keel

Joe Vanderpluym

Vice Mayor

City Planner

Wilson County Planner

Fisher & Arnold

Fisher & Arnold

Fisher & Arnold

Fisher & Arnold presented the layout of the greenway on the property maps and identified locations for trailheads and their relationship to parks, TVA, Corp of Engineers, City and County owned properties. F & A identified locations for primary and secondary trailheads.

Implementation of sections of the greenway system was discussed. The sections that would get implemented first would be located on city properties. Also the intent was for any areas that were to have future development that had the greenway located on those properties would be the responsibility of the developer.

An additional greenway was proposed for the Willoughby Station area. The Willoughby Greenway would connect to Stoners Creek and travel northward along a smaller creek to the Willoughby Station area.

A Greenway Regulation was discussed and it was suggested that the master Plan and Report be "attached" to the Transportation Plan.

A Draft version of the Master Plan report was submitted for review and comment.



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3205 Players Club Parkway

38125 Memphis, Tennessee
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jvdrplym@fisherarnold.com

**PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan**

Greenway Advisory Meeting 03.27.03

Project No: AN 4214.6

Date: 4.16.03

Phone No. Na

Prepared By: Joe Vanderpluym, ASLA

Prepared For: File

Attendees:

Sally Robertson	Community Member
Jason Robertson	Community Member
Bobby Franklin	City Planner
Russ Adsit	Fisher & Arnold
Marlin Keel	Fisher & Arnold
Joe Vanderpluym	Fisher & Arnold

A presentation and a discussion of the Implementation Plan (Chapter 7) was conducted. It was noticed that there are discrepancies between the Matrix developed and the implementation plan. F & A will proceed to make the corrections. Part of Chapter 7 identified cost associated to various sections of the trail.

Lot identification along the greenway was discussed. F & A with the help of Mt. Juliet has been able to identify all lots along the Greenhill Greenway and the Willoughby Greenway. Some sections of both the Cedar Creek and Stoners Creek Greenways have not been identified. These are areas outside of the City limits. Along Cedar Creek areas that are not know are north of the Wind Tree Golf Course and near the Wilson Substation. Along Stoners Creek there are areas near the Davidson County line, Stone Bridge and Mt. Juliet Road that lot information is missing.

F & A submitted a site furnishings package to be reviewed by the GAC. This was initiated so that a design theme can be implemented for any future design and construction implementation.

F & A requested that the Advisory members review all documents submitted and then a discussion of the items submitted could take place prior to the final public meeting.

The final public meeting will be held on April 3rd at 6:30pm. F & A will email all people that have provided email addresses. The City of Mt. Juliet will place the announcement on their web site and on the board located on Mt. Juliet Road. The City was also going to place the announcement in the newspaper.



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PROJECT NAME: Mt. Juliet Greenway, Bike & Pedestrian
Master Plan
GAC Meeting April 3, 2003 5:30pm
Project No: AN 4214.6
Date: 4.16.03
Phone No. Na
Prepared By: Joe Vanderpluym, ASLA
Prepared For: File, Report

The final Greenway Advisory Committee Meeting was held on April 3rd. The focus of this meeting was to discuss site furnishings, what phase would be the first to be implemented and how the City would adopt The Mt. Juliet Greenway, Bike & Pedestrian Master plan for future development.

The attendees where:

Paul Deyo
Dorinda Wolentarski
Russ Adsit
Joe Vanderpluym

Ed Hagerty
Bobby Franklin
Marlin Keel

The site furnishings document was presented and discussed. The type of Site furnishings chosen was for the durability and character so that they would be in keeping with the overall concept of the greenway system.

The City of Mt. Juliet was going to submit Charlie Daniels Parkway sidewalks for grant monies from TDOT. The City is also looking at resubmitting part of the Stoners Creek Greenway from Green Hill Road to Mt. Juliet Road.

Adoption of the Mt. Juliet Greenway, Bike and Pedestrian Master Plan was discussed. The report would have to get Planning Commission approval prior to being adopted by the City Council. The thought was the report would be an overlay to the existing zoning regulations.

A discussed developed with regards to Devonshire Road and why it had a center lane. It was thought that this was done prior to being annexed by the City. The road is wide enough to remove the center lane and develop two bike lanes. Devonshire Road would make an ideal bike lane that connects HWY 70 which is a bike route to the Willoughby Greenway.



Appendix C: Resources

Increasing Physical Activity Through Community Design, A Guide for Public Health Practitioners, 2002. National Center for Bicycling & Walking, 1506 21st Street NW Washington, DC 20036

Bicycle and Pedestrian Master Plan, City of Lebanon, City of Mt. Juliet, Wilson County, Metropolitan Planning Organization, 2002. RPM & Associates, In association with Hawkins Partners, Inc.

Guide for the Development of Bicycle Facilities, 1999. American Association for State Highway and Transportation Officials (AASHTO), P.O. Box 96716, Washington, DC 20090-6716.

Greenways for America, 1990. Charles E. Little, The John Hopkins University Press. 701 West 40th Street, Baltimore Maryland 21211

Greenways: A Guide to Planning, Design and Development, 1993. The Conservation Fund. Island Press, 1718 Connecticut Ave NW, Suite 300, Washington, DC 20009

Edmond Trails and Sidewalk Master Plan, 1999. Prepared for the City of Edmond, OK Author unknown.

Tennessee Greenways and Trails Plan, 2001. Tennessee Department of Environment and Conservation. 401 Church Street, 7th Floor L & C Tower Nashville, TN 37243

Tennessee Greenways and Trails, A Citizen Action Guide. Tennessee Department of Environment and Conservation. 401 Church Street, 7th Floor L & C Tower Nashville, TN 37243

The National Bicycling and Walking Study, Final Report 1994. US Department of Transportation. 400 Seventh Street, S.W., Washington, DC 20590 US Government Printing Office.

Improving Conditions for Bicycling and Walking, A Best Practice Report, 1998. Federal Highway Administration, 400 Seventh Street SW HEP - 10, Washington, DC 20590

Soils Survey of Wilson County, Tennessee 1996. United States Department of Agriculture, Natural Resources Conservation Services, in cooperation with Tennessee Agricultural Experiment Station

Landowner's Options, A guide to the voluntary protection of land in Tennessee. Tennessee Parks and Greenways Foundation. 2704 12th Avenue South, Nashville TN 37204

Tennessee Governors Council on Greenways and Trails, Greenways & Trails Institute 2002. Tennessee Department of Environment and Conservation, 401 Church Street, 7th Floor L & C Tower Nashville, TN 37243



Planning Sidewalks and Trails for Access, Best Practice Design Guidelines, 2001 U S
Department of Transportation, Federal Highways Administration, 400 Seventh Street, S.W.,
Washington, DC 20590 US Government Printing Office.

Bruce Johnson - Ajax Parks and Recreation Manager, Design Services, Ajax, Ontario Canada

Greg Clark - Collierville Parks and Recreation Director, Collerville, Tennessee

Charlie Hudson - Open Space Design & Development Manager, Jefferson County, Colorado

Lynne Humkey - Program Coordinator, Murfreesboro, Tennessee

