

GREENWAYS, PEDESTRIAN AND BICYCLE PLAN

Fauquier County, Virginia

FAUQUIER COUNTY, VIRGINIA

ACKNOWLEDGEMENTS

This Plan was prepared under the guidance of the Fauquier County Parks and Recreation Department. Guidance and support for the development of this Plan was also provided by the Fauquier County Trails Coalition. Additional support in developing the trail maps was provided by the Fauquier County Geographic Information Systems Office.

Approved Nov. 15, 2007 by the Fauquier County Board of Supervisors

Prepared for:

Fauquier County Parks and Recreation Department
320 Hospital Drive, Suite 6, Warrenton, VA 20186
Phone: (540) 347-6848
www.fauquiercounty.gov

Director: Larry W. Miller
Project Manager: Don Schenck
Sr. GIS Specialist: Allison Juarez

Prepared by:

Toole Design Group, LLC
4603 Calvert Road, College Park, MD 20740
Phone: (301) 927-1900
www.tooledesign.com

Earth Design Associates, Inc.
4499 Old Auburn Road, Casanova, Virginia 20139
Phone: (540) 347-9330

The Fauquier County Parks and Recreation Department would like to thank the following individuals for serving on the Connections Plan Focus Group:

Per Bang-Jensen, Fauquier Trails Coalition
Janice Bourne, Fauquier County Public Schools
Scott Bruggemann, Town of Remington
Jolly deGive, Piedmont Environmental Council
Virginia Dorkey, Lee District/Remington Community Partnership
John Duemmel, Warrenton Service District Planning Committee
Joyce Findley, Casanova Hunt
Tom Harris, Fauquier County Parks and Recreation Board
Jay Heffner, Fauquier Trails Coalition
Mimi Moore, Citizens for Fauquier County
Ridge Schuyler, The Nature Conservancy
Ashley Smith, Service District Planning Committee
Jeffrey Walker, Rappahannock-Rapidan Regional Committee

TABLE OF CONTENTS

Chapter 1: Executive Summary 3

Chapter 2: Introduction 11
The Importance of Bicycling and Walking in Fauquier County
Policy Context
Planning Context
Planning Process

Chapter 3: Vision and Goals 22
Goal 1: Connectivity
Goal 2: Environmental/Quality of Life
Goal 3: Recreation and Health
Goal 4: Education and Promotion
Goal 5: Funding

Chapter 4: Existing Conditions 25
Bicycling Conditions
Walking Conditions
Existing Off-Road Trails

Chapter 5: Network and Policy Recommendations 32
Action 1: Open Space/Greenway Land Preservation
Action 2: Inclusion in Development Projects
Action 3: School Policies
Action 4: Institutional Framework
Action 5: Maintenance and Management

Chapter 6: Program Recommendations 45
Action 6: Pedestrian and Bicycle Safety Education
Action 7: Safe Routes to School
Action 8: Health and Fitness Encouragement Programs
Action 9: Employee Commute Incentive Programs
Action 10: Staff Training
Action 11: Enforcement
Action 12: Access to Future Transit

Chapter 7: Implementation Plan 51
Funding Sources

Appendix A: Federal Transportation Policies 54

Appendix B: Facility Design Information 56

Appendix C: Trail Maintenance 61

Appendix D: Recommendations for Sidewalk Ordinance 63

CHAPTER 1: EXECUTIVE SUMMARY

Walking and bicycling are popular activities in Fauquier County for both recreation and transportation. Greenways contribute significantly to the quality of life, and protect the County's natural resources. An increasing number of residents have expressed a desire to preserve greenways and open space throughout the County, in order to provide safer places to bicycle and walk. The County has a rich heritage of horseback riding activities and events, including horse show competitions and hunts, and canoeing has become an increasingly popular activity among many county residents.

In many places in the County, these activities are difficult. The greenway network is in its very early stages of development, and multi-use pathways are discontinuous. There are few paved shoulders or bike lanes, therefore bicycling is often not a safe or convenient option.

This Plan identifies locations that are in need of greenways and bikeway improvements, and identifies a number of actions that need to be taken to ensure that future land preservation efforts, development, and road construction addresses the need for greenways and safer pedestrian and bicycle movement within and between the Service Districts.

Why are Greenways, Bikeways and Walkways Important to Fauquier County?

These issues are important to Fauquier County residents for a number of reasons:

Greenways are critical to the future preservation of sensitive ecological lands and the rural heritage of Fauquier County.

By protecting open space areas and greenways along the County's stream and river corridors, water quality can be greatly improved in Fauquier County's streams, the Rappahannock River and Chesapeake Bay. Preservation of these lands can - in some cases - serve a dual purpose of benefiting our residents by providing areas where they can walk, bicycle or paddle a boat for health and recreation.

Walking and bicycling can play a vital role in improving the health of residents of Fauquier County.

Residents of Fauquier County need opportunities to exercise in order to improve their health. In Virginia, the prevalence of obesity increased by 100% between 1991 and 2001.

Important Definitions

Greenway:

A greenway is a corridor of open space. Greenways vary greatly in scale, from narrow ribbons of green that run through a variety of landscapes, to wider corridors that incorporate diverse natural, cultural and scenic features. They can be land- or water-based, and may follow old railways, ridge tops, stream corridors, shorelines or wetlands. Some greenways are recreational corridors that may accommodate non-motorized users. Others function almost exclusively for environmental protection and are not designed for human passage.

Derived from the Pennsylvania Greenways Action Plan, 2001

Multi-Use Trail:

Multi-use trails are separated from motorized vehicular traffic by an open space or barrier and located either within the highway right-of-way (often termed "parallel shared use path") or within an independent right-of-way. Trails may also be used by pedestrians, skaters, wheelchair users, joggers, hikers, people with baby strollers and a wide variety of other non-motorized users. In some cases, shared use paths also accommodate equestrians.

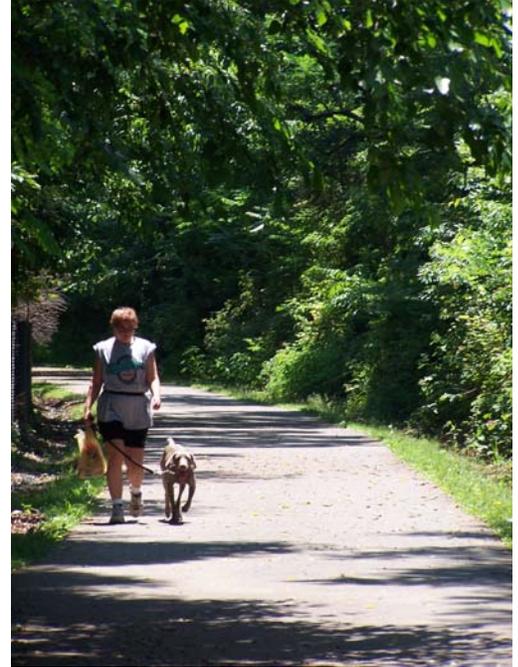
Sidewalk:

That portion of a highway, road or street specifically constructed for the use of pedestrians on the outside edge of the vehicular travel way. Sidewalks are typically, but not always, curb-separated from the roadway and made of concrete, brick, asphalt or another hard surface materials.

Problems associated with overweight and obesity including heart disease, diabetes, and a host of other illnesses can be avoided by getting a short, 15-minute bike ride or brisk walk twice per day. County residents are concerned about health issues and need close-to-home opportunities to get their daily exercise.

Walking and bicycling in Fauquier County can help to reduce traffic congestion, while also providing a recreational resource.

Walking for fitness or recreation has consistently been ranked as the number one outdoor recreational activity by U.S. adults for the past decade, and bicycling has been consistently ranked among the top ten activities. The popularity of these outdoor activities can be seen along the Warrenton Branch Greenway, which receives an average of 89,000 visitors each year. Residents of Fauquier County need an alternative mode of travel for short trips - which account for nearly half of all daily trips that are taken in the County.



Preserving greenways and bikeways network makes good economic sense for Fauquier County.

Bicycle touring is a low impact activity that can bring dollars to many small town businesses, museums, and other cultural institutions, but does not generate overwhelming numbers of cars or people.

The Warrenton Branch Greenway - an outstanding resource that draws 89,000 visitors per year.

Summary of Vision and Goals

Fauquier County's vision for walking and bicycling provides the public, elected officials, county staff, and others a clear picture of the future network. The specific goals speak directly to particular areas that need action. Together they provide a solid framework for the recommended actions in this Plan.

Vision Statement:

Fauquier County will become a place:

- ◇ *where multi-use trails and greenways serve a dual purpose as recreation and transportation corridors and serve to preserve open space, and;*
- ◇ *where people have the convenient and safe option of traveling on foot and by bicycle throughout the County for recreation and transportation.*

To realize this Vision, the following five goals were established:

GOAL 1: Develop a county-wide walkway, bikeway and greenway network among residential neighborhoods, Towns, workplaces, shopping centers, historic districts, schools, libraries, recreation centers, parks, etc.

GOAL 2: Preserve and protect the environmental quality of Fauquier County's rural, suburban and urban communities through the preservation of greenways and open space corridors.

GOAL 3: Provide opportunities for a great many county residents who desire to walk, bicycle, ride horses and paddle boats for recreation and health.

GOAL 4: Educate business and community leaders and the general public about the benefits of walking and bicycling, and provide safety messages for people who use the system.

Goal 5: Provide adequate funding to develop and maintain a seamless network of facilities.



Key Recommendations of the Plan

This Plan recommends the construction of a physical network of greenways, bikeways and sidewalks, as well as a variety of programs and policies that are needed to achieve the vision and goals identified above. Detailed recommendations are provided in Chapters 5 and 6. Below is a summary of the key recommendations of the Plan:

ACTION 1: Network of Multi-Use Trails, Blueways, Horse Trails, Bikeways and Sidewalks

This Plan recommends a comprehensive network of multi-use trails that will be located within the Service Districts of the County. The proposed locations within the Service Districts have been carefully considered and have undergone a citizen-driven review process (see pages 32-33 for a more detailed description of this process).

The maps that are located inside the back cover of this Plan show the specific locations of proposed trails within the Service Districts. It is important to note that future revisions to this Plan will be necessary in order to facilitate a more in depth discussion regarding trail connections *between* the Service Districts.

At the present time, multi-use trails are supported in the language of the Comprehensive Plan but are not adequately supported by the detailed regulations that control development within the County. *As a result, there is little practical guidance on how to design multi-use trails, bikeways and sidewalks in the County.*

Chapter 5 identifies a variety of actions needed to ensure that new developments (both commercial and residential) are safe for walking and bicycling, and that multi-use trails and bikeways identified in this Plan (and in Service District plans) are constructed during development projects. The following specific recommendations support this action:

- 2A: County and municipal staff should require future developers to construct multi-use trails and greenways as identified in this Plan and Service District Plans, and that they dedicate these corridors to the County for public use.
- 2B: The County should adopt the standards of the Parks and Recreation Department for multi-use trails, sidewalks, bikeways, blueways, etc., and revise local subdivision ordinances and roadway design standards accordingly.

ACTION 2: Land Preservation

Private landowners in Fauquier County should be invited to participate in the greenway program primarily through voluntary measures and incentives, many of which already exist through the Purchase of Development Rights (PDR) program, conservation easements, and agricultural districts. Additional incentives should be provided to encourage smaller land owners to participate.

Chapter 5 also recommends that the County provide user-friendly information on the wide variety of land preservation programs for citizens and developers, and publicize incentives to preserving greenways and open space.

ACTION 3: School Policies

Walking and bicycling to school is an activity that many generations of children were able to do in the past. In recent years, however, some schools in Fauquier County have taken steps to discourage, and in some cases prohibit children from walking and bicycling to school due to concerns about safety. As walking and bicycling conditions improve in the future it will be important to re-examine these policies. A good example of this is William C. Taylor Middle School, which has a direct connection to the Warrenton Branch Greenway - students could easily use the trail to safely access school. This action addresses the need to make conditions safer for students traveling to and from school.



ACTION 4: Institutional Framework

This action addresses the need for continued oversight and coordination to insure successful implementation of this Plan. Chapter 5 identifies an institutional framework that will be needed to implement the recommendations of this Plan. The following specific activities are recommended:

- 4A: Establish a trail staff person in the Parks and Recreation Department to oversee the planning and design of proposed greenways and trails throughout the County, and to work with developers and homeowners associations to ensure that good quality trails are built as part of the development process, to coordinate the efforts of local jurisdictions and other County government agencies, and to prepare grant applications for the myriad of grant opportunities available for these types of projects in Virginia (see job description in Chapter 5, Recommendation 4A).
- 4B: Establish a county-wide coordination committee responsible for coordinating the implementation of this Plan.
- 4C: In the future, address planning needs for connections between the Service Districts.

ACTION 5: Additional Sources of Funding

Although the majority of the proposed network will be built through the development process, there will be gaps in the network in both the short term and long term that will need special funding in order to complete. This action addresses the need to identify additional sources of funding, both through grants and the capital budget, in order to establish a continuous network.

ACTION 6: Maintenance and Management

While Fauquier County owns only portions of the trail network and does not manage the roadway system, ensuring good maintenance will require coordination with a variety of other parties. Chapter 5 identifies actions that will be needed in order to coordinate the maintenance and management of the pedestrian and bicycle network. It also identifies the need to establish guidelines for trail user etiquette in order to reduce conflicts between the many different types of users who will enjoy future Fauquier County Trails.

ACTION 7: Safety Education

Chapter 6 identifies a number of resources that will be helpful in establishing pedestrian and bicycle safety education for all ages, as well as for motorists who should be taught to use caution at trail and sidewalk crossings. Specifically, bicycle and pedestrian safety curricula

should be implemented in elementary and middle schools throughout the County. The County should work with the health and P.E. coordinator for Fauquier County Public Schools to conduct additional research into the program and gain the involvement of local schools.

ACTION 8: Safe Routes to School

The environmental, social, health, traffic safety and direct costs of a system that delivers most students to school via school buses and personal automobiles are significant. While increasing the numbers of students that bicycle and walk to school can help mitigate the negative impacts of the current system, safe routes to school must be created before parents and school officials will feel comfortable encouraging students to use them. Chapter 6 identifies a number of actions that can be taken to launch a pilot Safe Routes to School (SRTS) program in Fauquier County. These programs have been highly successful in other Virginia jurisdictions and throughout the U.S.

ACTION 9: Encouragement Programs

Community-wide encouragement and advocacy for walking and bicycling can be achieved through events, ongoing programs, and town- or county-sponsored initiatives. Chapter 6 identifies a number of specific activities that can be undertaken to encourage walking and bicycling for fun and fitness.

ACTION 10: Employee Commute Programs

Fauquier County should encourage bicycle commuting by participating in Bike-to-Work Day, and by providing information to employers and employees. This action recommends that public agencies in Fauquier County become model employers: providing monetary bike/walk commute incentives, showers and lockers for employees, and "Guaranteed Ride Home" policies for emergencies and inclement weather.

ACTION 11: Training for Agency Staff

Pedestrian and bicycle design is a new field of study that will require background training for local agency staff who are responsible for development reviews and for coordinating with VDOT on transportation projects. This type of training has been conducted in other Virginia cities and counties, and has been funded by VDOT in the past.

ACTION 12: Enforcement

It will be important in the future to improve enforcement of laws concerning the safe interaction of pedestrians, bicyclists, and motorists in shared environments. Education should be provided to law enforcement officers to encourage them to reinforce laws as they apply to aggressive motor vehicle behavior toward bicyclists and pedestrians. Pedestrians and bicyclists should be educated to follow the rules of the

road as well. Chapter 6 identifies a number of steps that should be taken to ensure this occurs.

ACTION 13: Access to Future Transit Services

While Fauquier County's current transit service is limited mainly to shuttle buses and vanpool, a number of transit proposals have been discussed in recent years. In all future transit projects, convenient and safe pedestrian and bicycle access should be a top priority. Chapter 6 identifies a number of measures that should be taken if transit services are increased in Fauquier County in the future.

Implementation Plan

The establishment of a regional network of multi-use trails and bikeways in Fauquier County will require a partnership among the county, local jurisdictions and the state. New greenway trails, multi-use pathways that extend along roadways, and sidewalk projects will need to be coordinated through various funding programs, including the Six Year Transportation Improvement Program. Chapter 7 identifies a number of funding programs that should be aggressively pursued in order to fund the implementation of this Plan.

It is important to note that future revisions to this Plan will be necessary in order to facilitate a more in depth discussion regarding trail connections between Service Districts.

County Approval Process

The Board of the Parks and Recreation Department is hopeful that this plan is include as and approved section of the County's Comprehensive Plan. In order to accomplish this objective the following steps must be completed:

1. An in-depth review by the Parks and Recreation Board, County Administrator, County Attorney and the Planning Commission. Public hearing for input would be held by the Parks & Recreation Board and Planning Commission. Revision as needed after this input and review process.
2. Acceptance by the Planning Commission for inclusion in the Comprehensive Plan and forwarding on to the Board of Supervisors
3. Review by the Board of Supervisors and completion of revisions from this review.
4. Acceptance by the Board of Supervisors for inclusion in the Comprehensive Plan.

Next steps:

1. Inclusion of trail design standards per the standards recommended herein and any available County standards.
2. Possible amendment to the Zoning and Subdivision Ordinances to add trail standards and specifications.

3. Pursuit of additional funding sources as needed to augment developer-financed trails, bikeways and sidewalks.

CHAPTER 2: INTRODUCTION

Fauquier County's bucolic landscapes, quaint towns, and various historic, natural and cultural resources provide an ideal setting for bicycling, walking, horseback riding and canoeing. County residents have expressed a desire to preserve greenway corridors throughout the County, both to improve water quality and environmental conditions, as well as to serve as recreational corridors. Bicycling in the region is growing in popularity, and county residents are increasingly looking for places where they can safely walk to improve their health as well as for recreation.

Greenways and bikeways also will help to preserve and enhance the social values that Fauquier County holds dear. Greenways offer an opportunity to slow down and greet a neighbor, a chance to reinforce our connection with nature, and a safe place that people of all ages and abilities can experience.

This Plan provides a coordinated and strategic approach to the development of a regional system of greenways and bikeways throughout the County. The Plan meets the goals of the region to create a comprehensive network that connects neighborhoods, adjacent jurisdictions, and key destination points.



The Importance of Greenways and Bikeways in Fauquier County

Fauquier County is a popular place to settle as well as to visit because of the region's natural beauty, access to outdoor activities, and abundance of historic and cultural resources. Recent growth has created dramatic changes in transportation and land use. Roadways throughout the region are experiencing increases in traffic, thus causing concerns that they are less safe for walking and bicycling.

Efforts should be made now to ensure that people on foot and bicycle will be able to use Fauquier County's roadway network in the future. Transportation improvements must be designed to preserve the ability for people to walk and bicycle for recreation and transportation throughout Fauquier County.

There are a variety of reasons why greenways and bikeways are important in Fauquier County:

#1: More greenways and increased levels of walking and bicycling will help to preserve rural landscapes in Fauquier County, and will improve air and water quality.

- By protecting open space areas, or greenways, along the County's stream and river corridors, water quality can be greatly improved. Greenways act to filter runoff and reduce flooding by slowing the release of stormwater into floodplains.
- Greenways provide opportunities to protect the County's rural open space areas by preserving sensitive ecological lands. In locations where public access is appropriate, some greenways can also provide access for canoeing, hiking and horseback riding.
- Vehicle emissions and other motor vehicle pollutants contribute to water pollution, which ends up in Fauquier County's streams, the Rappahannock River and the Chesapeake Bay. Increased levels of walking and bicycling will have a positive impact on local and regional water quality, and greenways help to filter pollutants from runoff.
- Fauquier County will soon be classified as being in non-attainment for ground level ozone by the U.S. Environmental Protection Agency. This means that air quality in the region is below federal health-based standards for clean air. Motor vehicle emissions are a major contributor to ozone pollution.
- Increased levels of walking and bicycling can play an important role in reducing air pollution. 48.8% of all trips we make are less than 3 miles in length. By substituting a bicycling or walking trip for these short auto trips to the nearby grocery store or workplace, area residents can impact the amount of pollutants generated by automobiles. Sixty percent of the pollution created by automobile emissions is emitted in the first few minutes of operation, before pollution control devices begin to work effectively.

#2: Walking and bicycling can play a vital role in improving the health of residents of Fauquier County.

- Residents of Fauquier County need opportunities to meet the Surgeon General's recommendation of 30 minutes of physical activity per day. Efforts to integrate physical activity into people's daily routines (such as opportunities to walk and bicycle) are critically important (1998 report of the American Medical Association).
- Today, there are nearly twice as many overweight children and almost three times as many overweight adolescents in the U.S. as there were in 1980. In Virginia, the prevalence of obesity increased by 100% between 1991 and 2001, going from 10 percent to 20 percent in ten years.
- Research conducted in 1999 by the Centers for Disease Control found



that “obesity and overweight are linked to the nation’s number one killer - heart disease - as well as diabetes and other chronic conditions”. The report also states that one reason for Americans’ sedentary lifestyle is that “walking and cycling have been replaced by automobile travel for all but the shortest distances.” (October 1999 issue of the JAMA - Journal of the American Medical Association).

- Total costs attributed to obesity (medical costs and lost productivity) amounted to an estimated \$117 billion in the year 2000, 10% of total national health care costs.

#3: Increased walking and bicycling in Fauquier County for transportation can help to reduce traffic congestion, while also providing a recreational resource.

- Walking for fitness or recreation has consistently been ranked as the number one outdoor recreational activity by U.S. adults for the past decade, and bicycling has been consistently ranked among the top ten activities. These trends are evident in the outstanding popularity of the Warrenton Branch Greenway - an average of 89,000 people use the trail each year.
- Many people in the region need an alternative mode of travel. Because of age or economic circumstances, some of the region’s residents - children, students, low-income households and retirees - do not have access to an automobile. Bicycling is an extremely affordable option when compared to the expense of owning and operating an automobile (\$120 per year compared to over \$5,000 per year).
- The county’s residents will be more likely to use bicycles for transportation if there are safe places to ride. A 1990 Louis Harris Poll found that 40% of U.S. adults say they would commute by bike if bike lanes and pathways were available.

#4: Developing a trails and bikeways network makes good economic sense for Fauquier County.

- Trails can provide a significant boost to the local economy. Several local jurisdictions expect to see additional tourism revenues from the development of trails: for example, equestrians and canoeists who enhance their visit to the Rappahannock by eating lunch in Remington. Several recent economic impact studies of trails in the Mid-Atlantic have shown that multi-use trails bring significant revenue to local small businesses and Towns. A 2004 study of the Northern Central Rail Trail (a 21-mile unpaved trail in Maryland) found that the annual revenues from the purchase of hard goods, soft goods and



accommodations was approximately \$10.3 million. A trail user count conducted by the Maryland Department of Natural Resources estimated a total of 867,725 user visits to the Northern Central Rail Trail in 2004.

- Bicycle touring is a low impact tourist activity that can bring dollars to many small town businesses, museums, and other cultural institutions, but does not generate overwhelming numbers of cars or people. Realizing economic benefit from appropriate use of rural road resources and trails coincides with the region's desire to maintain its rural nature and quality of life.
- Bicycle tourism is big business in the United States, bringing millions of dollars in tourism revenue to some parts of the country. In Vermont, for example, bicycle touring brings in more revenue than the maple syrup industry. A questionnaire of Delaware cyclists in 1997 found that bicycle tourists were willing to spend between \$35.59 and \$84.77 per day, with the amount increasing as the number of days touring increases.
- Fauquier County has a multitude of outdoor activities to offer visitors in addition to bicycling, such as hiking (Appalachian Trail is located in the region), camping, horseback riding and canoeing. The region has an opportunity to build a reputation as a destination for people seeking an active vacation.

Policy Context

By far, the most efficient way to improve conditions for walking and bicycling is to incorporate greenways, bikeways, sidewalks and safe crossings into community design from the outset. It is far more expensive to retrofit pedestrian and bicycle facilities into communities that were only designed for automobile access. Therefore the concept of "complete streets" has gained a tremendous amount of support in recent years. Complete streets are those that are designed for all users - people who drive automobiles, people who bicycle, people with disabilities, and people who travel on foot.

Policies have been adopted at all levels of government in order to ensure that land is preserved for greenways, and that communities are designed to support walking and bicycling. Below is a description of the policies that are most relevant to this Plan.

Federal Policies and Regulations

Federal transportation policies (through the Intermodal Surface Transportation Efficiency Act of 1990 as well as subsequent transportation bills) strongly support the inclusion of pedestrian and bicycle facilities in transportation projects, and have supplied a consistent source of funding for these activities for the past fifteen years. The federal requirements for the provision of pedestrian and bicycle facilities are very detailed, and can be found in Appendix A.

Americans with Disabilities Act (ADA)

According to the 1990 U.S. Census, one in every five Americans has a disability. People with disabilities are more likely to be pedestrians than other adults because some physical limitations can make driving difficult.

For these reasons, the U.S. Government established the Americans with Disabilities Act (ADA) in 1990. Its implementing regulations, issued by the Department of Justice (DOJ) in 1991, require that all new and altered facilities - including sidewalks, street crossings and related pedestrian facilities in the public right-of-way - be accessible to and usable by people with disabilities. The Americans With Disabilities Act Accessibility Guidelines (ADAAG) provide the necessary guidance for the design and construction of pedestrian facilities.



State Recreation and Transportation Policies

Department of Conservation and Natural Resources

This Plan is clearly in line with statewide recreation goals, as set forward in the recommendations of the Virginia Department of Conservation and Recreation's (DCR) *2002 Virginia Outdoors Plan*. DCR identified the need to provide "transportation alternatives, specifically trails for walking, hiking and cycling and to connect people with destinations."

This Plan is also supported by a variety of land preservation programs that are available in Virginia, including the Purchase of Development Rights (PDR) Program. This program enables local governments to develop and enact an easement program to preserve open spaces, farms, forests and natural areas, and restrict future development of the land while permitting landowners to continue to use their land as they had been. While this program will not support public access for trail development, it will ensure that greenway lands (i.e. environmental buffers and wildlife areas) are preserved in the future.

The Open-Space Land Act enables public bodies to acquire properties or interests in property, or designate property for use as open-space land. "Open-space land" means any land provided or preserved for

- park or recreational purposes
- conservation of land or other natural resources
- historic or scenic purposes
- assisting in the shaping of the character, direction, and timing of community development, or
- wetlands

Public bodies may also acquire fee simple title or other interests in real property including easements for the conservation of farm and forestlands. (Information above was obtained from the DCR website.)

Virginia Department of Transportation

As described above under Federal policies, transportation agencies have also provided a tremendous level of support and funding for bikeways, greenways and sidewalks. While local jurisdictions play a large role in establishing transportation priorities in Virginia, the Virginia Department of Transportation (VDOT) is the agency responsible for constructing and maintaining many of the primary and secondary roads throughout the Commonwealth.

On March 18, 2004 the Commonwealth Transportation Board adopted a new state policy for integrating pedestrian and bicycle accommodations into roadway projects (often termed “incidental” improvements - bikeways and sidewalks that are built as part of new roadway construction or roadway reconstruction). This policy essentially reverses previous VDOT policies which required a great deal of public and political support in order for bikeways and sidewalks to be *considered* for inclusion in transportation projects.

The new policy states that *“VDOT will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking.”* The policy provides a number of factors under which additional emphasis will be placed on the need for such facilities, essentially requiring bikeways and sidewalks whenever a roadway project occurs in an urban or suburban area. The policy provides some exemptions under which facilities may *not* be provided, such as in situations where:

- scarcity of population, travel, and attractors, both existing and future, indicate an absence of need for such accommodations
- environmental or social impacts outweigh the need for these accommodations
- safety would be compromised
- total cost of pedestrian and bicycle accommodations to the appropriate system (i.e., interstate, primary, secondary, or urban system) would be excessively disproportionate to the need for the facility
- purpose and scope of the specific project do not facilitate the provision of such accommodations (e.g., projects for the Rural Rustic Road Program)
- pedestrian and bicycle travel is prohibited by state or federal laws

This policy also pertains to operations and maintenance, and specifically states the following in Section 3.3.1:

“Bicycling and walking should be considered in operational improvements, including hazard elimination projects and signal installation. Independent operational improvements for bicycling and walking, such as the installation of pedestrian signals, should be coordinated with local transportation and safety offices. The maintenance program will consider bicycling and walking so that

completed activities will not hinder the movement of those choosing to use these travel modes. The maintenance program may produce facility changes that will enhance the environment for bicycling and walking, such as the addition of paved shoulders. "

VDOT's new policy went into effect on March 18, 2004 and applies to all projects that reached the scoping phase after that date. As with all major policy changes, it will take several years before the "on the ground" results of VDOT's new policy will be evident, as projects move through the pipeline from initial scoping, through the planning and design phases and eventually into construction.

It is critical that local governments continue to show support for the inclusion of pedestrian and bicycle accommodations in state roadway projects. This includes projects at all levels: maintenance, design and construction, and operations. The level of accommodation provided in VDOT projects is likely to be commiserate with the level of support expressed by local citizens, agency staff and elected officials.

The complete version of VDOT's *Policy for Integrating Bicycle and Pedestrian Accommodations* can be found on the VDOT website (www.virginiadot.org) in the Program section of the website, under Bicycling and Walking.

Local Policies

The Fauquier County Subdivision Ordinance (as amended October 14, 2004) has a mixture of good provisions for pedestrians and bicyclists, as well as a number of factors that have been overlooked and are in need of revision. (A full review and list of recommendations with regards to the Subdivision Ordinance is provided in Chapter 5 and the Appendix of this report.) The ordinance does not specifically address the provision of greenways during commercial and residential development, however it does require sidewalks on both sides of newly constructed roadways. Subdivision ordinances for towns in Fauquier County are generally less detailed with regards to provision of multi-use trails and sidewalks.

Another issue with regards to local policies is that some schools in Fauquier County do not allow students to walk or bicycle to school. As the County takes steps to improve conditions around schools for walking and bicycling, it will be important to re-examine these policies on a case-by-case basis to determine if they can be changed.

Planning Context

There are a number of local plans and policy documents in Fauquier County that support the development of a Bicycle, Pedestrian and Greenways Plan, including:

- **Fauquier County Comprehensive Plan 1992-2010**
 The goals of the Fauquier County Comprehensive Plan 1992-2010 are consistent with this Plan. Chapter 9 of the Comprehensive Plan offers guidance for future infrastructure needs including parks recreational facilities. The Comprehensive Plan directed each Service District to develop a trails plan, which has since been accomplished. The Service District trails plans were the basis for the development of the maps that are provided in Chapter 5.
- **Fauquier County Parks, Recreation and Open Space Comprehensive Plan - 1989**
 This Plan established the goals of developing a greenway system and a network of trails countywide. In the intervening years, county staff implemented these goals by working with citizens to develop trail networks within the Service Districts; initiating a proffer system that incorporates greenways and trails into the development process; and constructing, in cooperation with the Town of Warrenton, the County's first Rail-to-Trail project with grant money.
- **Fauquier County Parks and Recreation Policies and Standards**
 The Parks, Recreation and Open Space Comprehensive Plan contains a department standards manual that addresses various parks and recreation amenities such as playground equipment and ball fields.
- **Town of Warrenton Comprehensive Plan**
 The Town of Warrenton's Comprehensive Plan contains a greenway element, which supports the goals of this Plan.

The adoption of this Plan also contributes to regional efforts to improve walking and bicycling conditions throughout the Piedmont region of Virginia. This Plan is well timed to coordinate with surrounding jurisdictions, in order to achieve connections that go well beyond Fauquier County's boundaries. The following efforts were either in progress or recently completed during the timeframe of this master planning process, in jurisdictions either adjacent to or near Fauquier County:

- **Northern Virginia Regional Bikeways and Trails Study** - This Virginia Department of Transportation study establishes a regional network of roads for bikeway development in Fairfax County, Prince William County, Loudoun County, Arlington County and the City of Alexandria. This Plan identifies transportation corridors for bicycles

between major activity centers, and establishes an Action Plan for the region to support higher levels of bicycling.

- **Loudoun County's Bicycle and Pedestrian Mobility Master Plan** - Loudoun County's Bicycle and Pedestrian Mobility Plan was approved by the Board of Supervisors on October 20, 2003. It identifies a countywide network of recommended bikeways and walkways to connect citizens in Loudoun to parks, schools, jobs, shopping areas and rural open space. Information about the plan, including the plan document, maps, and background on the project, is available at www.loudoun.gov/compplan/bikeped.htm.
- **Culpeper Bikeways Plan** - this plan identifies three connections to Fauquier County: along Highways 29, 211 and 802. Culpeper County also shares Fauquier County's vision to provide a blueway on the Rappahannock River.
- **Rappahannock-Rapidan Regional Commission (PD9) Regional Bike Plan** - this plan is slated to commence in FY '06, and will address bicycling throughout the region. It will be conducted under the direction of the Board of the Commission, and in conjunction with VDOT Transportation Mobility & Planning under the Rural Transportation Planning Program.
- **Central Shenandoah Valley Bicycle Plan** - this regional plan spans the five counties that comprise the Central Shenandoah Valley: Rockingham, Augusta, Rockbridge, Bath and Highland Counties, as well as the local jurisdictions of Staunton, Harrisonburg, Lexington, Waynesboro and Buena Vista. This Plan focuses primarily on bicycle transportation in the urban and suburban areas of the Central Shenandoah Valley, and on bicycle touring in the rural areas. A network of roadway corridors are identified in the Draft Plan for improvements that will include paved shoulders, bike lanes, and trails. Copies of the draft Plan can be obtained from the Central Shenandoah Planning District Commission.
- **Frederick County** - The Frederick County Parks and Recreation Department is developing several off-road trails in Winchester.
- **Fairfax County** - Fairfax County's Countywide Trails Plan (2002) identifies the general location of proposed public trails for non-motorized users.

To the extent possible, the findings of the above-mentioned studies and master plans were coordinated with the planning process for this Plan.

Planning Process

The planning process for this study involved a number of different activities and outreach efforts. The process is briefly outlined below.

1. *Field Analysis*

An analysis of existing conditions was conducted in the field for key areas of Fauquier County. This analysis included existing conditions on multi-use trails, potential locations for future greenways, sidewalk and pedestrian crossing conditions, and on-road bicycling conditions throughout the County.

2. *Public and Jurisdiction Input*

A considerable effort was undertaken to gather input for this Plan from residents and key stakeholders from each of the nine Service Districts. The public input process was an essential component in selecting locations for improvements. Each service district appointed a citizen committee to update the comprehensive plan for their particular community. As part of this effort, citizens made recommendations for future locations of greenways and trails, as well as on-road pedestrian and bicycle improvements. The adopted Service District Plans are incorporated into this plan. In addition, advocacy groups like the Fauquier Trails Coalition provided public input on the extension of trails throughout the county to create an integrated system.

3. *Draft and Final Plan and Route Network*

This Plan was reviewed by the Connections Plan Focus Group, whose members represent a wide variety of user groups throughout the County. Based on their comments, the Plan was revised. It was then reviewed by the public in a series of public hearings during its adoption, including a Planning Commission Public Hearing, a Parks and Recreation Board Public Hearing, and a Board of Supervisors Public Hearing.

It is intended, upon its adoption, that this Plan will become a component of Fauquier County's Comprehensive Plan.

Conclusion

This Plan has grown out of public concerns that greenways should be preserved, and that walking and bicycling conditions in the County need a greater level of attention in order to be safe activities. It was also the result of citizens who are concerned that open space areas in the County are preserved and connected. The remainder of this Plan describes how to accomplish this.

Chapter 3 outlines a *Vision* for Fauquier County's greenway network and identifies five key goals that form the foundation of this vision. Chapter 4 describes existing conditions and the extent of existing facilities. Chapter 5 outlines the recommended policy actions that will be needed to improve walking and bicycling conditions and provide a safe and effective bikeway and walkway network. It addresses roadway design policies, land development policies, and network maintenance and

management. Chapter 6 provides recommendations for support programs that will be needed, such as pedestrian and bicycle safety education. Chapter 7 provides a guide for plan implementation.

CHAPTER 3: VISION AND GOALS

The recommendations of this Plan are based on a long-term vision for greenways and bikeways throughout the County. The vision statement is intended to guide the overall direction of future recreation and transportation efforts in the region, and the implementation of this plan.

Fauquier County will become a place:

- ◇ *where multi-use trails, greenways and blueways serve a dual purpose as recreation and transportation corridors and serve to preserve open space, and;*
- ◇ *where people have the convenient and safe option of traveling on foot and by bicycle throughout the County for recreation and transportation.*

The following goals build on the strengths of Fauquier County, and are designed to help achieve the vision for improving pedestrian, bicycle, equestrian and blueway accommodations in the region.

GOAL 1: CONNECTIVITY

GOAL: Develop a county-wide walkway, bikeway and greenway network among residential neighborhoods, Towns, workplaces, shopping centers, historic districts, schools, libraries, recreation centers, parks, and other destinations, including linkages to neighboring jurisdictions.

While there are already some trails in the County, they serve a small portion of the population. This goal addresses the need for a seamless network of pedestrian and bicycle connections within and between the Service Districts.

- OBJECTIVE A: Expand the network of greenways, bikeways, blueways, horse trails and walkways throughout the county to connect developments, neighborhoods, towns, historic districts, schools, museums, public facilities and adjacent counties.
- OBJECTIVE B: Incorporate requirements for greenways, bikeways and walkways into all community design and modifications, and transportation activities.
- OBJECTIVE C: Accommodate the widest possible range of user abilities, including bicyclists, pedestrians (walkers, joggers, runners), in-line skaters, horseback riders, canoeists, disabled persons, children, and the elderly.



GOAL 2: ENVIRONMENTAL/QUALITY OF LIFE

GOAL: Preserve and protect the environmental quality of Fauquier County's rural, suburban and urban communities through the preservation of greenways and open space corridors.

This goal addresses the growing need to preserve and enhance Fauquier County's landscapes and to protect the quality of life for residents throughout the County.

- OBJECTIVE A: Provide greenway corridors which serve to filter run-off and provide migration routes for the County's wildlife.
- OBJECTIVE B: Provide incentives to landowners to preserve greenways and open space corridors.
- OBJECTIVE C: Provide blueways that enable county residents to access the Rappahannock for water-based recreation activities such as canoeing and kayaking.
- OBJECTIVE D: Reduce the environmental impact of motor vehicle emissions by providing alternative forms of transportation for short trips.



GOAL 3: RECREATION AND HEALTH

GOAL 3: Provide opportunities for a great many county residents who desire to walk, bicycle, ride horses and paddle boats for recreation and health.

This goal addresses the need to provide close-to-home opportunities for county residents to walk, bicycle, ride horses and paddle boats for health and recreation purposes.

- OBJECTIVE A: Provide greenway trails, bikeways, walkways and canoe trails within close proximity to places where people live and work, so that they have safe and convenient opportunities to engage in these activities.
- OBJECTIVE B: Provide access to the county's recreational facilities via greenways, bikeways and multi-use trails.
- OBJECTIVE C: Work with volunteer groups to encourage walking and bicycling through special events such as bike rides and walking tours.

GOAL 4: EDUCATION & PROMOTION

GOAL: Coordinate and promote the implementation of this Plan, and provide safety messages for people who use the system.

This goal addresses the need for community leaders and the general public to have a greater level of awareness of the benefits of walking and bicycling to health, the environment, and the quality of life of County residents.

- OBJECTIVE A: Establish a permanent advisory committee to coordinate the implementation of this Plan.
- OBJECTIVE B: Promote walkways, bikeways and shared-use paths and related facilities among county residents.
- OBJECTIVE C: Incorporate safety and security related design standards for roads, walkways, bikeways and shared-use paths.
- OBJECTIVE D: Educate the public about safe walking, bicycling, and driving rules and practices.
- OBJECTIVE E: Promote trail safety by establishing guidelines for trail etiquette, and by educating people about these guidelines.

GOAL 5: FUNDING

Goal: Provide adequate funding to develop and maintain a seamless network of facilities.

This goal addresses the need to provide funding for the construction and maintenance of the system.

- OBJECTIVE A: Aggressively pursue state and federal funding grants for the construction of new multi-use trails, bikeways and sidewalks throughout the County.
- OBJECTIVE B: Pursue grant sources that specifically target funding to eliminate gaps in the network.
- OBJECTIVE C: Establish sustaining local budget and finance programs for construction and maintenance of walkways, horse trails, blueway access, bikeways and related facilities.
- OBJECTIVE D: Encourage volunteer efforts and the involvement of community advocacy groups in the development of future multi-use trails.
- OBJECTIVE E: Design for low maintenance.

Conclusion

Fauquier County's vision for more greenways, bikeways and walkways provides the public, elected officials, county staff, and others a clear picture of the future network. The goals speak directly to the particular areas of emphasis that need action. Together they provide a framework for the recommendations in this Plan.

CHAPTER 4: EXISTING CONDITIONS

Fauquier County is located primarily in the Piedmont physiographic province of Virginia, and is therefore comprised of gently rolling hills that make for excellent bicycling conditions. The northwestern part of the County lies within the Blue Ridge province and is characterized by more steeply sloping terrain - conditions which also attract bicyclists who seek more challenging climbs, as well as people who enjoy hiking the Appalachian Trail. The county is bounded on its southern edge by the Rappahannock, a scenic and historic river that is surrounded by numerous archeological and historic sites.

Fauquier County's scenic farm country and historic small towns have long attracted recreational bicyclists and other tourists interested in weekend getaways, antique shopping and exploring civil war history. The natural beauty and high quality of life in Fauquier County, coupled with its proximity to the Washington DC metro area, have also made it an attractive place to settle. Fast-paced residential and commercial development accompanied this population growth, particularly on the eastern half of the county. This growth has created high volumes of motor vehicle traffic, and has raised concerns about the safety of pedestrians and bicyclists.

A number of Service District plans have directly addressed the need for better conditions for walking and bicycling, and have made this a key goal for future growth. One example is the Remington Service District Plan, which states that "movement throughout the community will be equally convenient for pedestrians, bicyclists and motorists." (Remington Service District Plan, page 4.)

Despite the County's goal of clustering development within Service District areas, low density, single use development in Fauquier County is creating a deterrent to walking and bicycling due to long travel distances between origins and destinations. Housing communities are often isolated from services, workplaces and schools, and are divided by wide arterials that are uncomfortable for walking and bicycling. Many of the existing suburban areas in the region will require retrofit to accommodate and encourage walking and bicycling, however there are opportunities to influence future developments to ensure they are designed to accommodate pedestrians and bicyclists.



Existing Off-Road Trails

Fauquier County is in the early stages of developing a network of off-road trails. One of the County's most notable trail facilities is the Warrenton Branch Greenway, which was built in 1998. This 1.5-mile

trail extends from downtown Warrenton (near the old depot) along an abandoned railroad corridor southeast to the Route 29 Bypass, where it crosses over the freeway and connects to a parking lot on Old Meetze Road. There are future plans to extend this trail south along Route 29 for approximately 0.75 miles to Lord Fairfax Community College, in conjunction with a development that is planned in that area of the County. In addition, the County hopes to extend the trail further to the south along the abandoned rail line corridor.

This extremely popular trail was supported by the Town of Warrenton and the Citizens for the Warrenton Branch, which has since changed its name to the Fauquier County Trails Coalition in order to promote the expansion of the greenway system throughout the County. This 10' wide multi-use trail includes a refurbished caboose, several historical railroad structures, and a variety of signs that provide information to the user. The Town of Warrenton is now conducting efforts to improve linkages between the trail and the Town's sidewalk network.



There are a number of park trails in the County, including trails at Rady Park and Crockett Park. These park trails are typically used by people hiking, bird watching, bicycling and rollerblading. In addition to the bridle trails in Sky Meadows State Park, people on horseback frequently use the fire roads in State forest lands, and in wildlife management areas. Equestrians in Fauquier County have expressed interest in longer treks (6 miles or more) and are interested in sharing future trails in Fauquier County that meet these conditions.

Plans are underway to provide canoe access to the Rappahannock River in the Remington area. With the growing popularity of "sit on top" kayaks, demand for canoe access to the Rappahannock River is likely to increase.

In recent years, Fauquier County has strongly encouraged residential and commercial developers to build shared use pathways and sidewalks and to dedicate them to the County for public use. This program has been successful in a number of cases, including Bealeton Station, Lee's Glen, White's Mill, Woods of Warrenton, and Warrenton Chase. The County typically negotiates proffers for trails when developers ask for a zoning change or Comprehensive Plan amendment.

In some of the newer suburban residential subdivisions, the sidewalk system is well designed for walking. A key challenge is to improve these systems by improving connectivity to destinations outside of the immediate neighborhood.

Bicycling Conditions

Bicycling conditions are extremely variable in the County, ranging from excellent conditions on rural roadways with low traffic volumes, to extremely poor conditions on congested and/or high speed roadways that extend through Warrenton, New Baltimore and other populated areas. Multi-lane intersections, freeway interchanges, and poor conditions on roadways with high traffic volumes all contribute to the perception among residents that bicycling is unsafe on major roadways in the County.

Most roadway cross sections do not include paved shoulders, therefore bicyclists must share travel lanes with motor vehicles. Travel lane widths are narrow on many of the older roads and traffic speeds are high in many areas of the County.

In rural areas of Fauquier County, increased traffic volumes and travel speeds are reducing attractiveness and safety for bicyclists on many rural roads that, just a short time ago, provided prime riding conditions. At the same time, there is a need to preserve historic stone walls that lie adjacent to some rural roads - in some cases, widening these roadways will not be possible.

In eastern Fauquier, many new collector and arterial roads are being designed with features that are not bicycle-friendly. These features included pavement and lane widths that facilitate vehicle speeds of 50 mph, when posted speeds are 35-40 mph; regular use of free flow right turn lanes; clover leaf interchanges for arterial roads; and dedicated right and left turning lanes at major intersections. Edge lane striping rarely provides a usable shoulder, and many shoulders remain unpaved. There are no bike lanes in the County.

Specific hazards that bicyclists have mentioned include:

- Narrow, rural roadways with high speed traffic and a lack of paved shoulders, conditions which force bicyclists to share the lanes with motor vehicles.
- Hostility from motorists who do not respect bicyclists' legal right to share the road.
- Inadequate shoulder maintenance - debris frequently collects in the shoulder, reducing the space available for bicycling.
- Key arterials that connect cities to rural riding routes with multiple lanes and substantial traffic volumes and no bicycling facilities.
- Large intersections with multiple turning lanes creating long signal phases and wide crossings in all directions. These intersections can put bicyclists in conflict with turning vehicles. Often signal timing is inadequate to enable a bicyclist to clear the intersection, and some signals do not respond to bicyclists (actuation system does not detect the presence of a bicycle).

- Lack of off-road trails for less experienced bicyclists.
- Lack of signage and route maps to provide bicyclists with information on routes.
- The region’s highways (namely Interstate 66, Route 29, Route 211 and Route 17) divide communities and create significant barriers to walking and bicycling. Highway interchanges require bicyclists to share the road with high speed traffic merging on and off highway ramps.
- Roadways that have been resurfaced with chip/seal pavements, which are loose and make it very easy for a bicyclist to slip.

There are several new bike routes that have been signed along rural roadways through and around Remington. This project was funded through VDOT’s Enhancement Program. The project consists of five signed bike routes (see map on following page).



Virginia’s Interstate Bike Route 1 briefly extends through the far Southeast corner of the County, along Route 611 (Sowego Road) from the Prince William County line to Route 612 (Brent Town Road), along the western edge of Quantico Marine Corps Base. This route is significant because it extends from the Virginia/North Carolina state line at Palner Springs near Occoneechee State Park to Boston, Massachusetts.

ADC’s Washington DC Regional Bike Map (available commercially through ADC) shows a number of “unofficial” bike routes through the eastern side of Fauquier County. These routes have been identified by experienced bicyclists for their scenic quality and connections to other routes. This includes several loop routes north of I-66, and some routes that extend through New Baltimore and areas to the south.

Bicycle parking is lacking at most destinations, including schools, shopping centers, along traditional main streets, at parks and other public facilities such as post offices and libraries. Where bike racks are provided, they are often in short supply, hidden from view, or are not of a design that supports the frame of the bike (U-racks are preferred to “ladder style” racks).

Walking Conditions

The availability of sidewalks in the region varies widely. As a general rule, the older area of Warrenton has a good network of sidewalks, and other town centers are generally pedestrian-friendly. As is the case with many older sidewalk systems, it is not uncommon to find an intersection with one or more missing curb ramps, essential for access by wheelchair, strollers, electric scooter, etc.. In the older



communities, because street surfaces have expanded over time, utility poles, signal control boxes, signs, trees and many other barriers occupy limited sidewalk space and often make passage difficult. In some areas, sidewalks have been well maintained, in others they are in need of repair.

There are many newer neighborhoods in Fauquier County that were not built with sidewalks, or where sidewalks are not continuous. In many places where sidewalks end, worn dirt paths indicate the presence of regular foot traffic. In suburbanizing areas of the County, pedestrians face the following obstacles:

- Wide and heavily-traveled roadways creating difficult pedestrian crossings
- Fast speeds on residential streets
- Lack of sidewalks on main roadways
- Sidewalks are located on only one side of some roadways, which requires pedestrians to cross the road in order to access the sidewalk, which puts them at risk.
- Highway interchange ramp crossings
- Poorly-marked crosswalks
- Americans with Disability Act deficiencies on existing sidewalks
 - Intersections without curb ramps
 - Cracked, uneven, sloping, or narrow sidewalks
 - Sidewalks with utility poles and trees in the middle of the walking area
- Lack of pedestrian push-buttons and pedestrian signals at signalized intersections
- Dead-end streets and cul-de-sacs
- Frequent driveway crossings on commercial roadways

A lack of sidewalks and pedestrian crossings in new commercial areas means that people are unable to walk between developments - even those that are located adjacent to one another. In addition, sidewalks will be needed along roadways that connect to new trails in order to enable people to access them without driving their car and parking near the entrance of the trail.

Schools that were once in isolated areas of the County are now surrounded by roads that carry heavier traffic at higher speeds. In many cases students living within a walkable distance to the school must be transported by bus because a safe walking route is not available.

Conclusion

Fauquier County has a mix of opportunities and challenges to connectivity. Progress to improve future connectivity will depend on the County's ability to overcome the barriers identified in this chapter, as well as to capitalize on the County's strengths and the growing

popularity of walking and bicycling, as well as other related outdoor activities such as horseback riding and canoeing.

CHAPTER 5: NETWORK AND POLICY RECOMMENDATIONS

This chapter presents the policy recommendations of this Plan. These recommendations are aimed at creating an interconnected network of greenways and bikeways so that people have the convenient and safe option of walking and bicycling for recreation and transportation.

These recommendations are fully supported by the County's Comprehensive Plan, which states in Chapter 10 that "bike and pedestrian trails should be developed to serve as transportation systems within service districts and between housing nodes and community centers."

Now is a critical time for Fauquier County to prepare for growth in its Service Districts, and to learn from the mistakes of other Virginia counties that were less prepared for this type of growth.

Other jurisdictions are dominated by automobile traffic, and face a daunting task of retrofitting their suburban areas to enable people to walk and bicycle. This is an expensive solution that could have been avoided if streets, residential and commercial developments had been built correctly the first time.

The key to success in Fauquier County lies in having a strategic plan that is supported by design guidelines, ordinances and other regulations necessary to steer community design and roadway construction.

ACTION 1: Establish a network of multi-use trails, greenways, blueways, sidewalks and bikeway connections that link neighborhoods to each other and to other destinations throughout the County, as well as to neighboring jurisdictions.

Recommendation 1A: Ensure that new developments (both commercial and residential) are safe for walking and bicycling, and that the greenways and bikeways identified in this Plan (and in Service District plans) are constructed during development projects. Ensure that new developments that are adjacent to the proposed network provide a trail and/or sidewalk connection to the master trails network.

Recommendation 1B: Eliminate gaps in the trails network in locations where previously existing development does not include trails. Institute a cooperative effort between homeowners



associations and the County to utilize the existing open space to accomplish this.

A current problem in the County is that the trails network is not connected, therefore Recommendations 1A and 1B speak to the need to build the new network and to eliminate gaps. There is a great need to build trails that link neighborhoods to each other so that travel can occur more easily between communities. County and municipal staff should require future developers to construct trails and greenways as identified in this Plan and Service District Plans, and should require that these corridors are dedicated to the County for public use. County and municipal staff should also facilitate projects that eliminate gaps in the network.

The proposed route network for Fauquier County is identified by the series of maps inside the back cover of this Plan. The locations of the proposed trails were developed through a citizen-driven process in each Service District which relied heavily on public input to determine the most appropriate locations for future trails. The Service District planning process supplied information in adequate detail to determine the exact locations (within the Service Districts) of future trails. In most cases, the proposed trail network extends along stream valleys and floodplain areas that can't be developed, through larger tracks of land that will at some point be developed, along roadways, and utility corridors. Utilizing the proposed plans within each Service District will tie together the fabric of that area, while providing easier access to the amenities located in that Service District.

It is important to note that future revisions to this Plan will be necessary in order to facilitate a more in depth discussion regarding trail connections *between* of the Service Districts.

In developing this network, the County will work cooperatively with landowners in order to address their concerns, and does not propose to condemn land in order to build this network. The majority of trail development will take place in the normal build-out of the Service Districts. Approximately 100 miles of trails are proposed to be built in the Service Districts.

In the layout of the maps a hierarchy for trail projects was developed:

- Planned Trail- Phase 1-Immediate -----O-----
- Acquired Trail- Development Pending -----X-----
- Existing Trail
(HOA, State, Federal, or Privately Maintained) - - - - -
- Existing Trail
(Parks & Recreation Maintained) _____

Within the Service Districts, trail lines shown are exact locations. Any proposed changes will need to be renegotiated with Parks and Recreation prior to change. Properties being developed adjacent to the trail will need to provide a connector from proposed development. Exact location of this connector can be negotiated with Parks and Recreation.

Except in rare circumstances, all trails should be built outside of the 10-year floodplain. All trails that are built to conform to this Plan will be dedicated by the developer to the County for public use. All trails that will convey to the County will be 10' wide asphalt trails. Internal subdivision trails may be 8' in width unless otherwise discussed with the Parks and Recreation Department.

The following figures provide the number of miles of trails that are proposed in each Service District:

- Catlett 6.7 miles
- Calverton 8.2 miles
- Midland 6.4 miles
- Bealeton 20.4 miles
- Remington 8.1 miles
- Opal 4.4 miles
- Warrenton 33.8 miles
- New Baltimore 42.1 miles
- Marshall 9.6 miles

TOTAL= 139.7 MILES*

*Please note: All trail mileage is approximate and may vary from the exact mileage calculated in the field.

Approximately 140 miles of public trails are proposed in The Fauquier County Connections Plan for walkers, bicyclists, and equestrian riders in the service districts. Through public-private partnerships with the Virginia Department of Transportation (VDOT), developer commitments and the Fauquier County Capital Improvements Plan as approved by the Board of Supervisors, land acquisition and construction of trails will

become realized. The costs and effort associated with trail maintenance will need to be shared amongst the Fauquier County Parks & Recreation Department, VDOT, homeowner associations (HOAs), participating community groups and non-profit organizations. Maintenance costs should be the responsibility of HOAs first, VDOT second and as a last resort, if the trails benefit the County outside neighborhoods, the County could be responsible for the maintenance costs.

As described previously, the development of the route network relied heavily on public participation (through the Service District planning process). Fieldwork was also conducted to verify public comments on various routes in the network. A number of criteria were used in the route network development. The routes indicated on the network map:

- Provide direct access between destinations
- Provide access to popular recreational riding
- Provide access to scenic open space areas such as greenways, parks, and rails-to-trails projects, and areas popular for mountain biking
- Provide access to historical sites
- Provide access to requested functional (commuting) ends such as libraries, shopping, and work locations

Recommendation 1C: The County should adopt any available standards of the Parks and Recreation Department for multi-use trails, sidewalks, bikeways, blueways, etc., develop new standards as needed, and revise local subdivision ordinances and roadway design standards accordingly.

At the present time, multi-use trails are supported in the language of the Comprehensive Plan but are not adequately supported by the detailed regulations that control development within the County. *As a result, there is little practical guidance on how to design trails and bikeways.*

The Fauquier County Connections Plan provides “Best Practices” design standards and guidelines to aid in implementing a high quality countywide trail system (see Appendix B). All recommendations are based on accepted state and national standards developed by the Virginia Department of Transportation (VDOT), American Association of State Highway Transportation Officials (AASHTO) and other sources.

Trails will be installed using a combination of Developer, County, VDOT, and private groups.

The Fauquier County standard as taken from the AASHTO’s guidebook states that under most conditions, a recommended paved width for a two-directional multi-use trail is 10 feet. In addition, all trails *shall* have shoulders with a minimum width of 5 feet. Trails coming from

adjacent private property connecting to the main trail shall be a minimum of 6' wide with a 5' safety buffer on either side. All trails will be constructed of a minimum base of 6" of stone with 2.5 inches of asphalt as recommended in the VDOT Material Specification manual.

Generally, trails adjacent to roadways are not recommended in areas with frequent driveways, side streets, or other trail crossings. The level of danger to the trail user increases with each trail crossing.

The following additional guidelines represent the recommended minimum design standards and support for Fauquier County trails.

1. Multi use trails and approaches should be on flat surfaces with adequate sight distance in each direction.
2. Landscaping should generally be native vegetation that requires minimal maintenance and irrigation.
3. Barriers at trail entrances should be clearly marked with reflectors and should be ADA accessible (minimum 5 feet clearance)
4. Multi-use trail construction should take into account impacts of maintenance and emergency vehicles on shoulders and vertical requirements.
5. Trails will be constructed *outside* of the 5 year flood as established by current FEMA maps.
6. If not covered specifically in this document, the AASHTO guidebook shall be consulted for specific design information.

Fauquier County's Subdivision Ordinance has a mixture of good provisions for pedestrians and bicyclists, as well as a number of factors that have been overlooked and are in need of revision. Town ordinances are generally less prescriptive and are not as strong in their requirements for pedestrian and bicycle facilities.

All subdivision ordinances in the County should be revised as described below. In addition, roadway design standards in the County should incorporate these principles.

▪ **Mixed uses and densities**

More nuanced requirements are needed with respect to mixes of uses and densities, with the goal of providing services in close proximity to residences so that walking and bicycling are viable. Most of the development that occurs in Service Districts is piecemeal (50 acres or less), therefore this will require more "hands on" guidance from local planners to ensure adjacent developments are connected to each other via streets and trails.

Definition of a Multi-Use Trail:

Multi-use trails are separated from motorized vehicular traffic by an open space or barrier and located either within the highway right-of-way (often termed "parallel shared use path") or within an independent right-of-way. Trails may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. In some cases, shared use paths also accommodate equestrians.

Definition of a Sidewalk:

That portion of a highway, road or street specifically constructed for the use of pedestrians on the outside edge of the vehicular travel way. Sidewalks are typically, but not always, curb-separated from the roadway and made of concrete, brick, asphalt or another hard surface materials.

The goal should be to require walkable subdivisions where origins and destinations (including recreation facilities, schools, shopping and community services) are within walking distance - .25 miles - of each other. This level of density and mixed use should be a requirement, rather than an exception.

- **Provision of multi-use trails**

The pedestrian trails section of Fauquier County’s Subdivision Ordinance (FCO) should be updated. This section should address the need for *multi-use trails* (rather than pedestrian trails) in all subdivision developments as deemed necessary by the Parks and Recreation Department, and should require the developer to identify sensitive ecological areas (such as floodplains) that should be protected with greenway easements. Multi-use trails should be built to connect homes with nearby destinations, and should be designed to facilitate convenient access to nearby destinations such as parks, schools, shopping areas, and adjacent subdivisions. These multi-use trails will be evaluated by the Parks and Recreation Department on a case-by-case basis.

Each commercial and residential development should be required to submit a pedestrian and bicycle circulation plan, which should identify main trails and connector trails as well as sidewalks and on-road bikeways. Main trails should be a minimum of 10’ in width and constructed of either asphalt or concrete. Connector trails may be reduced to 8’ in width.¹ (The current ordinance allows for a 4’ wide trail, which is far too narrow). Standard trail cross sections should be provided in the Subdivision Ordinance (Section 17) as well as in the Roadway Design Standards manual.

Finally, it is important that developers who build trails as part of the County’s network meet the standards described herein, and dedicate these multi-use trails to the County for general public access, so that they become a part of the county-wide network rather than only serving the residents of that particular subdivision.

All trails shown on maps accompanying this document will be owned and maintained by Fauquier County. For reasons of liability, connectivity, and proper maintenance assurances these trails are best addressed using this ownership approach.

- **Provision of bicycle facilities (on-road)**

Subdivision ordinances should require 5-foot wide bike lanes (in urban/suburban areas) and 4’ wide paved shoulders (rural roadways)

¹ These widths are necessary for several reasons: 1) they are required by national standards, as well as VDOT standards for shared use trails; 2) because the edges of asphalt trails tend to deteriorate over time, resulting in a narrower trail; and 3) because other communities have found that narrow neighborhood trails create conflicts between users and as a result their utility is greatly diminished.

on both sides of all roadways that exceed 1500 vehicles per day. For roads that are projected to carry higher volumes, bike lane and shoulder widths should be increased (see Appendix B for further details.)

- **Provision of sidewalks**

Current sidewalk requirements in both the Fauquier County and Town of Warrenton ordinances are insufficient and should be strengthened. Currently, county subdivisions with lots over .46 acres are not required to provide sidewalks on local streets - a significant issue since many Service Districts have R-1 zoning. **These ordinances should be revised to require sidewalks on both sides of all roadways built in Service District areas and within Town boundaries, including local streets, collectors and thoroughfares.** This provision is in sync with requirements in other Virginia counties. In addition, the ordinance should require that sidewalks be a minimum of 5' in width.

Further recommendations with regards to sidewalk provisions in County and local ordinances is provided in Appendix C.²

- **Bike parking**

The County should adopt a bike parking ordinance that requires private developers to provide bike parking at destinations. Bike parking ordinances have been adopted by communities throughout the U.S. - and excellent resource for a model bike parking ordinance is the Association of Pedestrian and Bicycle Professionals' *Bicycle Parking Guidelines*, which can be accessed at www.bicyclinginfo.org.

The Parks and Recreation Department should also investigate the possibility of installing bike storage lockers at commuter lots as a revenue-generating feature. Bike lockers provide long term, secure bike parking, and are usually made available through long-term rentals (i.e. 3 to 6 months).



Action 2: Establish and strengthen mechanisms by which open space and greenway lands are preserved and protected in Fauquier County.

Private landowners in Fauquier County should be invited to participate in the greenway program primarily through voluntary measures and incentives, many of which already exist through the Purchase of

² The Community Development Department will be responsible for preparing code revisions and ultimately enforcing many of the sidewalk and on-road bikeway requirements in this Plan.

Development Rights (PDR) program, conservation easements, and agricultural districts.

Rising development pressures on small landowners present a serious threat to preserving greenway lands in the County, because landowners with less than 50 acres of land are not eligible for many of the existing preservation programs. There are some good reasons for this - small parcels usually cost more per acre, making it more cost effective to concentrate on preserving large parcels. In order to protect the greenway network, however, there must be opportunities for landowners of all different sizes to participate.

Recommendation 2A: Provide user-friendly information for citizens and developers, publicize incentives to preserving greenways and open space.

Some landowners fail to participate in land preservation programs because they are not aware of the tax benefits. It can be difficult to navigate through the myriad of programs and requirements to determine which is the best option for a landowner's given situation. To gain increased awareness among local citizens, the County should create a brochure entitled: *Guide to Private Landowner Participation in Fauquier County's Greenway Network*. This brochure should be specific to the programs available for Fauquier County landowners, and should explain eligibility requirements for each program in a clear and easy-to-read format.

This brochure should be made available to land trusts, greenway advocates, and other citizens groups working on greenway projects, as well as through traditional sources within the County. (Note - descriptions for many of these programs already exist; this would consolidate them in one brochure, for ease of access.)

A Note about Liability:
Private landowners who grant an easement for public access across their land are protected from liability by the Virginia Recreational Use Act. (§29.1-509 of the Code of Virginia)

The county should also provide periodic updates to the development community regarding the greenway network. Developers and their engineering consultants should be made aware of changes in the County's review process with regards to protecting greenway lands, as well as the incentives that are available to them.

ACTION 3: Work with school principals that currently prohibit students from walking or bicycling to school to revise these policies in the future, as conditions improve.

There are several Fauquier County school principals who do not feel comfortable allowing students to walk or bicycle to school because of safety issues. Unfortunately, children are also at greater risk of many health issues due to inactive lifestyles, therefore there are concerns that children have more opportunities to get exercise during their daily activities. As the County continues to move toward improving access

around schools for walking and bicycling, it will be important to revisit these policies, and to work with school principals to develop programs that support safer walking and driving behaviors. A good example of this is William C. Taylor Middle School, which has a direct connection to the Warrenton Branch Greenway - students could easily use the trail to safely access school.

Chapter 6 recommends a new Safe Routes to School program in the County. Safe Routes to School programs are beneficial because they provide an impetus to improve walking conditions around schools, help to reduce the financial burden of student busing, provide another way for children to get daily exercise, and reduce traffic volumes during the morning peak hours.

School systems throughout Virginia and the rest of the country are actively implementing Safe Routes to School programs with great success. It is important to note that the Safe Routes to School program does NOT encourage students to walk alone in unsafe locations - it provides a method for improving conditions, and encourages parents to walk with students to school.

ACTION 4: Establish an institutional framework and oversight structure necessary to implement the recommendations of this Plan.

This section addresses the need for continued oversight and coordination to insure successful implementation of this Plan. This Plan serves as a starting point to provide direction for improving walking and bicycling conditions in the region and to encourage local jurisdictions to perform further investigation into opportunities to construct multi-use greenways, bikeways and walkways in their specific localities.

A variety of agencies, boards and committees will each play a role in the oversight of future bicycle, pedestrian and greenway programs and projects. It is important that these bodies provide the appropriate level of oversight and do not overlap in their responsibilities. The responsibilities of each are described below:

- Agency staff (including all plan reviewers) - responsible for reviewing the *details* of all proposed projects, and for enforcing the regulations with regards to bicycle, pedestrian and trail provisions. Also responsible for identifying appropriate issues that should be brought before the BPGAC, Parks Board and Planning Commission.

Agency staff are also responsible for *quality control* of the system, that is, they are responsible for ensuring that multi-use trails are constructed and maintained in compliance with Parks and Recreation Standards. In this respect, they have a

responsibility for inspecting trails that are built by developers for public use.

As the responsibilities of agency staff will be considerable (particularly the Parks and Recreation and Community Development Departments), it is recommended that a staff person be hired to be responsible for the program (see Action 4A below).

- Pedestrian, Bicycle and Greenway Advisory Committee (PBGAC) - responsible for advocating for the implementation of various aspects of the Plan, and for coordinating the activities of individual jurisdictions. This group may be consulted regarding various details of development projects when staff need advice or assistance (see recommendation 4B below).
- Parks and Recreation Board - responsible for more global issues related to achieving the County's vision with regards to recreational facilities, such as locations of future recreation and park facilities, preservation of greenway corridors, and funding strategies for such projects.
- Planning Commission - as an advisory board to the Board of Supervisors, the Planning Commission's responsibilities include providing recommendations to the Board of Supervisors for special exceptions, rezonings, Comprehensive Plan amendments and on other related land development issues. As such, the Planning Commission may request assistance from the BPGAC on occasion regarding important pedestrian and bicycle issues, and will serve to advocate for pedestrian and bicycle facilities as part of its ongoing work. In addition, the Planning Commission will be responsible for implementing many of the code revisions identified in this Plan.

Recommendation 4A: Establish a trail staff person in the Parks and Recreation Department to oversee the planning and design of proposed greenways and trails throughout the County, and to act as an advocate for such facilities during the development process.

To achieve the recommendations of this Plan, much work will need to be done in the future. A staff person should be hired to assume the responsibilities of preparing funding grant proposals, overseeing the work of developers in establishing greenways, and coordinating among the various Service Districts, Towns and adjacent jurisdictions.

More specifically, the Trails Coordinator will be responsible for all aspects of trail development within the County, including (but not limited to) working with homeowners associations and developers on trail issues, reviewing trail design plans submitted by developers, working with VDOT to ensure that future roadways and maintenance

activities account for the proposed trail network, working with other County and local government agencies to ensure connectivity across jurisdictional boundaries, and implementing the education and promotional programs recommended in this Plan.

Recommendation 4B: Establish a county-wide committee responsible for coordinating the implementation of this Plan.

Evidence from around the country shows that successful pedestrian and bicycle programs result from well-organized advocacy and inter-agency support. A Pedestrian, Bicycle and Greenway Advisory Committee (PBGAC) should be appointed by the Parks and Recreation Board and Planning Commission. The purpose of the PBGAC will be to stimulate and coordinate the implementation of this Plan. The PBGAC should be comprised of agency staff, Town representatives, a law enforcement official and citizens who are involved in pedestrian, bicycle and trail issues in the County.

This group should provide guidance and recommendations to the Parks and Recreation Board, the Planning Commission, and local villages when needed. A key goal of this committee in the first year should be to provide assistance and support for revisions to subdivision ordinances, and roadway design standards (per Action 2).

Recommendation 4C: In the future, address planning needs for connections between the Service Districts.

Future revisions to this Plan will be necessary in order to facilitate a more in depth discussion regarding trail connections *between* the Service Districts. The exact nature of these connections (for example, whether they will be made along roadways or along stream corridors) is not known at this time. It will be important in the future to conduct a more detailed planning effort in these locations.

ACTION 5: Pursue additional grant sources and capital funding as necessary to supplement developer-financed trails (including those for wheeled users as well as horseback riders), bikeways, blueways and sidewalks.

Although the majority of the proposed network will be built through the development process, there will be gaps in the network in both the short term and long term that will need special funding in order to complete. It will be important to establish a mechanism by which to build these connections, otherwise the network will remain incomplete. There are a wide variety of grant sources available (see Chapter 7). The County should establish a yearly budget item for multi-use trail and sidewalk construction, in order to provide matching funds for future successful grants, and to complete special projects that are not grant-funded.

ACTION 6: Work with other partners to ensure that the trail network is adequately managed and maintained in the future.

Recommendation 6A: Establish guidelines for trail etiquette that reduce conflicts between users, and enable Fauquier County residents and visitors to share multi-use trails.

Almost all trails in the County will be multi-use, therefore it will be very important to establish a set of guidelines for trail etiquette that reduces conflicts and unsafe behaviors among the wide variety of users who must share the trails. Trail etiquette messages should be condensed into short, easy to read signs that do not require the user to stop and read a long list of rules. This is particularly important on trails that have a high percentage of bicyclists, as well as those shared with horseback riders. The message should be “bikers yield to hikers, and bikers and hikers yield to horses.” Trail user groups such as the Fauquier Trails Coalition and horseback riding clubs should assist with these educational efforts.

Recommendation 6B: Develop a maintenance and management program that ensures that facilities are maintained in good repair, both through routine seasonal maintenance and spot repairs.

Since Fauquier County owns only portions of the trail network and does not manage the roadway system, ensuring good maintenance will require coordination with a variety of other parties. This includes VDOT, developers and property managers, Home Owners Associations (HOAs) and others. VDOT will maintain approved pedestrian and bicycle facilities located within the right-of-way of roadways that are under its operational control, except for snow and ice removal (as per VDOT policy of Dec. 19, 2002).

A first step in developing a maintenance program is to identify what tasks need to be undertaken and who is responsible for these tasks. Responsibility is largely determined by facility ownership. Tasks are largely divided between on-street bikeway maintenance tasks, “off-street” sidewalk and sidepath tasks, and multi-use trail maintenance tasks. Recommended maintenance practices include:

- Sweeping trails, bicycle lanes and paved shoulders regularly to remove debris;
- Repairing trail and roadway surfaces and sidewalks to ensure a continuous facility and smooth surface that is free of cracks, potholes, bumps and other physical problems;
- Careful repair of utility cuts to prevent rough surfaces for cyclists and sidewalk interruptions for pedestrians;
- Cutting back vegetation such as shrubbery, tree limbs and intrusive tree roots to prevent encroachment;

- Maintenance of pedestrian and bicycle signs, striping, and markings, especially replacement of signs that are damaged by vehicle crashes and other incidents;
- Maintenance of drainage facilities including catch basins and drainage grates;
- Snow removal; and
- Signal maintenance.

A maintenance schedule for the trail system is provided in Appendix C.

The NVRPA has a model maintenance and management program for the W&OD Trail, as well as a long history of working with trail support groups to augment the agency's maintenance resources with those of volunteers. Practices and procedures from this model should be studied and applied to future public trails in Fauquier County, and any publicly-owned pathway facilities that are added to the network by VDOT or developers.

The primary action recommended for maintenance and management is that the County identify a lead staff person and establish a system to address both regular and remedial inspection and maintenance of the on-road and off-road pedestrian and bicycle network. This staff person would be responsible for coordinating with trail volunteer groups for tasks that they can assist with. Once a system is established, a "Maintenance Action Request Form" could give citizens an easy means of reporting maintenance concerns on local trails and bikeways.

One method that other jurisdictions have used to maintain greenways is to establish a youth conservation corps that is responsible for performing a number of routine, light maintenance tasks. This can help to reduce the burden of maintenance on County staff, while also providing meaningful volunteer opportunities for local youth.

Conclusion

In conclusion, the network and policy recommendations in this chapter are a critical step in achieving the vision of an interconnected network of greenways, bikeways and sidewalks throughout Fauquier County. The implementation of this network will require partnerships among local jurisdictions, agency staff, and citizens. The physical network, however, is only one aspect of accommodating and encouraging walking and bicycling in Fauquier County. Chapter 6 described a variety of other programs that will be needed in the future to support walking and bicycling.

CHAPTER 6: PROGRAM RECOMMENDATIONS

While the previous chapter focused on physical improvements that are needed to support walking and bicycling in Fauquier County, there are a number of other important issues including enforcement, encouragement/promotion, education and awareness that should be part of a comprehensive program. This chapter sets forward a number of recommendations that will help the County promote and increase the safety of walking and bicycling.

ACTION 7: Implement safety education for pedestrians, bicyclists, equestrians, and blueway enthusiasts of all ages, as well as motorists.

Safety education is needed for all ages in Fauquier County, and should not only address the education needs of pedestrians and bicyclists, but should also address the need to educate motorists to encourage safer behaviors. Adult bicycling education can be achieved through the League of American Bicyclists, which certifies trainers for on-bike training courses. In addition, there are some excellent educational Public Service Announcements available through the Streetsmarts Campaign for the Washington Metro Region (see <http://www.mwcog.org/transportation/activities/planning/safety.asp>) Information developed through this program was federally funded, therefore the materials are in the public domain and may be re-used (with credit to the original sponsors).

Excellent information on blueway safety was developed by the Virginia Department of Game and Inland Fisheries. The online guide found at <http://www.boat-ed.com/va/index.htm> includes information regarding the legal requirements of operating a boat in Virginia, proper distress signals, and a section on canoeing, kayaking and rafting.

A variety of resources are available for horse trail safety information, including a youth safety guide through the American Youth Horse Council. The Virginia Horse Council is an authoritative resource locally on such topics, and should be consulted regarding future equestrian safety efforts.

Pedestrian and bicycle issues can be incorporated into a variety of existing curricula at elementary and middle school levels, as well as in Parks and Recreation Programs. There are a number of existing sources for funding and assistance in integrating pedestrian and bicycle safety education into schools.



Bike Smart, Virginia! is an initiative of the Virginia Department of Health to prevent bicycle-related injuries and fatalities in communities throughout the state. The initiative has several components to educate citizens about bicycle safety and to make safety equipment (such as bicycle helmets) available.

One component, *Bike Smart, Virginia Schools!* is a collaborative project with the Virginia Departments of Education, Health and Motor Vehicles and the non-profit organization, BikeWalk Virginia. The project's goal is to teach children safe biking behavior to reduce injuries and fatalities. This is accomplished through training-the-trainer workshops held around the state. School health and PE teachers receive 2 days of training in methods of teaching bicycle safety and become "Bike Smart Basics" Certified. The six-week course for elementary and middle schools includes on-the bike instruction (including: helmet safety, crash avoidance, bike handling skills, rules of the road etc.) and is taught as part of the school's Health and P.E. curriculum. Trainings are offered throughout the year across the state. Additional information can be found at www.vahealth.org/civp/bike/schools.asp.

A viable source for pedestrian and bicycle safety education funding in Virginia is the Department of Motor Vehicle's Safety Grant. The Virginia DMV accepts grant applications each year in March that support Virginia's primary transportation safety goal of "reducing the number of deaths and serious injuries that result from traffic crashes". Applications must also support specific safety areas that are highlighted each year, and often include pedestrian/bicycle safety. Grant applications are accepted from state agencies, universities, localities and non-profit organizations and the typical funding year is from October 1st through September 30th. Guidelines for the current year's application can be found at www.dmvnow.com/webdoc/pdf/tss10a.pdf

The County should work with the health and P.E. coordinator for Fauquier County Public Schools to conduct additional research into the program and gain the involvement of local schools.

ACTION 8: Initiate a *Safe Routes to School* program in Fauquier County.

Local and national estimates suggest that up to thirty percent of morning peak hour vehicle trips are school bound trips or include dropping students at schools. The environmental, social, health, and safety (not to mention direct costs) of a system that delivers most students to school via school buses and personal automobiles is significant. While increasing the numbers of students that bicycle and walk to school can help mitigate the negative impacts of the current system, safe routes to school must be created before parents and school officials will feel comfortable encouraging students to use them.

Safe Routes to School (SR2S) programs have been implemented successfully in the U.S. for the past decade. Most programs include some combination of engineering, encouragement, and enforcement strategies aimed at making it safe for more children to walk in their communities. This program will be most successful in schools located within the villages and suburban parts of the County, however health-based SR2S programs have also been successfully implemented in rural areas of Virginia by using walking routes on the school campus.



Fauquier County should consider applying for a Federal grant to fund a SR2S pilot program. This grant source provides 100% (no match required) funding for engineering, education, enforcement and encouragement programs within 2 miles of schools that serve Kindergarten through the 8th grade. This pilot program could be based on existing models used in Charlottesville and elsewhere to plan physical improvements (including sidewalk construction and pedestrian crossing improvements) and implement safety education programs (see Chapter 6) at interested schools. The goal would be to expand the SR2S program to other schools over time.

ACTION 9: Conduct programs and events that encourage walking and bicycling for fun, health and fitness, and for transportation.

Community-wide encouragement and advocacy for walking and bicycling can be achieved through events, ongoing programs, and town- or County-sponsored initiatives. An important key to success is having a coordinated approach, a consistent message and focused activities. Suggested activities, coordinated through the MBPAC and the Department of Economic Development, include the following:

Connections Website: the County should develop a website for local trails and bicycling enthusiasts, as well as visitors to the area. The site could include maps of on- and off-road facilities, recommended touring routes that provide access to historic and cultural sites in Fauquier County, resources such as bicycle shops, bike clubs, and a calendar of events. The website should identify locations of bridle trails, as well as canoe trails in Fauquier County. The website should also promote trail user etiquette, as described in the previous chapter.

Employer Health Programs: the County should promote active lifestyle programs among local employers, and should become a model employer in this regard. For example, ongoing programs should encourage County employees to regularly walk, bicycle, canoe, ride horses, etc. to improve cardiovascular health and wellness. Incentives should be

provided to employees who participate. For example, Arlington County provides a \$25/month stipend to employees who walk or bike to work at least 80% of the time. There are many other similar examples of encouragement programs throughout the Commonwealth.

Community Events: the County should work with local volunteer groups and local villages to sponsor events such as community bike rides for children, walk-a-thons and community trail walks, and guided walking and cycling tours for elected officials. The MBPAC should encourage individual localities to organize and participate in annual bike-to-work day activities.

Most people are aware of the environmental benefits of bicycling instead of driving an automobile, yet do not fully realize the health benefits that walking and bicycling provide. This strategy encourages the development of bikeways, walkways and trails to promote physical activity and wellness programs for people of all ages in Fauquier County. The initiative should emphasize the links between walking and bicycling and weight loss, disease prevention and longer lives for all members of the community. Targeted audiences for this outreach effort should include:

- Community-based health improvement partnerships
- Elder care facilities
- Hospitals
- Schools

Specific projects can be targeted based on local needs and ideas, however a key component of each project should be a community outreach and promotion effort that highlights the health benefits of walking and bicycling and gives practical advice about where to walk or bicycle in the community.

ACTION 10: Develop employee commute incentive programs in Fauquier County.

Fauquier County should encourage bicycle commuting by participating in Bike-to-Work Day, and by providing information to employers and employees. A good resource for information on this topic is the *Guide to Bicycle Commuting* developed by the Metropolitan Washington Council of Governments.

Public agencies in Fauquier County should be model employers: providing monetary bike/walk commute incentives, showers and lockers for employees, and “Guaranteed Ride Home” policies for emergencies and inclement weather. One example is Arlington, VA’s alternative commute program: employees who walk or bike to work at least 50% of the days in any given month receive a \$35 per month stipend. The stipend is paid out in a lump sum twice a year.

ACTION 11: Provide training to local agency staff regarding “what to look for” when conducting plan review with respect to trail, bikeway and pedestrian accommodations.

Pedestrian and bicycle design is a new field of study that will require background training for local agency staff who are responsible for development reviews and for coordinating with VDOT on transportation projects. This type of training has been conducted in other Virginia cities and counties, and has been funded by VDOT in the past. It may be possible to partner with VDOT’s Culpeper office to offer this type of training in Fauquier County in the near future.

ACTION 12: Improve enforcement of laws concerning the safe interaction of pedestrians, bicyclists, and motorists in shared environments.

Education should be provided to law enforcement officers who may not be aware of rules of the road and aggressive motor vehicle behavior toward bicyclists and pedestrians. The Maryland Office of Highway Safety for example, organizes safety training events for officers to raise awareness of about rights, rules, and appropriate responses to incidents involving conflicts between motor vehicles, bicycles and pedestrians.

Safety awareness programs can result in significant improvements in motorist behavior at the local level. For example, the Laurel, MD Police Department holds an annual Pedestrian Safety Awareness Week in Laurel’s downtown each year. Each day, they focus on a different theme, culminating in a Safety Saturday event aimed at raising general awareness of pedestrian issues. Weeklong activities include speed trailers on Main Street, targeted enforcement (drivers who do not yield to pedestrians at crosswalks are ticketed), and safety awareness messages.

Bicycle patrol is another strategy for increasing the visibility of bicycling in the region and involving law enforcement more extensively in bicycling issues. Bicycle squad members work with local staff to provide bike and pedestrian safety education through youth groups and schools, as well as simply talking with residents on their beats. The MBPAC should coordinate grants and other resources to establish a bike patrol in the County.

Professional law enforcement can also be supplemented with volunteer and community-based patrols. This approach can be used with great success on multi-use trails, and along walking and biking routes to school.

ACTION 13: Provide for convenient and safe pedestrian and bicycle access to future transit facilities and vehicles.

While Fauquier County's current transit service is limited mainly to shuttle buses and vanpool, a number of transit proposals have been discussed in recent years. In all future transit projects, convenient and safe pedestrian and bicycle access should be a top priority.

Improved pedestrian and bicycle access can significantly extend the reach of the transit system. The County should implement a combined education and marketing program promoting the benefits of biking and walking to transit, in conjunction with improvements to pedestrian and bicycle access to transit facilities. Transit stations, bus stops and park and ride lots should be accessible to pedestrians and bicyclists. Future buses should be equipped with bike racks, and future trains should be designed with areas where bicycles can be brought aboard. More information on bicycle access to transit can be found in the Transit Cooperative Research Program report entitled *Bicycle Access to Transit*.



CHAPTER 7: IMPLEMENTATION PLAN

The establishment of a regional network of multi-use trails and bikeways in Fauquier County will require a partnership among the County, trail advocates, towns and villages, and the state. New greenway trails, multi-use pathways that extend along roadways, and sidewalk projects will need to be coordinated through various funding programs, including VDOT’s Six Year Transportation Improvement Program. Since VDOT’s programmed improvements are a response to requests made by local jurisdictions, it will be necessary for local governments to continue to advance high priority regional bikeway projects, including upgrades to substandard shared-use paths, locations for new trails and on-road bikeways, and bicycle retrofit projects during roadway resurfacing.

Most of the funding sources described below require a local match - up to 20% of the project cost, in some cases (with the exception of the Safe Routes to Schools Program, which is 100% Federal funding). Fortunately, in kind donations of materials, labor, and land can be used as matching funds. Through a creative strategy of volunteer assistance and land donation, other Virginia counties have been able to generate matching funds with very little capital outlay.

It is recommended that Fauquier County establish a source of reserve funds that can be used as matching funds. These funds can be generated through donations from community groups, through the proffer system, and through the capital budget if necessary.

The following is a description of various funding opportunities available through VDOT (information derived from a VDOT brochure entitled *VDOT Funding for Bicycling and Walking Accommodations*).

Rural Transportation Planning Program

<i>Purpose</i>	This program provides funds to planning district commissions to carry out transportation planning for rural areas.
<i>Funding</i>	<ul style="list-style-type: none"> ▪ Federal funds finance 80% of program activities and grants ▪ A match of at least 20% from a planning district commission or locality is required
<i>Eligible projects</i>	<ul style="list-style-type: none"> ▪ Pedestrian and bicycle planning, greenway planning
<i>Eligible applicants</i>	<ul style="list-style-type: none"> ▪ Planning district commissions
<i>Contact</i>	VDOT district offices – www.VirginiaDOT.org

Highway Construction Program

<i>Purpose</i>	This program provides funding for the preliminary engineering, right of way acquisition, and construction of highway projects.
<i>Funding</i>	No local match is needed for projects on primary and secondary system roads. A 2% local match is required for projects on urban system roads
<i>Eligible projects</i>	<ul style="list-style-type: none"> ▪ Pedestrian and bicycle accommodations can be built as part of highway projects ▪ Pedestrian and bicycle accommodations can be built as individual projects, separate from the construction of highways, either on highway or independent right of way

Contact	VDOT district offices – www.VirginiaDOT.org
---------	--

Pedestrian and Bicycle Safety Program

Purpose	This program was developed to implement safety projects addressing pedestrian and bicycle crashes or the potential for such crashes, with evaluations based on risk and applications competing with like projects.
Funding	<ul style="list-style-type: none"> ▪ Up to 90% of a project can be financed with federal funds ▪ A project must have a minimum 10% match
Eligible projects	<ul style="list-style-type: none"> ▪ Construction of on-street facilities and shared use paths ▪ Development of treatments for intersections ▪ Installation of signs and pavement markings
Eligible applicants	<ul style="list-style-type: none"> ▪ State and local agencies may apply to the program
Contact	VDOT Mobility Management Division – HSIProgram@vdot.virginia.gov 804-786-9094

Transportation Enhancement Program

Purpose	This program is an initiative to focus on enhancing the travel experience and fostering the quality of life in American communities
Funding	<ul style="list-style-type: none"> ▪ Up to 80% of a project can be financed with federal funds. A local match of at least 20%, from other public or private sources, is required. ▪ Local matches may be in-kind contributions including tangible property, professional services and volunteer labor ▪ This is a reimbursable program
Eligible projects	<ul style="list-style-type: none"> ▪ Pedestrian and bicycle facilities such as sidewalks, bike lanes and shared use paths ▪ Pedestrian and bicycle safety and educational activities such as classroom projects, safety handouts and directional signage for trails ▪ Preservation of abandoned railway corridors such as the development of a rails-to-trails facility
Eligible applicants	<ul style="list-style-type: none"> ▪ Any local government, state agency, group or individual may apply to the program. All projects need to be formally endorsed by a local jurisdiction or public agency.
Contact	VDOT district offices – www.VirginiaDOT.org Transportation Enhancement Program Staff, VDOT Local Assistance Division

Safe Routes to Schools Program – NEW PROGRAM

Purpose	This program provides funding for engineering, education, enforcement and encouragement projects that are aimed at making it safer and more appealing for children to walk and bicycle to school.
Funding	<ul style="list-style-type: none"> ▪ 100% of the cost of the program can be financed with Federal funds ▪ No match is required. ▪ This is a reimbursable program
Eligible projects	<ul style="list-style-type: none"> ▪ Engineering projects such as traffic calming, sidewalk installation, intersection improvements, warning signage and crosswalks markings, among others ▪ Education programs such as pedestrian and bicycle safety classes, bike rodeos, and motorist education programs ▪ Encouragement programs such as Walking School Buses, Bike Trains, Walk to School Day, and other incentives to encourage children and their parents to walk and bicycle to school.
Eligible applicants	<ul style="list-style-type: none"> ▪ Any local government, state agency, or non-profit may apply to the program.
Contact	To be announced – for more information, see http://safety.fhwa.dot.gov/saferoutes/

Recreation Access Program

<i>Purpose</i>	This program provides bicycle access to public recreational facilities or historic sites operated by a state agency, a locality, or a local authority, either with an access road or on a separate bicycle facility.
<i>Funding</i>	<ul style="list-style-type: none"> ▪ This program uses state funds only. ▪ Up to \$75,000 may be awarded for bicycle access to a facility operated by a state agency. ▪ UP to \$60,000 may be awarded for bicycle access to a facility operated by a locality or local authority, with a \$15,000 match.
<i>Eligible projects</i>	Construction, reconstruction, maintenance, or improvement of bikeways.
<i>Eligible applicants</i>	A governing body of a county, city or town may make an application to this program
<i>Contact</i>	Hugh Adams, 804-786-2744, hugh.adams@vdot.virginia.gov VDOT Local Assistance Division

National Scenic Byways Program

<i>Purpose</i>	This program supports projects to improve the quality and continuity of the traveler's experience on highways designated as National Scenic Byways, All American Roads, or a state scenic byway.
<i>Funding</i>	<ul style="list-style-type: none"> ▪ Up to 80% of a project can be financed with federal funds ▪ A project must have a minimum 20% match ▪ This is a reimbursable program
<i>Eligible projects</i>	<ul style="list-style-type: none"> ▪ Construction of a facility for pedestrian and bicyclists along a scenic byway ▪ Safety improvements to reduce or eliminate the incidence or likelihood of crashes or conflicts with bicyclists and pedestrian
<i>Eligible applicants</i>	Any local government, state agency, group or individual may apply to the program.
<i>Contact</i>	Scenic Byways Program Staff VDOT Local Assistance Division 804-786-2264 h.chenault@vdot.virginia.gov www.bywaysonline.org, "Grants" section

APPENDIX A: FEDERAL TRANSPORTATION POLICIES

Federal transportation policies (through the Intermodal Surface Transportation Efficiency Act of 1990 as well as subsequent transportation bills, including the most recent legislation passed in 2005: The Transportation Equity Act - A Legacy for Users) strongly support the inclusion of pedestrian and bicycle facilities in transportation projects, and have supplied a consistent source of funding for these activities for the past fifteen years.

Section 1202 of the 1998 federal law, the Transportation Equity Act for the 21st Century (TEA-21) states that:

- *"Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State."* (Section 1202(a));
- *"Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction and transportation facilities, except where bicycle and pedestrian use are not permitted."* (Section 1202(a)); and
- *"Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians."* (Section 1202(a))

Federal law, as established in the Transportation Equity Act for the 21st Century (TEA-21), makes the following statements with respect to bridges:

"In any case where a highway bridge deck is being replaced or rehabilitated with Federal financial participation, and bicyclists are permitted on facilities at or near each end of such bridge, and the safe accommodation of bicyclists can be provided at reasonable cost as part of such replacement or rehabilitation, then such bridge shall be so replaced or rehabilitated as to provide such safe accommodations." (23 U.S.C. Section 217)

Policy Guidance

TEA-21 directed the Federal Highway Administration to draft policy guidance that would better define the level of accommodation that was required. In 1999, the Federal Highway Administrator issued the following guidance with regards to pedestrian and bicycle accommodations:

“While these sections stop short of requiring specific bicycle and pedestrian accommodation in every transportation project, Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes. “Due consideration” of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities. In the planning, design, and operation of transportation facilities, bicyclists and pedestrians should be included as a matter of routine, and the decision to not accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.”

In the FHWA’s subsequent Design Guidance issued in 2000 (entitled Accommodating Bicycle and Pedestrian Travel: A Recommended Approach), the following statement is made:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:

- bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.*
- the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.*
- where sparsity of population or other factors indicate an absence of need. For example, the Portland Pedestrian Guide requires “all construction of new public streets” to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.*

2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in States such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

APPENDIX B: FACILITY DESIGN INFORMATION

All new roadways in Fauquier County should be planned and designed as multi-modal facilities, consistent with the new VDOT policy. This section provides design guidelines for incorporating pedestrian and bicycle facilities into transportation and development projects in Fauquier County.

This Appendix includes some general recommendations for facility design, but it is not a design guide. Speed, traffic volume, adjacent land use, intersections, and many other factors must all be considered when constructing a facility. The Parks and Recreation Department should use the following national and state standards in preparing their own standards for facility design:

- Americans with Disabilities Act Accessibility Guidelines (ADAAG) (United States Access Board 2003).
- *Guidelines for the Development of Bicycle Facilities* (Association of American State Highway Transportation Officials (AASHTO) 1999)
- *Guide for the Planning, Design, and Operation of Pedestrian Facilities* (Association of American State Highway Transportation Officials (AASHTO) 2004)
- *Virginia Bicycle Facility Resource Guide* (Virginia Department of Transportation, 2002)
- *Manual on Uniform Traffic Control Devices*, Federal Highway Administration (FHWA) - latest edition

These documents may serve as references for future design projects, however County standards are the prevailing requirements.

Designing Trails for Multiple Users

Multi-Use Trail:

Multi-use trails (also called "shared use paths") are separated from motorized vehicular traffic by an open space or barrier and located either within the highway right-of-way (often termed "parallel shared use path") or within an independent right-of-way. Trails may also be used by pedestrians, skaters, wheelchair users, joggers, hikers, people with baby strollers and a wide variety of other non-motorized users. In some cases, shared use paths also accommodate equestrians.

Path Cross Section

Multi-use trails should be designed with consideration given to the volumes, various speeds and space requirements of different user groups. Generally, multi-use trails should be designed with a minimum cross section of 10 feet with 2 foot shoulders. This will enable the trail to operate as a two way facility. In areas with high volumes of trail users, 12-14 foot widths are recommended. In extremely constrained conditions, or for neighborhood trail connectors, trail width can be reduced to 8', however this is generally only appropriate for short sections of trails, or for trails that are not anticipated to carry high volumes of users.

Trail users generally co-exist on multi-use trails without requiring separate lanes for pedestrian versus bicycle traffic. For trails with extremely high volumes of pedestrians, however, it can be sometimes helpful to provide a separate treadway to minimize conflicts and improve the safety and comfort of the users.

Surface Types

The surface of the trail should typically be of asphalt. In some circumstances it may be appropriate to construct the path with a soft surface where the primary uses are mountain biking, horseback riding or running. Soft surface trails are generally not recommended in areas prone to flooding or where steep grades would cause the erosion of the trail surface. The surface should be designed to withstand the loads transferred by the heaviest maintenance vehicle intended to travel along the pathway.

Accessibility

The Americans with Disabilities Act (ADA) prohibits public entities from designing new facilities or altering existing facilities, including sidewalks and trails, that are not accessible to people with disabilities. Multi-use trails should comply with the guidelines set forth in the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The design for accessibility should also be applied to all connections to the multi-use trail including parking lots, neighborhood connectors, adjoining roadways, and adjoining facilities (rest stops, buildings, restrooms, etc.)

Cross slopes on shared use paths should not exceed 2%. Running grades should be kept to minimum to provide for maximum accessibility. Every effort should be made to ensure running grades are kept within ADA guidelines on shared use paths. In limited circumstances where achieving these grades would be prohibitively expensive or would denigrate a unique natural environment, exceptions can be made to running grade requirements. Making such an exception does eliminate the responsibility to meet ADA guidelines on all other aspects of trail design. The following steps should be taken to mitigate steeper grades in these situations:

- Provide flat landings with benches to enable trail users to stop and rest if necessary
- Provide hand rails on the sides of the trail
- Widen the trail to allow more space for slower users
- Provide an alternative accessible route and use signage to direct people with physical disabilities to the route

Steep downgrades *are not* recommended at roadway intersection approaches. Every effort should be made to keep intersection approaches at or below a 5% slope in order to reduce the possibility of a bicyclist or other wheeled user losing control and crashing into the intersection.

Shoulders

Two-foot wide graded shoulders should be provided along the entire length of the path unless right of way is constrained. The shoulders should typically be of some soft material to serve walkers and runners who prefer soft surfaces. If the trail will serve equestrians, the shoulders should be constructed of a 5' wide soft surface shoulder such as granular stone or dirt. In many cases, however, equestrians prefer a separated

trail within the same corridor to reduce conflicts with other users (see section below on equestrian trail planning and design).

Equestrian Trail Planning and Design:

Equestrian trails are an important component of the proposed trail network in Fauquier County. As such, it is critical that trails that are planned to be shared between horseback riders and other trail users are adequately planned and designed to safely accommodate these multiple users. Below are some general guidelines for planning and designing trails to accommodate equestrian use:

- Equestrian trails are generally 2-25 miles in length, therefore trails that are shorter than 2 miles in length (such as the Warrenton Branch Trail) are unlikely to appeal to equestrians unless they are extended.
- Equestrian trails are generally soft surface trails and are often constructed adjacent to an asphalt trail when multiple users are intended to use the facility.
- Equestrian trails require regular evaluation and significant maintenance because the weight of the horse and rider is channeled through a small hoof, creating a greater impact on the trail tread. The maintenance program should also include the removal of manure.
- Special attention is needed on multi-use trails that incorporate equestrian use to minimize conflicts between users. Horseback riders need education regarding the need to manage their horse during passing events, and trail users need education regarding the proper way to pass a horse while using the trail. Proper trail etiquette can help to reduce or eliminate conflicts on these multi-use trails.
- On longer trails in which equestrian users are anticipated to “trailer-in,” separate access parking and staging areas are needed for people arriving with trailers and horses. Multi-use trails that accommodate horses also need tethering spots, and access to water fountains.
- Adequate and clear signage is needed on multi-use trails that accommodate horses both to indicate areas where horses are allowed and where horses are not allowed.

On-Road Bikeway Types:

Shared Roadways

Shared Roadways are those streets and roads where bicyclists may be adequately served by sharing the travel lanes with motor vehicles. Usually, these are streets with very low traffic volumes and/or low speeds, which do not need special bicycle accommodations in order to be bicycle-friendly. In Fauquier County this includes rural, low volume roadways, as well as residential (local) streets.

Signed-Shared Roadways

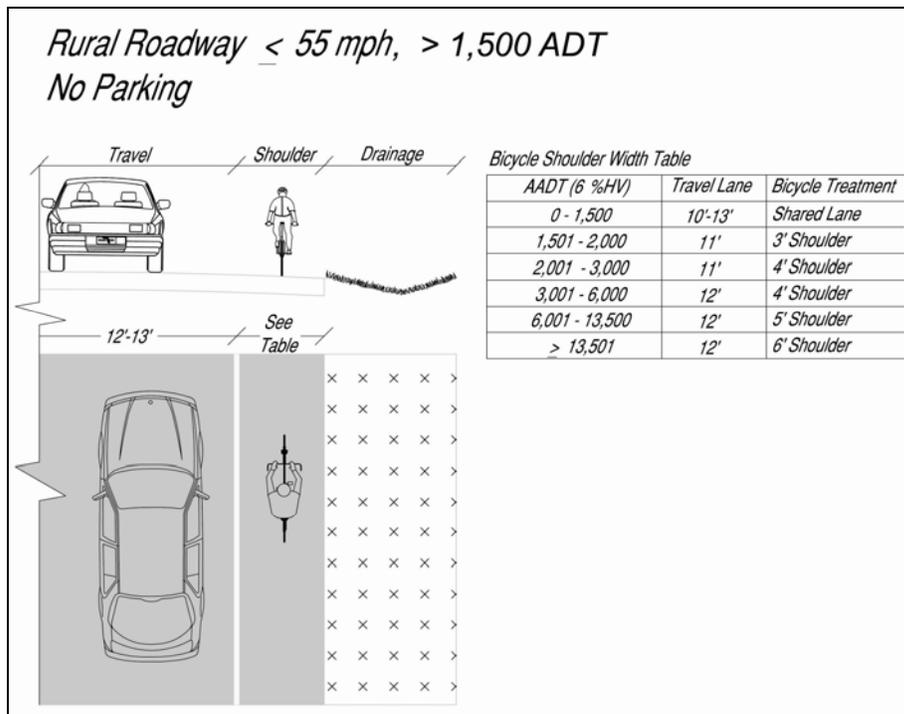
A signed-shared roadway is shared roadway which has been designated by signing as a preferred route for bicycle use. Bike route signs can be posted on key routes to indicate to bicyclists that particular advantages exist to using these routes compared with alternative routes.

Striped/Paved Shoulders

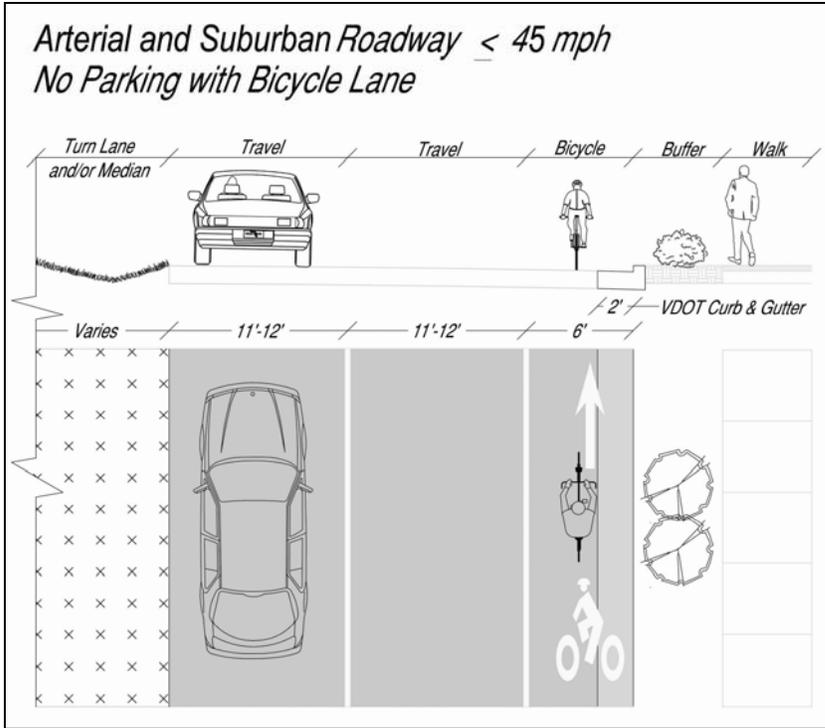
Striped/paved shoulders can provide cyclists with extra riding space to increase their comfort when traveling adjacent to motor vehicle traffic. There is no minimum width for paved shoulders, however a width of at least 4 feet outside the lane edge stripe is preferred. According to the AASHTO Guide for the Development of Bicycle Facilities (1999), "where 4-foot widths cannot be achieved, any additional shoulder width is better than none at all". See Detail 1 for recommended shoulder widths based on traffic volumes.

Bike Lanes

A bike lane is a portion of the roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are always located on both sides of the road (except one way streets), and carry bicyclists in the same direction as adjacent motor vehicle traffic. The minimum width for a bicycle lane is 4 feet on roads without curb and gutter, and 5 feet with a curb and gutter (5' includes the 2' gutter pan). Five- and six-foot bike lanes are typical for collector and arterial roads. See Detail 2 for recommended shoulder widths based on traffic volumes.



Detail 1



Detail 2

Recommended Facilities by Roadway Type

Pedestrian Accommodations:

Sidewalks

Sidewalks are the central ingredient of the pedestrian network. Sidewalk installation should be a routine part of road improvement and new construction projects in urban and suburban areas. Sidewalks should be included on both sides of roadways within Urban and Village Growth Areas and should be a minimum of 5-feet wide. Where a 5-foot minimum width can not be provided, the maximum possible sidewalk width is better than no sidewalk at all. Sidewalks should be separated from the roadway with a landscape buffer and should comply with the most recent ADA Accessibility Guidelines.

Pedestrian Crossing Treatments

Safe and convenient roadway crossings are essential to the Lancaster County pedestrian system. Marked crosswalks are used to designate optimal or preferred locations for pedestrians to cross. They should be marked with high-visibility markings (per the MUTCD) and be at least 6-feet wide³². Marked crosswalks are often more effective when they are complemented by good lighting, “Yield to Pedestrians” bollards, and traffic calming measures, such as median crossing islands and curb extensions. Raised crosswalks serve the dual purpose of slowing traffic and improving pedestrian visibility. Curb ramps are required at all marked and unmarked crosswalks.

APPENDIX C: MAINTENANCE PROGRAM

It is recommended that the County follow the Facility Maintenance Practices and Bikeway Maintenance Schedules below. The first step in developing a maintenance program is to identify what tasks need to be undertaken and who is responsible for each task. The Bikeways Maintenance Schedule (see Table 1) lays out maintenance tasks. The Trail Planner should be responsible for coordinating the execution of the Maintenance Schedule and should be the point of contact for citizens with questions regarding maintenance. Funding for an ongoing maintenance program should be included in the County’s operating budget or Capital Improvements Program.

A Maintenance Action Request Form gives citizens an easy means of reporting maintenance concerns. The form allows citizens to notify County agencies about existing conditions affecting trail use. The requests are submitted to the Trails Planner who then refers the request to the appropriate (VDOT or internal). The forms are should be made available at locations throughout the County and on the County’s web page.

The following description of maintenance practices was adapted from the 1996 Oregon Bicycle and Pedestrian Plan. The descriptions serve as guidelines for staff that are responsible for performing trail maintenance tasks.

**Table 1: Multi-Use Trail Maintenance Schedule
Parks and Recreation Department**

Task	Frequency	Comments
Regular inspection	2 times per year	Includes all off-road bikeways, identify needed repairs of pavement signs, marking, etc.
Trail sweeping	2 times per year	All paved trails
Trail snow removal	As needed	Clear snow from identified priority trails
Trail repairs	As needed	Repair of trails including potholes, cracks or other problems on shared-use paths, and benches, trash cans, and other trail amenities
Trail resurfacing	10-12 years	Applies to all asphalt trails
Debris removal from trails	As needed	Remove debris from trails such as limbs, slit and broken glass
Signs and markings	As needed	Repair or replace signs and markings identified during inspections
Vegetation control	As needed, at least 2 times per year	Trim limbs and shrubs 2 feet back from trail edge, trim grass from trail edges
Litter removal	6 times per year	Could be done with volunteers

**Table 2: Typical Maintenance Costs
Parks and Recreation Department**

Trail Element	Unit		Price Per Unit	Notes
Typical Maintenance Costs (For 1-Mile Paved Trail)				
Sweeping/blowing debris off trail tread (20 x/year)	Mile	*Sweeping/blowing debris off of trail= 10' wide trail x 5280' = 52, 800 ft. / 43,560= 1.21 acres x \$22 avg. hourly wage= \$26.62 per cleaning x 20 cleanings = \$532.00 + 75% for equipment=\$399 + \$532=	\$931.00	Removal of small natural debris such as leaves and twigs from the trail tread surface. Both mechanical and hand equipment is utilized.
Pick-up and removal of trash (20 x/year)	Mile	*Trash removal/pickup from trail and immediate adjacent areas= 10' wide trail x 5280' = 52, 800 ft. / 43,560= 1.21 acres x \$22 avg. hourly wage= \$26.62 per cleaning x 20 pickups/removals = \$532.00 + 75% for equipment=\$399 + \$532=	\$931.00	Removal of trash from department-owned receptacles; pick up/disposal of any trash or debris from trail environs.
Weed Control and Vegetation Management (10 x/year)	Mile	Weedtrimming 2000' x.01 =\$20.00x 30 trimmings = \$600	\$600.00	Vegetation control rather than mowing. Includes trimming, cutting and pruning of weeds, vines, bushes and trees. Also includes spraying.
Mowing of grass safety zone on either side of trail (30 x/year)	Mile	Mowing 5' shoulders on each side of trail= 10' x 5280' = 52, 800 ft. / 43,560= 1.21 acres x \$20 per mowing= \$24.20 per mowed mile x 30 mowings = \$726.00	\$726.00	Mowing of grass, with riding or walk behind equipment. Widths vary by site.
Minor repairs to trail amenities	Mile	1.21 acres of trail area+/- in mile x \$22 avg. hourly wage=\$26.62 x 118 staff maintenance labor hours per year=\$3141.00 + 75% for equipment & supplies=	\$5,497.00	Includes minor erosion issues, painting, amenity installation, vandalism, etc...
Asphalt Resurfacing Deprecation Account	Mile	\$65,000 to resurface 1 mile of trail/15 year deprecation= \$4,000 deprecation cost per mile	\$4,000	Includes surface prep, may include milling and 2.5 inches of new asphalt.
Total Maintenance Cost for a mile of paved trail	Mile		\$12,685	

*NRPA Maintenance Labor Standard=118 staff hours per acre per year. Per acre maintenance cost= average hourly wage (\$22/hrFCPRD)+ 75% for equipment and supplies

APPENDIX D: RECOMMENDATIONS FOR SIDEWALK ORDINANCES

The recommendations below apply specifically to the Fauquier County Subdivision Ordinance, however the recommendations can also be applied to Town ordinances as appropriate.

- **Sidewalk width**

The standard width of sidewalks detached from the curb should be changed from 4 feet to 5 feet. This additional foot in width is very important, as it enables two people to walk side by side, which is not possible on 4-foot wide sidewalks. Many other jurisdictions have increased their minimum sidewalk width to 5'. In addition, new rules that will be issued by the U.S. Access Board in the near future will require that 4' sidewalks provide a 5' passing area (a wider area where two wheelchairs can pass) every 200'. Additional sidewalk width is particularly important for locations with higher volumes of pedestrian activity, such as near schools, shopping centers, parks, and other pedestrian attractors. In these locations, it would be beneficial to require 6-foot wide sidewalks.

The current requirements for sidewalk cross slopes in several standards drawings in Section 17 (FCSO) do not meet the requirements of the Americans with Disabilities Act (ADA). The cross slope standards in cross sections 1B, 2B, 3B, and 4B allow a 1":1' (8%) cross slope. ADA allows no more than a 1":48" cross slope (2%). These cross sections should be revised as soon as possible to meet federal requirements.

- **Sidewalk setback from the street**

It is recommended that the cross sections in Section 17 be reviewed with respect to the required setback between the sidewalk and the street. The current amount of sidewalk separation required for local streets and local collectors is 4.5 feet, which is sufficient. The current amount of separation required for major thoroughfares is 9 feet, which is also sufficient. However the current amount of separation required for major collectors is only 1.5 feet - which should be increased to a minimum of 7 feet.

- **Roadway width**

In general, the geometric design specifications (Section 17 of FCSO) should be reviewed to ensure that local and collector streets are not built excessively wide, as has been the practice in the past. Wide streets have resulted in excessive speeds on a number of Fauquier County roadways - more appropriate widths will help to traffic calm local and collector streets.

- **Driveway design**
The Standard Driveway Entrance detail in Section 17 should clarify that the driveway apron (sloped area) must not extend through the sidewalk area of the driveway, which must be maintained at a maximum 2% cross slope. This is required by the ADA in order to maintain the accessibility of driveway entrances. In addition, the concrete sidewalk should be extended across driveway cuts to maintain the continuity of the sidewalk and reinforce to the driver that he/she must yield to pedestrians at driveways (which is required by law).
- **Curb design**
“Rolled” or sloped curbs are not currently permitted in the FCSO, and should not be permitted in Fauquier County in the future. Rolled curbs are angled curbs that are often preferred by developers because they do not require a driveway cut and thus reduce development costs. However they enable drivers to park on the sidewalk, and otherwise degrade the aesthetic qualities of residential streets.
- **Street trees**
Street trees should be required between the sidewalk and the street along all new roadways. Street trees help to reduce motor vehicle speeds, and also greatly improve pedestrians’ feeling of comfort and safety in the roadway environment. Large shade trees such as Sycamore, Elm and Japanese Zelkova are preferred over medium and small trees (such as Bradford Pear) that do not offer as much shade. Street trees should typically be placed no closer than 30 feet on center, and no greater than 60 feet on center, depending on the species of tree. In locations with no buffer strip, consideration can be given to providing tree planting behind the sidewalk, which may improve aesthetic conditions and provide shade, but will not improve pedestrians’ sense of safety in the roadway environment.

For narrow landscape buffers less than 5 feet wide, care should be taken to use shade tree species that can survive in a narrower space and have less invasive root systems, such as varieties of Chinese Pistache and Maple trees.