

# Town of Appomattox Pedestrian and Bicycle Plan



Prepared by Virginia's Region 2000 Local Government Council  
May 2009

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## Acknowledgments

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## Chapter 1: Introduction

The Town of Appomattox, with the location of schools, public and private services, and shopping within its borders, is the primary service center to Appomattox County residents. Further, within and just outside the Town's borders is the Appomattox Court House National Historical Park, a vital national historic site and the most visited paid destination in the region, and considerable residential, commercial, and recreational development within Appomattox County. This study provides an overview and recommendations for improving pedestrian and bicycle connections between community resources and highlight land use, transportation, and development opportunities to incorporate pedestrian access as an integral Appomattox Town standard and community service amenity.

Funding for this alternative transportation project was provided by the Virginia Department of Transportation through a \$19,000.00 awarded grant from the Multimodal Planning Grant Program, the Town of Appomattox, and technical assistance from the Virginia's Region 2000 Local Government Council. The Multimodal Planning Grant Program is a program provided through the Virginia Department of Transportation Commonwealth's Multimodal Planning Office. Guidance for the development of this plan was provided by the Appomattox Pedestrian Steering Committee, comprised on Town of Appomattox staff, citizens, and policy makers, and representatives from the Virginia Department of Transportation.

### A. Background and Purpose

In May 2005 the Appomattox County House National Historical Park, with assistance from the Conservation Fund and in partnership with the Town and County of Appomattox, held the Appomattox Community Vision Workshop. The workshop was held to consider the opportunities and roles the surrounding community could play in promoting the mission of the National Park to "promote, preserve, and protect parks and other areas for the enjoyment, education, and inspiration of current and future generations" and to see the role the National Park could play in creating economic benefit for the surrounding community. During this time period, the Conservation Fund was partnering with a number of National Parks in close proximity to communities to develop "gateway community" plans. The workshop, attended by 43 community residents, resulted in the opinion that developing a pedestrian network, that would include trails, sidewalks, and bike lanes, that would connect key resources in the community would be the most appropriate, effective, and achievable method to achieve the economic and historic benefits desired by all of the participating partners.

In response to the meeting, a committee was formed to initiate a process to bring to fruition the vision of connecting community resources, enhancing the quality of life, and creating economic development opportunities for the Appomattox community. The task of the formed Appomattox Heritage and Recreational Trail Planning Team, AHRTPT, was to guide the process to develop the connection vision. The AHRTPT applied for and received technical assistance from the National Park Service Rivers and Trail Program. The result of an approximate eighteen month vision process was the Appomattox Heritage and Recreational Trail Plan – A Vision of Connectivity.



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The Appomattox Heritage and Recreational Trail Plan – A Vision of Connectivity provided the benefits, justification, and framework for developing alternative transportation connection corridors within Appomattox. The plan ultimately recommended five activities to bring the connection vision to a reality: provide program staffing; establish program funding; develop a trail master plan; continue to support the AHRTPT; and develop a Town of Appomattox Sidewalk Study.

Since the development of the planning document, the Town and County of Appomattox and the Appomattox Court House National Historical Park have worked together to put into action the five plan recommendations. This Town of Appomattox Pedestrian and Bicycle Plan represent the completion of Action Item 5 from the Appomattox Heritage and Recreational Trail Plan – A Vision of Connectivity.

This study has been developed for the purpose of improving and expanding opportunities for residents and visitors to safely and effectively access the many community resources with and just outside the Town of Appomattox by walking or bicycling. It is intended that this study in incorporated as an integral component of the Town of Appomattox Comprehensive Plan and a referenced planning document for Appomattox County as these partners work together to implement the long term connection vision originally articulated in the May 2005 Community Vision Workshop.

## **B. Project Vision and Goals**

The Town of Appomattox Pedestrian and Bicycle Plan has been developed to guide the development of pedestrian and bicycle facilities that will encourage Town and County citizens to alternative transportation modes to access key resource within the Town and adjoining county resources.

The following goals have been designed for the purpose of achieving the vision for improving and promoting pedestrian connections to key destinations within Town and to residential growth areas and cultural destinations beyond the Town borders.

- Create a safe pedestrian network the encourages walking and bicycling as a viable transportation option;
- Develop alternative pedestrian facilities that meet the needs of all user types;
- Establish a process to prioritize pedestrian improvements;
- Create pedestrian improvement recommendations that correspond to the need and problem being addressed;
- Encourage the health and well being of all age populations within the community by offering healthy lifestyle opportunities associated with walking and biking;
- Coordinate the development of an alternative transportation system that combines to create the greater Appomattox Heritage and Recreational Trail which highlights the cultural, historical, and natural resources of Appomattox;
- Encourage quality of life and economic benefit to the Town.



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### **C. Planning Process**

This Appomattox Pedestrian Plan was developed with public and area stakeholder involvement throughout the planning and plan development process. The project was provided primary oversight and guidance by the Appomattox Pedestrian Planning Committee (APPC). The APPC was comprised of Town of Appomattox officials, staff, and citizens, and representatives from the Virginia Department of Transportation. The APPC met throughout plan development to guide public outreach, review obtained data, formulate project direction and community feedback, and directed Plan development.

The APPC gathered citizen input through a number of methods. Two public meetings were held during the planning process. The first meeting, held on October 7, 2008, provided an overview of current pedestrian conditions, allowed participants to provide input on necessary upgrades through written format and direct input on maps, provided an overview of the Virginia Safe Routes to School Program, and summarized initial findings from administered student/parent surveys taken through the public schools. On May 11, 2009 a second community meeting was held in conjunction with the Town Council meeting to present to the community and solicit feedback on the proposed pedestrian system recommendations, prioritization of improvements, and suggested funding opportunities. Further, the APPC oversaw the development of a Safe Routes to School initiative that included the distribution of surveys to parents of students attending the Appomattox County Elementary and Middle Schools.

### **D. Plan Overview**

The Town of Appomattox Pedestrian and Bicycle Plan is prepared to guide the development of a pedestrian and bicycle network in the Town. Chapter 1 provides the general background and project goals. Chapter 2 provides a general overview of bicycle and pedestrian facility types and highlights some of the challenges and considerations for improving and establishing pedestrian linkages. Chapter 3 outlines existing local and regional programs, planning initiatives, and physical conditions currently within the Town. Recommendations for pedestrian and bicycle facility improvements and development, along with the policy and program activities that can provide implementation support are presented in Chapter 4. A process to implement Plan recommendations, along with funding opportunities that can be combined to create a long-term comprehensive alternative transportation system within the Town is found in Chapter 5.



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## **Chapter 2: Pedestrians and Cyclist as Transportation Users**

The purpose and goal of the transportation system is to provide the public a safe and effective transportation network that allows access to desired destinations. An effective system provides multiple transportation options to meet the needs of multiple users. The method an individual chooses to travel from one destination to another depends on many factors including, physical limitations, socioeconomic situation, proximity to desired destination, and quality of the transportation infrastructure.

No matter what type of transportation mode utilized, be it by car, bus, motorized scooter, or bicycle every mode involves being a pedestrian at some point with travel from one location to another. Further, every person is a pedestrian, even those who may utilize wheelchairs or other mobility assistance device.

Walking is the most basic travel mode for a community and a fundamental component of an efficient network. A pedestrian and bicycle network ensures that independent of access to all residents regardless of age, physical constraints, and income to community destinations. Further, participating in walking and bicycling as a means of transportation has been shown to positively enhance physical and mental health on residents and by having an effective alternative transportation network have positive impact on a community's quality of life, reduce road congestion on roadways, and strengthen communities through increased physical contact with neighbors.

### **A. Essential Components of the Pedestrian and Bicycle Network**

A well designed and executed alternative transportation network is comprised of many elements that combine to ensure a safe, efficient, and pleasant walking and bicycling experience for residents to reach desired destinations. A pedestrian and/or bicyclist must feel safe in order to utilize a pedestrian or cycling network. They must have a safe place to walk or ride that does not pose too many physical barriers, for pedestrians provides protection and separation from motorists, a clear understanding of where they can walk or bike, and lastly a continuous route to reach their destination.

Pedestrian and bicycle facilities must be designed and constructed to meet the different physical and site characteristics and must consider multiple user types and comfort levels. Much information on the design specifications for walkways, crossing, signage, bike lanes, wide shoulders, and other components of an alternative transportation system is available. Specific pedestrian and bicycle facility design is determined by State and local standards most of which are based on design and construction standards set by the American Association of State Highway and Transportation Officials, AASHTO, and the Manual on Uniform Traffic Control Devices, MUTCD.

A general overview of the pedestrian and bicycle network components that are necessary to create a comprehensive and connected alternative transportation system are presented below. The Town of Appomattox should look for opportunities to utilize all of these elements in various locations, throughout the Town. Some additional elements, such as public transportation and transit stops



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are vital system components in larger urbanized areas but are not currently transportation options within Appomattox.

**Sidewalks and Walkways** – Sidewalks and walkways serve as the skeleton by which all other pedestrian components are accessed by pedestrians. Sidewalks are the actual space that pedestrians use to move from one location to another. Sidewalks should be constructed according to widths designated in the AASHTO or local guidelines and ADA guidelines should be followed when constructing all sidewalk elements, including curb ramps and street crossings.

**Pedestrian Crossings** – Defined as “any portion of a roadway at an intersection or elsewhere distinctly indicated for pedestrian crossing by lines or other markings on a road surface” by the American Planning Association. Pedestrian crossings represent obvious potential conflict between pedestrian and the vehicular traveler and must be designed according to the number and density of pedestrian and vehicular use. Further, consistency in position within an intersection, color, marking pattern, and other design features throughout a locality or designated area is important to ensuring recognition and awareness of pending pedestrians by motorist.

**Signage**- Signs are a key component to a well designed and safe alternative transportation system. In general signage within the pedestrian and cycling transportation network is used to alert motorist of pedestrian and bicycling activity or to direct pedestrians or cyclist movement towards designated areas, such as crosswalks or marked on-road corridors. While signage is vital to ensuring safety to pedestrians, cyclist, and motorists it is important not to overuse signage to a point that it is ignored by motorist or that it provides a false sense of safety or awareness.

**Pedestrian Signals** – Similar to signs, electronic signals are primarily utilized for the purpose of warning or permitting safe crossing for pedestrians. These electronic devices, controlled through a number of manual or timed formats, are employed primarily at longer crossing distances or higher volume roads. Sight distance and advanced warning are often also needed for these devices. At multiple lane crossings, pedestrian signals can also be combined with pedestrian refuges, raised medians, and curb cuts.

**Bicycle Accommodations** – Bicycle accommodations represent any on-road or off-road facility that provides a smooth, consistent surface, and safe condition for a bicyclist given the road motorist volume and allowable speed. Based on road conditions, bicycle accommodations represent specifically designed standards by which signage and recognition for cyclist is permissible and desired. On road bicycle accommodations range from basic signage to marked routes designed exclusively for bicycle use. Details on the various types of bicycle accommodations are later in this Chapter. It should be noted that every road, except for specific limited access roadways where bicycles are prohibited, can be used as bicycles are accepted and expected modes of transportation.

## **B. User Types**

Potential users of the pedestrian and bicycle network are represented by a diverse range of specific needs, physical characteristics, comfort and skill level. While the primary difference within the users along a pedestrian network relates to mobility and age, which has impact on such



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elements as signal timing at crosswalks, visual clearance for motorist, and surface quality, there are additional factors that determine specific cyclist characteristics and system needs.

Bicyclists are generally defined by a three-category rating system that is used to determine the overall comfort and ability level of the cyclist. The rating system, derived from the American Association of State Highway and Transportation Officials (AASHTO), for each of the three user types is defined as:

- Group A – Advanced bicyclist are those cyclist who are comfortable riding a bicycle under most traffic conditions. These cyclists have a high comfort and expertise level. They operate their bicycles as transportation vehicles, tend to ride for convenience and speed, desire convenient and direct routes to destinations, and are generally comfortable on most roads riding with courteous and alert vehicular traffic.
- Group B –Basic bicyclist who are casual riders, young adults with limited experience, or teenage riders, that do not have the same level of confidence or comfort to operate in all traffic conditions as Group A cyclist might. These cyclists tend to look for lower vehicular traffic volume and speed routes and specialized bicycle facilities.
- Group A – Children and young teens riders whose roadway and facility use is generally monitored by an adult. This group often moves more slowly and less directly than other groups, requires attentive traffic conditions, and where possible, should use off-road, specialized facilities to ensure safety.

### C. Facility Types

The following presents a description and use consideration for the various pedestrian and bicycle accommodations recommended within the Amherst Pedestrian and Bicycle Plan. The following information is based on facility descriptions and visual examples presented in the AASTO *Guide for the Development of Bicycle Facilities*, VDOT *Virginia Bicycle Facility Resource Guide*, and the FHWA *Manual of Uniform Traffic Control Devices* (MUTCD).

#### Shared Roadway

Shared roadways are those streets and roads that are used by both motorist and cyclist sharing the same travel lane. These streets are usually along corridors with low traffic volume or lower traffic speeds and as such do not require special accommodation. Streets designed with wide outside lanes (13 to 14 feet) may also be considered shared roadways. By providing the outside lane width, there can be increased comfort for cyclist. One aspect that should be considered when utilizing a wide shoulder, the increased width can potentially also encourage motorist to drive at higher speeds.





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### Shared Roadway with Signage or Shared Lane Marking or “Sharrow”

Visibility to both motorist and cyclist that sharing of the roadway is expected can be enhanced through the use of special signage or pavement markings or Sharrows. Bicycle signage or Sharrows provide increased visibility and awareness for motorist to be aware of the likelihood of cyclist along the route. The use of signage or shared lane markings also serve to guide cyclist along designated bicycle routes.



### Share the Road Signage



### Paved Shoulders

Improvement, through additional width, along the shoulder portion of the road can provide an effective share the road bicycle accommodation. In order to serve as a safe accommodation for cyclist however, they need to be smooth, well-maintained, and consist of a uniform surface. A shoulder width of 4 feet is a recommended in most cases to provide cyclist comfort. There are however, certain instances where additional width may be advised:

- steep climbing slope – cyclist may need more width as they need additional width to move their bikes when traveling up hill);
- high bike usage is expected (along a primary route);
- motor vehicle speeds expected above 50 mph;
- where there is an anticipated high volume of trucks, buses, or other commercial vehicles.





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It should be noted that while a 4 foot shoulder is recommended, any additional shoulder width can provide for bicycle accommodation as there is no design standard. Therefore, any additional width that can be provided will benefit a cyclist. As these types of facilities are also share the road accommodations. Signage is also advised.

### Bicycle Lane

A bicycle lane is a portion of the roadway that has is designated through striping, signing and pavement markings for the preferential or exclusive use of bicycles. Bicycle lanes should be located on both sides of the road (except along one way streets) and are intended to carry cyclist in the same direction as car travel. Bike lanes are established along roads where there is anticipated significant bicycle demand. The standard width for a bicycle lane is 5 feet however they can be designed to a minimum of 4 feet. The Virginia Bicycle Facility Resource Guide recommends the following bike lane minimum widths to meet specific road conditions:



- 4 foot minimum on roadways with gutter pan and curb;
- 5 foot minimum where adjacent to barrier curb or other solid side obstruction;
- 5 foot minimum when adjacent to on-street parking; and
- 6 foot where substantial truck traffic is present or where motor speeds exceed 50 mph.

### Shared –Use Paths

Shared-use paths, generally speaking, are off-road corridor separated from the road system by an open space or barrier. They are generally designed for multiple users which include pedestrians, cyclists, skaters, wheelchair users, joggers, and other non-motorist users. Shared use paths should be designed for a minimum of 10 feet of width and constructed of a uniform and compactable surface that meets the specific surface needs of multiple users.





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### Sidewalks

Sidewalks represent the backbone of any pedestrian system. They should be designed to provide appropriate width, surface, separation from motor vehicles. Further, it is ideal to provide a width that allows two adults to walk side-by-side, generally considered to be 5 feet. To meet ADA requirements, a sidewalk should provide, at a minimum a width of 5 feet is required at every 200 feet of length to provide passage width.

### Curb Extensions

Curb extensions are physical extensions of a sidewalk or island that increase visibility of pedestrians by motorist and shorten the pedestrian crossing distance and thus motorist contact zone. Curb extensions, through their visual nature, often serve to slow motorist speed thus presenting an additional safety feature for pedestrians. Curb extensions are appropriate crossing locations along area with on-street parking. They can also include visual and physical amenities such as trees or small plants. These additional features also can serve to slow traffic and present visual cues to be alert for pedestrians.



## **D. Obstacles for Pedestrians and Bicyclists**

### Pedestrian Obstacles

While walking is the most basic form of transportation, there are often multiple obstacles that make utilizing the pedestrian system unsafe or too uncomfortable to make it a viable transportation option. Further, for those residents who rely on the pedestrian network exclusively, are often forced to walk along dangerous roads, walk along uneven surfaces, and navigate among the motoring traffic that does not anticipate their presence. The following provides a summation of the types of conditions and obstacles often faced by pedestrians as they navigate within a community. Understanding and recognizing these issues that can cause safety concerns and discomfort in utilizing the pedestrian network is important in developing strategies to eliminate current hazards, educate the motoring public to the needs of pedestrians, and ultimately energize a community to recognizing the value in utilizing the system and reducing the use of cars. Common problems include:



1. No place to walk – lack of sidewalks, paths, or trails connections to schools, transit stops and stations, parks, shopping, and places of worship.

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2. Poor surfaces – surfaces that are broken, uneven, or covered in weeds or obstacles.

3. Blocked pathways – Existing sidewalks blocked by barriers such as cars, trash, vegetation, utility poles, signs, etc.



4. Difficult street crossings – Long distances that can not comfortably be crossed by all residents in a comfortable period and cause long exposure to vehicles, lack of curb ramps, or signed walkways



5. Drivers not adhering to the pedestrian network



### Obstacles for Cyclist

Bicycle use on roads is an appropriate, expected, and legal transportation mode. The only exception is in specific locations where bicycle use is stated as illegal, these locations are in general along high-speed, limited-access highways. While almost any road may be used by cyclist for transportation purposes, there are a number of key obstacles that limit comfortable transportation use by most cyclist. Most of these obstacles are related to safety and the vulnerability that cyclist face by traveling on the same grade surface as motorized vehicles.



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Below is an overview of the more common obstacles faced by cyclist when traveling along the road system. Addressing solutions to elevate these conditions is vital to the creation of an atmosphere that supports a safe and efficient bicycle transportation network. The most common obstacles faced by cyclist include:

- Not enough separation from motorized vehicles/effective width available for cyclist;
- Speed of traffic along road;
- Volume of vehicles along the road;
- Surface conditions of the pavement along the road;
- Existence of parking along the road; and
- Amount of large vehicles/trucks that travel along the road.

The above noted issues and the system to elevate these conflicts, represent the need to implement specific physical solutions to create safe, comfortable, and a usable bicycling network. They do not address what is considered by many cyclists to be an additional safety issue that impacts both cyclist and motorist which is general education and understanding of road cycling as a transportation option. Education is needed for both cyclist and motorist to ensure that road conflicts are eliminated and that all a traveling parties are able to safely reach their destinations.

### **E. Determining Facility Options**

There are many conditions that must be factored when determining which specific pedestrian or bicycle facility type solutions that should be employed to create the safe and effective connection vision envisioned by the Appomattox community. While determination of facility type solutions is beyond the scope of this Plan, the following presents the methodology that is utilized by transportation specialist in establishing facility recommendations.

#### Bicycle Level of Service and Bicycle Compatibility Index

A series of evaluation measures have been developed by transportation specialist to assist in determining cyclist comfort along specific conditions and methods to evaluate changes that would enhance comfort and safety. The two mathematical methods utilized are the Bicycle Level of Service (BLOS) and Bicycle Compatibility Index (BCI). BLOS represents an evaluation of physical features which specifically affect bicycling – such as road width, speed, etc. BCI defines the comfort or experience of a cyclist based on perception of comfort based on road physical features. Both BCI and BLOS utilize a rating system from A to F, where A represents the highest level descending to F. More information on BLOS and BCI equations and use is available through the Federal Highway Administration website provided in **Appendix D**.

While facility determination is beyond this Plan, the Town should participate and provide input into the pending update of the Region 2000 Bicycle Plan. It is fully anticipated that the recommendations presented within the plan will be evaluated to the following standard during the update of the Region 2000 Bicycle Plan. Once completed, findings will be incorporated with local and regional planning documents.





## Chapter 3: Existing Conditions

This section of the Town of Appomattox Pedestrian and Bicycle Plan examines the current physical features, policies, and plans that support the planning and development of an alternative transportation network within the Town and adjacent county areas. Presented are physical characteristics of the existing road and sidewalk conditions as provided and developed through VDOT. In addition a visual inventory of existing conditions was conducted by Virginia's Region 200 Local Government Staff and members of the APPC to identify pedestrian deficiencies within the Town. In addition, area citizens provided comment on maps provided at a community meeting held in October, 2008.

Map 3.1 provides a summation of the current conditions presented and highlights key community destinations.

### A. Current Facilities

#### Road Network

The specific characteristic along and adjacent to the road system are vital in development of the pedestrian and bicycle network. The majority of the pedestrian and bicycle network is adjacent to or along the road network and therefore road characteristics, such as the specific geometries, speed, vehicle volume, etc. is vital information in system recommendations and design.

A current inventory of roads as provided by VDOT which includes primary roadway information is provided in **Appendix A**.

#### Pedestrian Network

Within the Town of Appomattox, as is the case with many town centers, there is a fairly comprehensive sidewalk network within the Town's central core. Further, the Town has provided leadership in expanding pedestrian access in recent years by constructing a number of new sidewalks, incorporating a unified design and width standards, and in partnering with Appomattox County and Appomattox Court House National Historical Park in development of a trail loop system vision plan to connect community resources. While these efforts are very important the Town still lacks a comprehensive pedestrian plan that identifies and priorities needs. Despite recent sidewalk upgrades there are still a number of areas with inadequate sidewalk conditions, which include uneven surfaces, narrow widths, no separation from the street grade to provide separation from vehicles, and poor transition zones. Further, except for the Main Street area, there are very few marked crosswalks within the Town that provide clear visual cues for pedestrians and motorist to be aware of pedestrians.



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#### *Unmarked or Signaled Intersections at Primary Corridors*

Within the Town there are a number of key intersections along the primary corridors of Confederate, Church, Ferguson, and Virginia Avenue that lack marked or signaled pedestrian crossings. In a number of instances, such as along Confederate, a pedestrian must cross multiple lanes and there is no visual cue to remind motorists and direct pedestrians for safe crossing.



Intersection of Court, Confederate, and James Streets



Intersection of Confederate Blvd. and Church St.



Intersection of Court St. and Ferguson St.

#### *Old Sidewalks that are narrow, crumbling, and do not provide safe separation from motorists*

There are a number of areas within the Town that are served by sidewalks, however, these sidewalks are very narrow, thus do not provide comfortable passage and do not allow for two adults, or an adult and child to walk side by side.



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A number of the Town's older sidewalks are developed almost at the same grade as the road surface; this lack of grade separation from the street does not create safe pedestrian separation from motorists.



Sidewalk along Church St.

*Lack of sidewalks for pedestrians to reach community locations.*

The Town continues to lack sidewalks that connect residential areas to community resources.



Lee Grant Ave. in the direction towards Dogwood St.



Patricia Anne Lane. This road provides a connection to the residential areas along Patterson St.

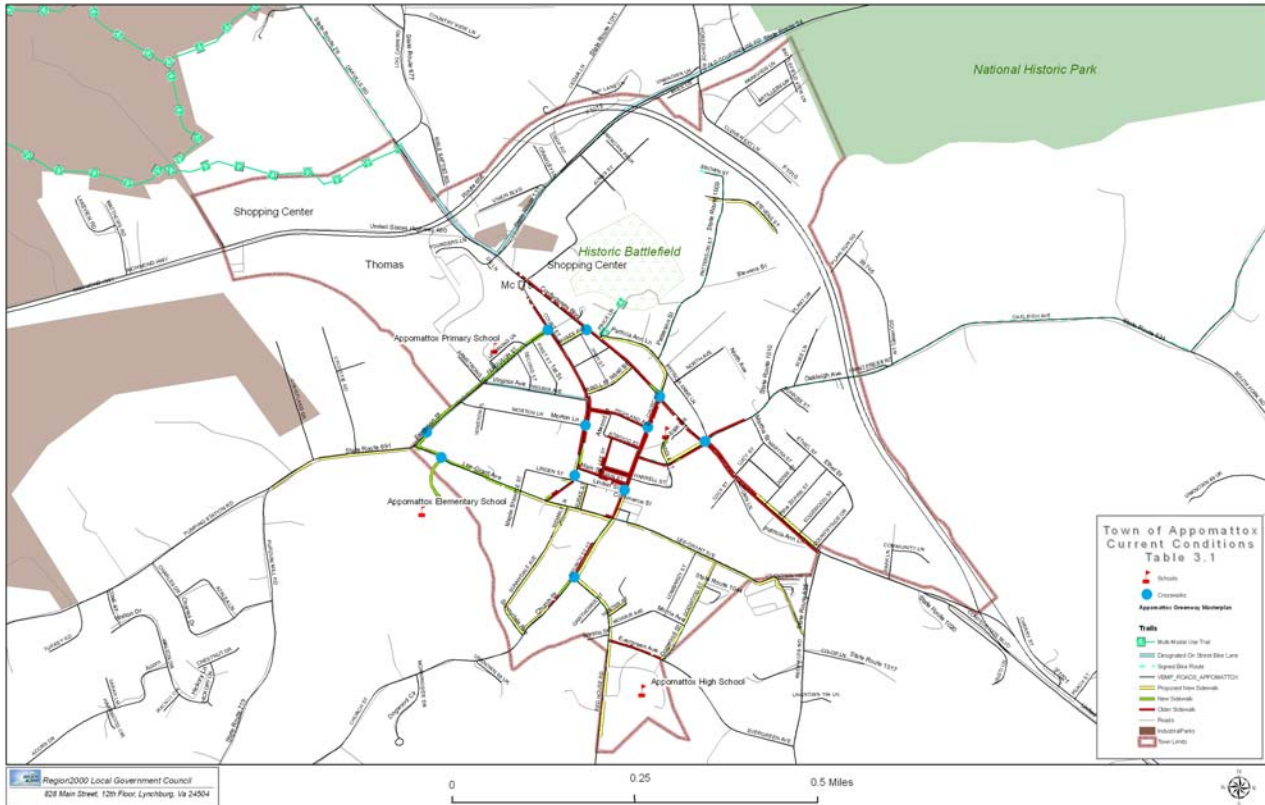
### Bicycling Network

Currently there are no designated bicycle accommodations within the Town of Appomattox. There are, however, a number of potential routes identified in the *Central Virginia Planning District Commission Regional Bicycle Plan*, developed in 2000, which include roads that run through the Town. However, currently there are no designated bicycle accommodations within the Town or Appomattox County. While the Town currently has no accommodations for bicycling there are a number of roads within the Town's core and outlying areas that are quite wide and offer potential share the road or signed routes. Potential routes were identified in the Appomattox Greenway Master Plan – A Vision of the Future, the plan developed through the pro-bono assistance by the DesignForum, Incorporated, a Richmond firm and are expanded within **Chapter 4 – System Recommendations** of this document.



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Map 3.1 Town of Appomattox Current Conditions



A larger version of this map is found at the end of Chapter 3.



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### B. Local and Regional Plans

There are a number of local and regional policy and planning initiatives that have been lead by the Town, Appomattox County, the Central Virginia Metropolitan Planning Organization, and through the Virginia's Region 2000 Local Government Council that support and present the opportunities and value of pedestrian and bicycle facility development.

- *Appomattox County Comprehensive Plan*

The Appomattox County Comprehensive Plan was developed and adopted by the county in The county Comprehensive Plan presents the long-term land use decision visions and goals for the Appomattox area. The Comprehensive Plan includes the following goals that provide the support and justification for alternative transportation development within the Appomattox community.

Transportation Chapter

“Goal: Develop alternative transportation methods to better serve county residents and visitors to the County’s attractions.”

Economic Development Chapter

“Objective C: Promote the rich history and natural beauty of Appomattox County as a means of enhancing quality of life in the region.”

- *Appomattox Greenway Masterplan – A Vision for the Future*

This master plan document, created through pro-bono services of the Richmond landscape architecture firm, DesignForum, Inc., provides a summation of potential on-road and off-road connection opportunities to resources within the Town, adjacent county resources, and the Appomattox Court House National Historical Park. The plan was adopted by both the Town and Appomattox County in October 2008.

- *The Appomattox Heritage and Recreational Trail Plan – A Vision of Connectivity*

A conceptual connectivity document, adopted by the Town and County of Appomattox, that highlights the benefits, justification, and framework for developing a long-term, multi-phase alternative transportation corridor that will connect the Town, Appomattox County Park, and the Appomattox Court House National Historical Park. The plan envisions a combination of off-road trails and on-road bicycle and pedestrian facility accommodations.

- *Central Virginia Planning District Commission Regional Bicycle Plan*

Developed in 2000 by the Local Government Council, known in 2000 as the Central Virginia Planning District Commission, the Regional Bicycle Plan highlights some preliminary routes for creating bicycle connections with the greater Planning District region. Each locality was evaluated and suggested bicycle route opportunities are presented. The Town of Appomattox is represented within the regional bicycle plan as having route recommendations along U. S. Route 26, U. S. Route 24, U. S. Route 460, and U. S. Route 727.



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- *Region 2000 Greenways and Blueways Plan*  
Developed in 2003 the regional plan presents a long-term conceptual plan for the creation of off and on-road connections to key resources throughout the Region 2000 area. The plan presents the benefits to the entire Region 2000 area in economic development and quality of life indicators for connecting through trails, on-road connections, and utilization of the James and Staunton Rivers. Within the conceptual network the priority project noted for Appomattox County is the development of a connection loop between the Town, County Park, and Appomattox Court House National Historical Park. The long-term vision plan also notes future connection to Holiday Lake State Park and Pamplin, and the eventual High Bridge State Park.

### **C. Federal and State of Virginia Pedestrian and Bicycle Policies**

The following summarizes current federal and state policies that support the planning and development of alternative transportation, be it walking, biking, or transit, as integral and vital transportation network elements.

- Federal Highway Administration (FHWA) Virginia Division Office Bicycle and Pedestrian Policy:  
The Virginia Division Office of the FHWA in 2001 established a Bicycle and Pedestrian Policy. The policy supports within all new and reconstructed federal-aid transportation projects, except under specific circumstances, the inclusion of pedestrian and bicycle facilities. The policy notes that the agency will assist VDOT through sharing of technology, planning activities, and safety promotion. Further, the FHWA Division policy states: “Bicycle and pedestrian facilities should be funded at the same federal-state ratio as the typical highway improvement...”.
- Americans with Disabilities Act:  
The Americans with Disabilities Act (ADA) was established in 1990 by the United States Government. This federal legislation is issued and regulated by the Department of Justice and stipulates that all new and altered facilities in the public right of way, such as sidewalks, street crossings, and transit facilities, be accessible to and usable by people with disabilities. Design and construction guidelines are provided by the American with Disabilities Act Accessibility Guidelines (ADAAG).
- VDOT Policy for Integrating Bicycle and Pedestrian Accommodation:  
In 2004 the Commonwealth Transportation Board adopted a new policy that guided the integration of pedestrian and bicycle accommodations within all elements of the roadway project network. The new policy states “VDOT will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking.” The alternative transportation policy is applicable to planning, construction, operations, and maintenance, including hazard elimination. The policy does allow exemptions of pedestrian facility inclusion where safety or feasibility warrants preclusion. A complete version the VDOT policy is provided in **Appendix B**.



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## Chapter 4: System Recommendations

Recommendations, actions, and strategies for the long-term development of a comprehensive pedestrian network that serves the current and future needs of the Appomattox community is presented in this chapter. Further, a methodology to prioritize system implementation based on need, ability to serve multiple users, and coordinate with planned development is presented. The chapter is divided into four recommendation sub-sections: prioritizing system recommendations, general policy recommendations, physical system recommendations, and program recommendations.

### A. Prioritizing System Improvements and Development

The Town of Appomattox is committed to ensuring safe transportation access to resources within the community. This includes creating alternative transportation connections, through both on-road and off-road facilities that accommodate walking and biking along with traditional motorized transportation. The Town, through the leadership and partnerships with both Appomattox County and the Appomattox Court House National Historical Park over the last four years has been evidence of this commitment. While the Town is committed to promoting pedestrian and bicycling opportunities it recognizes that improvements to the existing sidewalk network and development of new facilities will take time and that decisions must be made to prioritize development opportunities. To facilitate alternative transportation development decisions, a process to prioritize pedestrian and bicycle improvements within the Town is presented.

The prioritization of alternative transportation improvements or development within the Town of Appomattox should be evaluated according to the following prioritization rating. The rating is presented from highest to lower priority, with the highest priority corresponding to number 1.

1. Eliminates a known safety hazard (such as an accident area or recorded pedestrian/motorist conflict area);
2. Existing system is in place to serve basic pedestrian access however not constructed to current standards, is along a highly traveled route, and is along a route noted within Tourism documents;
3. Provides access for students or citizens to schools;
4. Is a component within the a scenic or recreational corridor identified within a Town, County or regional Plan;
5. Provides access from primary residential area to shopping area or public space (e.g. park) or facility (e.g. town or county governmental office);
6. Is associated with commercial development along U. S. Route 460, Confederate Boulevard, Court Street, or within the Town's Central Business District;
7. Is associated with new residential development, within the Town or in adjacent Appomattox County area, where a substantial residential development is planned; and;
8. Existing system is in place to serve basic pedestrian access however not constructed to current standards but does not have a safety hazard and is not along a highly traveled route.



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It should be noted that a lower priority does not indicate having no value as a system recommendation or development option, but rather facility development may not initially meet multiple system goals or benefits to warrant implementation in the near term. It is not the intent of this Plan to identify one particular project over another but rather present a system by which the Town and local partners can evaluate system development opportunities.

The Town should not hesitate to capitalize on any funding or partnership opportunity that may be available to implement a system recommendation that does not necessarily present the highest prioritization goal. Further, there may be instances where facility development or improvement, such as timing shoulder width addition along with road improvements or an unforeseen funding opportunity, will override the prioritization system. Lastly, the Town should capitalize any opportunity that arises to implement pedestrian and bicycle system facilities, no matter how small even if a connection is not currently available or planned in the near-term. The implementation of a comprehensive system will take multiple years and represents a long-term vision. As such any component of the pedestrian and bicycling network that is developed is a benefit and works towards promoting the overall goal. Therefore, the Town should not shy away from small system improvements that are components of the long-range connection plan.

## **B. General Policy Recommendations**

This section presents some general policy recommendations for implementation of pedestrian and bicycle facilities within the Town of Appomattox. As is the case in all policy actions, considerable partnering with multiple agencies, organizations, and civic groups will be required. For transportation policy within the Town partnering with VDOT to ensure policy action and approval is required. Further, a number of the recommendations within this plan will require additional partnership and approval by Appomattox County.

In Virginia, VDOT has been a leader within the Commonwealth in recognizing and promoting pedestrian and bicycle accommodations vital elements within the greater transportation network. As a result VDOT has initiated a number of policies within planning, design, engineering, and education dedicated to support of pedestrian and bicycle facilities. Therefore, a number of policy recommendations presented in this Plan require nothing more than the effective utilization of existing policies.

4B.1 – Apply, by default, the VDOT *Policy for Integrating Bicycle and Pedestrian Accommodations* to all corridors within the Town of Appomattox.

The VDOT policy outlines the framework for how VDOT will incorporate pedestrian and bicycle accommodations as an integral component of the transportation network and includes accommodation activities within program planning, funding, design, construction, operation, and maintenance. The policy is described in more detail in Chapter 2 of this document and presented in entirety in **Appendix B**.

4B.2 – Encourage adoption of the Town of Appomattox Pedestrian and Bicycle Plan by area local government and incorporation of recommendations into local and regional planning documents.





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With Plan approval of the Town should present the plan for consideration and incorporation into the Appomattox County Comprehensive Plan, the Rural Transportation Long Range Plan, the *Region 2000 Greenways and Blueways Plan*, and the pending update of the Region 2000 Bicycle Plan. Incorporation within these local and regional plans will be necessary to create the partnerships and support that will be necessary for full implementation of pedestrian and bicycle accommodations noted within this Plan.

4B.3 - Ensure where applicable that pedestrian and bicycle facilities identified in this Plan are constructed during planned road improvement and development projects.

The Town should encourage future development within Town limits to incorporate the pedestrian and bicycle facilities identified. Further, in partnership with VDOT, Appomattox County, and the Virginia's Region 2000 Local Government Council, any time a roadway is being widened, resurfaced, or undergoing any other physical improvements, the Town should ensure Plan recommendations are included within the planning and construction of any road upgrade or maintenance work. By promoting bicycle and pedestrian accommodations within traditional road planning, paving, maintenance, and construction schedules cost-effective implementation can be obtained.

A number of the physical pedestrian and bicycle facilities do not require extensive construction and right-of-way purchase costs. Some of the cost-effective accommodation solutions, such as road restriping and share the road accommodations can be coordinated with resurfacing, maintenance, and construction activities.

4B.4 – In partnership with VDOT and Virginia's Region 2000 Local Government Council establish the institutional framework and oversight structure necessary to implement the recommendations of this Plan.

This recommendation requires leadership by the Town, Local Government Council, and VDOT to develop and guide oversight and coordination to develop pedestrian and bicycle accommodations within the Town and entire Region 2000. While development of this larger organizational effort is beyond the scope of this study, it is recognized that this larger, multi-agency and organization effort is needed and currently a planning consideration within the Local Government Council.

4B.5 – Continually pursue grant sources and other funding opportunities to implement pedestrian and bicycle facilities within the Town of Appomattox.

The Town should work with area local governments and agencies to formulate creative opportunities to capitalize on the many state, federal, and private funding and partnership opportunities to both plan and implement alternative transportation.

## **C. Physical System Recommendations**

This section presents infrastructure improvements, specifically sidewalk construction, installation of crosswalks, bicycle accommodations, and signage, within Town that will enhance the safety and comfort of pedestrians, cyclist, and motorist.



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Pedestrian and bicycling system infrastructure recommendations are presented in Map 4.1 - Town of Appomattox Pedestrian and Bicycling System Recommendations and described further in Table 4.1 – Facility Recommendations. The determination of which specific pedestrian and bicycle accommodation type that should be used along the recommended system corridors is beyond the scope of this study and will require more detailed analysis at the time of planning and construction. Further, detailed costs associated with construction of noted improvements will also be undertaken at the time of planning and design. There are numerous studies and planning documents with different system costs estimates. General costs for the alternative transportation facility type recommendations presented in this plan, on individual practices or per foot basis for noted system recommendations are highlighted within **Appendix C**.

4C.1 – Create more visible and ADA accessible crosswalks to highly traveled areas in the Town. The installed crosswalks should be developed utilizing a uniform method including same design in curb cuts and same stripping pattern or crosswalk marking throughout the Town to stimulate awareness by motorist and pedestrians. The stripping and visual method chosen on all new crosswalks should include planning for upgrades to existing crossing as road resurfacing or development occurs. Specific design standards and signage should be an integral component of system improvements. Areas noted for crosswalk installation or improvements are noted by the blue dots on Map 4.1.

The Town, within the downtown area, utilizes a very visual and aesthetically pleasing making method. The use of a similar pattern throughout the Town should be considered.



Main Street in Appomattox



Well-marked crossing along Main St. in Lynchburg

The Town should also consider additional use of curb extensions at crosswalks along Confederate Ave., Court Street, and Virginia Ave., as they have along Main Street. The curb extensions, beyond their use of reducing the time a pedestrian is in the road, present an additional visual cue that often serves to slow motorist. Further, with incorporation of plantings these features provide another aesthetic image along these primary community and gateway corridors.



Example of curb extensions used around the Hospital in Lynchburg



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4C.2 - Upgrade current sidewalks in the Town, which due to width, physical obstacles, or lack of separation from the roadway, do not provide a safe, even, and comfortable walking environment.

Sidewalk instillation and upgrades are noted by the yellow lines on Map 4.1.

4C.3 – Create on-road bicycle accommodations along designated road routes within the Town of Appomattox and along routes that extend into Appomattox County.

The type of bicycle accommodation that can be used along the noted routes will depend on a number of factors such as: road width, traffic volume, traffic speed, and shoulder width. The specific accommodation that can or should be utilized is beyond the scope of this study. However, the Town should continuously maintain contact and communication with the local VDOT office to ensure that every opportunity, such as timing with general road maintenance or resurfacing is optimized to facilitate facility improvements.

Roads where suggested bicycle accommodations are noted are depicted as the light blue lines and numbers on the System Recommendation Map.

4C.4 – Install sidewalks where they currently do not exist to create a safe and seamless connection network along primary Town roads.

4C.5 – Look for opportunities during development or through partnership with private landowners to create off-road, such as a multi-use trail, extensions to create pedestrian and bicycle loops within the Appomattox community.

The Town, in partnership with businesses, should look for opportunities to create off-road connections that will create additional pedestrian and bicycle connections. Some opportunities noted include partnership with Wal-Mart during development of this primary development corridor.

### **D. Program Recommendations**

In addition to the policy actions and physical improvements to the pedestrian and bicycling network, there must also be education, awareness, and encouragement programs that promote the value and benefit associated with walking and biking as a transportation mode. Education should

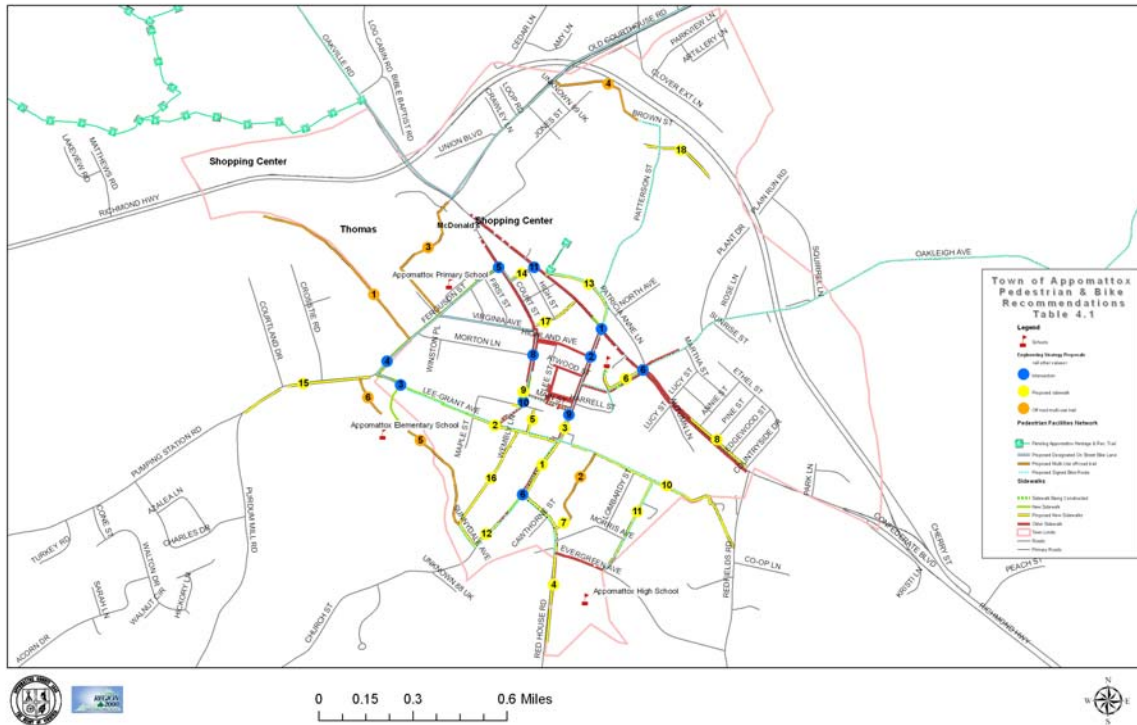
include information on how to safely use both the pedestrian and bicycle facilities. In addition, motorists should be educated to understand that cyclist and pedestrians are legitimate and expected users of the road system. It should be understood by pedestrians, cyclist, and motorists that each user must adhere to transportation regulations and policies and are all subject to law enforcement should any portion of the transportation system be used in an illegal fashion. Finally, safety programs, encouragement and promotional programs that highlight the connection of walking and biking to increased health, community quality of life, and connection to economic development should be included as a vital pedestrian system implementation program.

This section highlights a number of pedestrian and bicycling safety and promotional programs that can be implemented by the Town, regional transportation partners, or other community



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**Map 4.1 Town of Appomattox  
Pedestrian and Bicycle System Recommendations**



A larger version of this map is available at the end of Chapter 4.



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stakeholders. Only a small portion of the many program ideas that have been utilized nationally and within Virginia is presented. More detail on implementing safety and promotional programs can be obtained by researching the bicycle and pedestrian resource list presented in **Appendix D**.

4D.2 – Install bicycle and pedestrian signage within the Town that increases safety through providing awareness and direction to motorist, pedestrians, and cyclist.

Along designated bicycle accommodation routes install signage, specific version will depend on route designation, to inform motorist and cyclist. Primary signage within Appomattox will be Share the Road signage. In any installation instance, signage will be according to the MUTCD and AASHTO regulations and in accordance with VDOT approval.

4D.3 - Initiate a Safe Routes to School program at the Appomattox County Elementary and Middle Schools.

The Town of Appomattox is fortunate to have within its boundaries the Appomattox County Primary, Elementary, and Middle schools. Further, the Appomattox community is fortunate to have the leadership of both the Town of Appomattox and the Appomattox County School Division in forming a partnership that resulted in the development of the Appomattox Elementary School and Appomattox Middle School Safe Routes to School Travel Plans. Each of these long-term vision plans for creating the physical environment and the educational and programmatic activities to encourage walking and bicycling access to the schools was developed through the Virginia Safe Routes To School Program in December, 2008.

The Safe Routes to School Program, SRTS, is a national transportation program created through Section 1404 of the 2005 Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users Act, better known as SAFETEA-LU. The SRTS program established a grant program, with administration through the state transportation programs, for providing communities opportunities to improve conditions by which students and residents could safely walk and bike to schools that included grades Kindergarten through Eighth grades. The program has three goals:

1. to enable and encourage children, including those with disabilities, to walk and bicycle to school;
2. to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
3. to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

In Virginia the SRTS funding is available for programmatic or construction opportunities designed to enhance the safety and participation of students in walking and/or biking. Programmatic grants are provided for the purpose of developing SRTS plans and programs within a school or school divisions that can be used to promote walking and biking, provide safety training, of other programmatic type activities. Construction funds can be used to make physical



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improvements, such as sidewalk plans, instillation of curb ramps, signage, timed signals, or pedestrian inlands.

The Town, through grants and local business and stakeholder group partnerships, should look for opportunities to promote the educational, outreach, and encouragement activities highlighted within Appomattox Safe Route to School Travel Plans.

A condensed copy of the Appomattox Elementary and Appomattox Middle School Safe Routes to School Travel Plans are provided in **Appendix E**. Complete copies of Travel Plans are available through the Town of Appomattox or through the Virginia's Region 2000 website; <http://www.Region2000.org>.

4D.1 - Educate pedestrians, cyclist, and motorist about walking and cycling safety skills and rules of the road.

Create public outreach and education activities and brochures that promote safe use of pedestrian facilities and best practices for system users and motorist. The Town should utilize the education and outreach activities identified within the Safe Routes To School Travel Plans. Further, the Town should seek partnership with local law enforcement and community organizations, such as Girl Scouts, Boy Scouts, churches, etc., that are able to assist in promoting walking and biking safety.

4D.4- Conduct, in coordination with tourism, and economic development activities, programs and events that highlight the pedestrian and bicycling opportunities located within and outside the Town.

Once bicycling and pedestrian facilities have been expanded and improved, the Town should partner with local agencies, business, and stakeholder groups to develop maps that highlight the pedestrian facilities along with the other community resources highlighted within promotional brochures and activities. The brochures can include information on the scenic rural road network within the Town and County so enjoyed and valued by the cycling community.



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**Table 4.1 Summation of Pedestrian and Bicycle System Recommendations**

Recommendation	Length or Quantity	Estimated Unit Cost *	Total Estimated Cost **	Description
<b>Pedestrian Network – Crosswalks/Timed Signals</b>				
Install crosswalks and timed signal at intersection of Church & Confederate Blvd	4	\$	\$	Install 4-way crosswalk at intersection; provided timed crossing signal
Update the crosswalk at the Middle School across Church from Highland	1	\$ 9,000	\$ 9,000	Upgrade the current crosswalk in front of Middle School, include uniform pattern and connection to curbs
Upgrade crosswalk at Elementary School across Lee Grant	1	\$ 9,000	\$ 9,000	Create a more visible crosswalk that follows area pattern.
Install crosswalk across Ferguson at current break in sidewalk	1	\$ 9,000	\$ 9,000	Paint crosswalk at current truncated dome areas at the sidewalk break along Ferguson
Install crosswalk intersection Ferguson & Court St.	1	\$ 9,000	\$ 9,000	Install crosswalk across Ferguson at intersection of Ferguson & Court St.
Install and complete the crosswalk at Church and Evergreen Ave	1	\$ 9,000	\$ 9,000	This intersection has had a good portion completed; needs to be stripped to match agreed upon area pattern
Install crosswalk across Confederate at Oakleigh intersection	2	\$ 9,000	\$ 18,000	Install crosswalk across Confederate at Oakleigh - consider use of pedestrian island and across Oakleigh.
Install crosswalk across Court St at Morton Lane	1	\$ 9,000	\$ 9,000	Install a crosswalk across Court St at the Morton Intersection; consider use of bulb out to shorten crossing and to create visual interest along this primary corridor
Visual crossing at Church and Court Streets across railroad	2	\$ 9,000	\$ 18,000	Provide a visible crossing along Church and Court Streets at the railroad tracks.
Install crosswalk intersection Moses & Confederate	1	\$ 9,000	\$ 9,000	Install crosswalk across Confederate
<b>Pedestrian Network - Sidewalks</b>				
Construct, replace sidewalk along Church	1,865 ft	\$ 240,000 CPM	\$ 84, 775	Replace existing substandard sidewalk along Church between Lee Grant and Evergreen
Construct, replace sidewalk along Lee Grant Ave.	1,418 ft	\$ 240,000 CPM	\$ 64,455	Construct a sidewalk that runs from corner of Oakleigh and Confederate and continues adjacent to school property and guides students to building



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<b>Recommendation</b>	<b>Length or Quantity (approx.)</b>	<b>Estimated Unit Cost *</b>	<b>Total Estimated Cost **</b>	<b>Description</b>
Construct, replace sidewalk along Church	416 ft	\$ 240,000 CPM	\$ 18,910	Extend sidewalk along Church Street to provide continuous route from Harrell
Construct, replace sidewalk along Evergreen	1,302 ft	\$ 240,000 CPM	\$ 59,180	Construct and replace existing sidewalk along Evergreen between Church and High School
Construct, replace sidewalk along Burke	381 ft	\$ 240,000 CPM	\$ 17,320	Replace existing sidewalk along Burke Street
Construct sidewalk adjacent to Middle School along Oakleigh	835 ft	\$ 240,000 CPM	\$ 39,955	Construct a sidewalk that runs from corner of Oakleigh and Confederate and continues adjacent to school property and guides students to building.
Construct sidewalk along Hunter	416 ft	\$ 240,000 CPM	\$ 18,910	Extend sidewalk along Church Street to provide continuous route from Harrell
Construct sidewalk along Confederate	1,231 ft	\$ 240,000 CPM	\$ 55,955	Extend existing sidewalk along Confederate to Countryside Drive
Construct sidewalk along bottom portion of Court St	242 ft	\$ 240,000 CPM	\$ 11,000	Construct sidewalk along Court Street between Main and Lee Grant
Construct new sidewalk along Lee Grant	3,141 ft	\$ 240,000 CPM	\$ 142,775	Construct a new sidewalk along Lee Grant between Church and Red Field Rd.
Construct new sidewalk along Dogwood St.	1,582 ft	\$ 240,000 CPM	\$ 71,900	Construct sidewalk along entire length of Dogwood Street
Construct sidewalk along Church to Sunnysdale Ave.	572 ft	\$ 240,000 CPM	\$ 26,000	Construct a sidewalk from where sidewalk currently ends on Church to Sunnysdale Ave.
Construct sidewalk along Patricia Ann Lane	1,447 ft	\$ 240,000 CPM	\$ 65,775	Construct sidewalk along Patricia Ann Lane to connect to Confederate
Construct sidewalk along Moses St.	415 ft	\$ 240,000 CPM	\$ 18,865	Construct sidewalk along Moses St. to provide continuous sidewalk access from Confederate Blvd to Court St.
Construct sidewalk along Pumping Station Rd	2,120 ft	\$240,000 CPM	\$ 96,365	Construct sidewalk along Pumping Station from Lee Grant to Purdum Mill





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Recommendation	Length or Quantity (approx.)	Estimated Unit Cost *	Total Estimated Cost **	Description
Construct sidewalk along Sunnydale Ave	2,300 ft	\$240,000 CPM	\$104,545	Construct sidewalk along entire length of Sunnydale Ave.
Construct sidewalk along Isabell St.	711 ft	\$240,000 CPM	\$ 32,320	Construct sidewalk along Isabell St. to provide continuous sidewalk access from Confederate to Court
Construct sidewalk along Stevens St.	965 ft	\$240,000 CPM	\$ 43,865	Construct sidewalk along Stevens St.
<b>Biking Network – Road Accommodations</b>				
Provide accommodation along Church St	4,724 ft.	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Church St. between Confederate & Red House Rd.
Provide accommodation along Lee Grant	5,561 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Lee Grant between Red House & Ferguson St.
Provide accommodation along Ferguson St	4,510 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Ferguson between Confederate & Lee -Grant
Provide accommodation along Virginia Ave	1,665 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along full length of Virginia Ave
Provide accommodation along Court St	4,000 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Court St. between Confederate. & Lee Grant
Provide accommodation along Main St.	813 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Main St.
Provide accommodation along Dogwood St.	1,783 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Dogwood St.
Provide accommodation along Confederate/Oakville Rd.	2,237 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Confederate Ave./Oakville Rd. to the Wal-Mart shopping complex and the pending Appomattox Heritage and Recreational Trail. Measurement is provided to the Town border, however it is recommended facility designation extend further into the County
Provide accommodation along Old Courthouse Rd.	6,034 ft	Depends on facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Old Courthouse Rd. beginning at Confederate Ave. Measurement is provided to the Town border, however it is recommended facility designation extend into County and to the Appomattox Court House National Historical Park



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Recommendation	Length or Quantity (approx.)	Estimated Unit Cost *	Total Estimated Cost	Description
Provide accommodation along Oakleigh Ave.	5,033 ft	Depends of facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Oakleigh Ave. beginning at Church St. Measurement are to Town border, however it is recommended facility designation extend into County
Provide accommodation along Patricia Ann Lane	1,920 ft	Depends of facility evaluation	Evaluate in Region 2000 Bike Plan Update	Create on-road bicycle facility along Patricia Anne Ln.
<b>Bicycling/Pedestrian Network – Multiuse Trail</b>				
Develop off-road connection to shopping area utilizing area behind Thomasville	3,353 ft	\$ 720,000 CPM	\$ 457,000	Provides safe connection to shopping area from residential areas
Construct a multiuse trail from Hunter/Park to Lee Grant	1,280 ft	\$ 720,000 CPM	\$ 174,550	Utilize Town-owned utility easement to create connection to school, Town, & Park.
Develop off-road connection that directs cyclist/pedestrians behind primary school	2,585 ft	\$ 720,000 CPM	\$ 352,500	Provides safe connection to shopping area from residential areas
Develop off-road connection that directs cyclist/pedestrians to Old Courthouse Rd.	1,856	\$ 720,000 CPM	\$ 253,000	Develop multiuse trail from the end of Crown St to Old Courthouse Rd, future bicycle accommodation
Create a multiuse between school & Sunnysdale Ave.	1,964 ft	\$ 720,000 CPM	\$ 267,800	Construct a multiuse trail from Sunnysdale Street to Appomattox Elementary School
Create a multiuse trail between Elementary school and Pumping Station Rd	726 ft	\$ 720,000 CPM	\$ 99,000	Construct a multiuse trail from Pumping Station Road to Appomattox Elementary School
<b>Bicycling/Pedestrian Network – Signage</b>				
Install Share Road Signage	Instillation at unit intervals to be determined	\$330/sign	Evaluate in Region 2000 Bike Plan Update	Depending on future bicycle facility type determination; install Share the Road or Bicycle Route signage. Signage is suggested to be placed approximately

\* Unit Costs – Cost estimates are based on costs provided through by VDOT’s Transportation & Mobility Planning Division – Statewide Planning Level Costs Estimates, January 2009. It should be noted that these costs include planning and general state averages. Further, cost do not include additional right-of-way costs.



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## Chapter 5: Implementation

### A. Adoption and Incorporation of Pedestrian and Bicycle Plan

To ensure that the vision and goal of a comprehensive pedestrian and bicycle system that promotes alternative transportation is implemented within the Town of Appomattox, recommendations presented in this Plan should be adopted by the Town and incorporated into local, county, regional, and ultimately state plans. Specifically the Town of Appomattox must adopt this plan and incorporated into the Appomattox County Comprehensive Plan. Further, the Town of Appomattox should consider the development of a Town Comprehensive Plan. The Town should also request incorporated of the policy and system recommendations within the pending Region 2000 Bicycle Plan update, and the Region 2000 Greenways and Blueways Plan.

In addition the Town, through it's partnership with the Virginia's Region 2000 Local Government Council, should insure the system recommendations are included with the Rural Transportation Plan and the State Transportation Improvement Program (STIP). Each of these actions presents the avenue by which the Town is eligible for recommended projects to be considered for funding through multiple federal, state, and private transportation programs and funding.

Oversight by a dedicated staff member, group, or agency to ensure that Plan recommendations are implemented will be required. Within the Town of Appomattox the Property and Streets Committee presents a current structure to provide oversight for sidewalk and crosswalk implementation. While incorporation into local, regional, and state plans represents the avenue for project implementation, there must be an additional dedicated effort to ensure that coordination, timing, advocacy, and partnerships are fostered and maintained to implement the bicycle facility recommendations. It is recommended that the Town of Amherst, either as an internal body or in partnership with a regional agency, establish a bicycle/pedestrian committee. It is anticipated that this recommendation and implementation activity could be incorporated within the Local Government Council structure.

### B. Funding

To make the develop a pedestrian and cycling friendly environment within Appomattox a reality there must be supportive partners and stakeholders and multiple funding sources. From the simplest activities such as signage instillation to the complex coordination and construction associated with off-road trails, funding is a necessity. A number of recommendations within this plan, such as repainting or painting crosswalks, are fairly simple in their execution and can be undertaken through regular scheduling and incorporation into the maintenance program. Others, such as instillation of curb cuts, stripping, or instillation of signage, while they also may be incorporated within general maintenance or resurfacing schedule require minor construction changes, potential right of way purchase, preliminary engineering and design, and a larger allocation of funding and coordination. Still other recommendations, such as instillation of entire sidewalk corridors or off-road trails, can only be implemented through costly engineering, design, land acquisition, and construction. These projects and the considerable costs associated can only be achieved through considerable assistance of federal, state, and local funding and public and private partnerships.



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There are a number of potential funding sources within the federal, state, and local levels that can be utilized to implement planning and construction of pedestrian and bicycle facilities. For the Town of Appomattox, or other rural areas within the Commonwealth, the most common programs available for pedestrian and bicycle plan development are through the two programs administered by the Virginia Department of Transportation (VDOT). Specifically, there are two programs, VDOT's Secondary Six-Year Improvement Program (S-SYIP) and the Rural Regional Long Range Transportation Plan (RLRTP). The S-SYIP is prepared through the VDOT District Office. Members from the rural areas Virginia's Region 2000 Local Government Council, Local Government Council, are responsible for the development of the RLRTP. The Transportation Technical Committee, a subcommittee within the Local Government Council and comprised of representatives from each locality, the Federal Highway Administration, the Department of Rail and Public Transit, and VDOT guide staff from the Local Government Council in the development of the RLRTP.

A number of potential funding is made available through grant programs where applications are submitted and distributed by federal and state agencies based on an approved rating system. While these grant programs are very competitive and represent limited funding, they represent funding avenues that are generally quite consistent and well documented in their use for pedestrian and bicycle funding in Virginia. A summary of some of the more recognized funding sources is noted below. A number of the grant opportunities noted are specifically geared toward the expansion and development of alternative transportation modes, enhancing public health, improving access to public transit, supporting movement of elderly, disabled, or low-income residents, or in the removal of safety hazards. While others have move limited use and should be evaluated for the ability to meet the specific program priorities.

Federal and State Funding Sources that can be used for pedestrian facilities:

**National Highway System (Federal Program)** – Funds from the National Highway System may be used to construct bicycle facilities and pedestrian walkways on land adjacent to any highway along the National Highway System.

**Highway Construction Program (VDOT program)**– This VDOT program provides funding for preliminary engineering, right of way acquisition, and construction funds of highway projects. These funds may also be used as part of a highway project to provide pedestrian or bicycle facilities. This system does not require a local match in the rural areas along primary or secondary roads.

**Pedestrian and Bicycle Safety Program (VDOT program)** – This VDOT program provides funding to implement safety improvements where pedestrian or bicycle accidents have taken or where potential accidents are shown to be a proven potential. These projects can receive up to 90% Federal funding and must have a minimum of a 10% local match.

**National Scenic Byways Program (Grant Program)** – This program supports projects that improve the quality or continuity of the traveler's experience along highways designated as National Scenic Byways, All American Roads, or a state scenic byway. Funds can be used to provide alternative transportation facilities and are funded through a potential 80% Federal and minimum 20% local match fund equation.



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**VDOT Revenue Sharing Program** (VDOT Program) – This VDOT program, available to most Virginia localities, can provide up to \$ 1 million in matching funds, to construct, reconstruct, or improve roads within the approval VDOT roadway system. Localities request funds through a resolution and funds may used to implement the following activates:

- Deficits on completed construction, reconstruction, or improvement projects from the Six-Year Plan;
- Supplement funding from project listed on the Six-Year Plan;
- Construct, Reconstruct, or Improvements Projects not included with the Six-Year Plan but deemed worthy of submittal by an appropriate VDOT manager;
- Provide for improvements necessary for acceptance of specific subdivision street, such as widening or surface treatment;
- Provide paving for previously unpaved roadways in rural areas;
- Provide for new road facilities to be a part of the highway or road network in a locality that VDOT provides maintenance payments.

Revenue Sharing funds may not be used to supplement any work that is deemed to be general maintenance. Localities that do not maintain their own roads must submit a request through the county in which they are located.

**Hazard Elimination Safety Program Funds** (Grant Program) – Provided as a portion of Federal Highway Safety Improvement Program (HSIP), this program provides funds for identifying and correcting hazardous locations and can include publicly owned bicycle or pedestrian pathways or trails and can be used to provide traffic calming measures and corrections at dangerous crossings. Areas that have known bicycle hazards are eligible for potential program funding.

**Transportation Enhancement Program Funds** (Grant Program) – Funds can be used to construct pedestrian facilities as well as develop educational and program activities related to transportation. These funds have been extremely beneficial throughout Virginia and represent the successful funding received by Appomattox County to implement the approximate 1.6 mile trail that connect the Town of Appomattox to the Appomattox County Community Park. These funds can be used to develop sidewalk improvements or on-road bicycle facilities noted within this Plan, the funds can also be used for any additional off-road trails that provide non-motorized transportation to community resources.

**Recreational Trail Program Funds** (Grant Program) – These funds can be used to develop recreational trails. These grant funds might be an option for trail or pedestrian connections to future public spaces and may serve as a potential funding source for one of the noted off-road trail connections within the Town or to any future park or pubic space development envisioned by the Town.

**Recreation Access Program** (Grant Program) – The program provides pedestrian and bicycle access, via access road, sidewalk, or separate bicycle facility, to a public recreational facility or historic site operated by a governmental agency or locality or local authority. This program uses state funds only and has specific eligibility funding amounts depending on the type of access facility utilized. Again, as with the Recreational Trail Program Funds, the use of these funds would be dependent on the Town's future plans for recreational or public space development.



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**Safe Routes to School Program** (Grant Program) – Funds can be used to provide non-construction funds to implement programs to get children walking or biking to school or walking in general or to provide construction improvements to schools that have implemented a Safe Routes to School program. Construction improvements can include development of sidewalks, signage, or crossing improvements. This program presents a viable funding opportunity as the Town and the Appomattox County School Division have already developed and had approved by VDOT the Appomattox Elementary and Middle School Travel Plans. There should be continued investigation into creating the environment and support to create a Safe Routes to School Program that includes the education, encouragement, enforcement, and evaluation initiatives noted within the approved Appomattox Elementary and Middle School Travel Plans.

**402 Highway Safety Program** (Grant Program) – Administered in Virginia through the Virginia Department of Motor Vehicles (DMV), this program from the National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration provides funds for projects, which include opportunities for bike and pedestrian, that reduce crashes and injuries in areas shown to have safety problems.

**Federal Public Lands Highway Program** (Grant Program) – This federal program provides federal funding to facilitate public transportation access to federal lands. Provisions for pedestrian and bicycle facilities that provide public access are eligible activities.

**Community Development Block Grant Program** (Grant or Direct Allocation Program) – Funds are used to provide neighborhood revitalization, economic development, and facilities improvements to areas with a 51 percent incidence of low to moderate income individuals or a designed project eligible area. Several communities, including Greensboro, North Carolina, have used these funds to develop pedestrian travel to schools, shopping areas, and public transit stations. These funds would only be an option within the Town of Appomattox on a small basis as the income and program limitations may preclude successful use.

**Job Access and Reverse Commute Program (Grant)** – Federal funds available to support transportation of welfare recipients and eligible low-income individuals to and from employment, this includes the provision for pedestrian and bicycle facilities. This program would need to be reviewed for eligibility within Appomattox County to such key employers as Thomasville.

**Economic Development Grants for Public Works and Development of Facilities** (Grant Program) – Administered through the US Department of Commerce, Economic Development Administration (EDA), funds can be used by designated localities for public works projects that can include trails and sidewalks facilities. Funds provided through the EDA are only available to localities and/or regional entities that have successfully completed a Comprehensive Economic Development Strategy (CEDS) that highlights the primary needs within a community and establishes a framework and prioritization of eliminating the identified needs. Program requires a 30 percent local match except in extremely distressed areas where the match can be reduced to 20 percent.

There are also numerous funding opportunities through private foundations, non-profit organizations, local businesses, and donations from local charities and organizations. These opportunities should always be investigated and can often be obtained through web-based grant



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search engines and local stakeholders. Some good examples of fairly well-known national organization grant opportunities include the Bike Belong Grant Program and grants through the International Mountain Bicycling Association.

In order to implement the comprehensive alternative transportation system the Town will need to utilize multiple funding opportunities. It should be noted that with all state, federal, and foundation funding the nature of the funding and rules for participation change and therefore, should be researched. In addition, the Town should utilize the information resources provided in **Appendix D**. These national sources are dedicated to the advancement of biking and walking and therefore serve as very beneficial sources on funding, design, and implementation information.

### **C. Conclusion**

The Town of Appomattox Pedestrian and Bicycle Plan has been developed to facilitate the development of an alternative transportation network that supports the use of walking and biking as viable transportation mode to community resources. The Plan presents facility development opportunities as well as program and policy activities that collectively implemented will work to create an efficient pedestrian and bicycling network in Appomattox. This Plan when combined with the development of the Appomattox Heritage and Recreational Trail will create a seamless pedestrian network that will highlight the cultural, historical, and community resources that are found in abundance within the Town and surrounding Appomattox County. The connectionsystem will provide economic and quality of life benefits that will benefit the Town and entire Region 2000 area for years to come.



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## Appendices



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**Appendix A**  
**Town of Appomattox Road Inventory**

The following is a summation of the roadway data, from the Virginia Department of Transportation Federal Aid System, for all collectors and above within the Town



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## **Appendix B**

The Virginia Department of Transportation through its Bicycle and Pedestrian Program, and other program initiatives, promotes pedestrian access through walking and bicycling within Virginia. They have provided leadership in the state in creating pedestrian connections and promoting partnerships, technical assistance, funding, and program enforcement to ensure that pedestrian planning is an integral component of transportation planning as a whole.

The following is a copy VDOT's policy for incorporating pedestrian transportation accommodations within the transportation network. This information was provided through the Virginia Department of Transportation website at [www.virginiadot.org](http://www.virginiadot.org). Further, within each district of the state a pedestrian coordinator is available to provide technical assistance and guidance in incorporating pedestrian improvements and facilities within a locality and region. The following is a list of some key resources for obtaining more detail on planning, designing, implementing, and funding pedestrian improvements.

### **Virginia Department of Transportation Policy for Integrating Bicycle and Pedestrian Accommodations**

#### **1. Introduction**

Bicycling and walking are fundamental travel modes and integral components of an efficient transportation network. Appropriate bicycle and pedestrian accommodations provide the public, including the disabled community, with access to the transportation network; connectivity with other modes of transportation; and independent mobility regardless of age, physical constraints, or income. Effective bicycle and pedestrian accommodations enhance the quality of life and health, strengthen communities, increase safety for all highway users, reduce congestion, and can benefit the environment. Bicycling and walking are successfully accommodated when travel by these modes is efficient, safe, and comfortable for the public. A strategic approach will consistently incorporate the consideration and provision of bicycling and walking accommodations into the decision-making process for Virginia's transportation network.

#### **2. Purpose**

This policy provides the framework through which the Virginia Department of Transportation will accommodate bicyclists and pedestrians, including pedestrians with disabilities, along with motorized transportation modes in the planning, funding, design, construction, operation, and maintenance of Virginia's transportation network to achieve a safe, effective, and balanced multimodal transportation system.

For the purposes of this policy, an accommodation is defined as any facility, design feature, operational change, or maintenance activity that improves the environment in which bicyclists and pedestrians travel. Examples of such accommodations include the provision of



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bike lanes, sidewalks, and signs; the installation of curb extensions for traffic calming; and the addition of paved shoulders.

### **3. Project Development**

The Virginia Department of Transportation (VDOT) will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking. Factors that support the need to provide bicycle and pedestrian accommodations include, but are not limited to, the following:

- project is identified in an adopted transportation or related plan
- project accommodates existing and future bicycle and pedestrian use
- project improves or maintains safety for all users
- project provides a connection to public transportation services and facilities
- project serves areas or population groups with limited transportation options
- project provides a connection to bicycling and walking trip generators such as employment, education, retail, recreation, and residential centers and public facilities
- project is identified in a Safe Routes to School program or provides a connection to a school
- project provides a regional connection or is of regional or state significance
- project provides a link to another bicycle and pedestrians accommodations
- project provides a connection to traverse natural or man-made barriers
- project provides a tourism or economic development opportunity

Project development for bicycle and pedestrian accommodations will follow VDOT's project programming and scheduling process and concurrent engineering process. VDOT will encourage the participation of localities in concurrent engineering activities that guide the project development.

#### **3.1 Accommodations Built as Independent Construction Projects**

Bicycle and pedestrian accommodations can be developed through projects that are independent of highway construction, either within the highway right-of-way or on an independent right-of-way. Independent construction projects can be utilized to retrofit accommodations along existing roadways, improve existing accommodations to better serve users, and install facilities to provide continuity and accessibility within the bicycle and pedestrian network. These projects will follow the same procedures as those for other construction projects for planning, funding, design, and construction. Localities and metropolitan planning organizations will be instrumental in identifying and prioritizing these independent construction projects.

#### **3.2 Access-Controlled Corridors**



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Access-controlled corridors can create barriers to bicycle and pedestrian travel. Bicycling and walking may be accommodated within or adjacent to access-controlled corridors through the provision of facilities on parallel roadways or physically separated parallel facilities within the right-of-way. Crossings of such corridors must be provided to establish or maintain connectivity of bicycle and pedestrian accommodations.

### 3.3 Additional Improvement Opportunities

Bicycle and pedestrian accommodations will be considered in other types of projects. Non-construction activities can be used to improve accommodations for bicycling and walking. In addition, any project that affects or could affect the usability of an existing bicycle or pedestrian accommodation within the highway system must be consistent with state and federal laws.

3.3.1 Operation and Maintenance Activities 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.

3.3.2 Long Distance Bicycle Routes Long distance bicycle routes facilitate travel for bicyclists through the use of shared lanes, bike lanes, and shared use paths, as well as signage. All projects along a long distance route meeting the criteria for an American Association of State Highway and Transportation Officials

(AASHTO) or *Manual on Uniform Traffic Control Devices* (MUTCD) approved numbered bicycle route system should provide the necessary design features to facilitate bicycle travel. Independent construction projects and other activities can be utilized to make improvements for existing numbered bicycle routes. Consideration should be given to facilitating the development of other types of long distance routes.

3.3.3 Tourism and Economic Development Bicycling and walking accommodations can serve as unique transportation links between historic, cultural, scenic, and recreational sites, providing support to tourism activities and resulting economic development. Projects along existing or planned tourism and recreation corridors should include bicycle and pedestrian accommodations. In addition, the development of independent projects to serve this type of tourism and economic development function should be considered and coordinated with economic development organizations at local, regional, and state levels, as well as with other related agencies. Projects must also address the need to provide safety and connectivity for existing and planned recreational trails, such as the Appalachian Trail, that intersect with the state's highway system.



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### 3.4 Exceptions to the Provision of Accommodations

Bicycle and pedestrian accommodations should be provided except where one or more of the following conditions exist:

- 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 bicycle and pedestrian 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)
- bicycle and pedestrian travel is prohibited by state or federal laws

### 3.5 Decision Process

The project manager and local representatives will, based on the factors listed previously in this section, develop a recommendation on how and whether to accommodate bicyclists and pedestrians in a construction project prior to the public hearing. The district administrator should confirm this recommendation prior to the public hearing. Public involvement comments will be reviewed and incorporated into project development prior to the preparation of the design approval recommendation. When a locality is not in agreement with VDOT's position on how bicyclists and pedestrians will or will not be accommodated in a construction project, the locality can introduce a formal appeal by means of a resolution adopted by the local governing body. The resolution must be submitted to the district administrator to be reviewed and considered prior to the submission of the design approval recommendation to the chief engineer for program development. Local resolutions must be forwarded to the chief engineer for program development for consideration during the project design approval or to the Commonwealth

Transportation Board for consideration during location and design approval, if needed for a project. The resolution and supporting information related to the recommendation must be included in the project documentation.

The decisions made by VDOT and localities for the provision of bicycle and pedestrian travel must be consistent with state and federal laws regarding accommodations and access for bicycling and walking.





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#### **4. Discipline Participation in Project Development**

VDOT will provide the leadership to implement this policy. Those involved in the planning, funding, design, construction, operation, and maintenance of the state's highways are responsible for effecting the guidance set forth in this policy. VDOT recognizes the need for interdisciplinary coordination to efficiently develop, operate, and maintain bicycle and pedestrian accommodations.

Procedures, guidelines, and best practices will be developed or revised to implement the provisions set forth in this policy. For example, objective criteria will be prepared to guide decisions on the restriction of bicycle and pedestrian use of access-controlled facilities. VDOT will work with localities, regional planning agencies, advisory committees, and other stakeholders to facilitate implementation and will offer training or other resource tools on planning, designing, operating, and maintaining bicycle and pedestrian accommodations.

#### **4.1 Planning**

VDOT will promote the inclusion of bicycle and pedestrian accommodations in transportation planning activities at local, regional, and statewide levels. These planning activities include, but are not limited to, corridor studies, small urban studies, regional plans, and the statewide multimodal long-range transportation plan. To carry out this task, VDOT will coordinate with local government agencies, regional planning agencies, and community stakeholder groups. In addition, VDOT will coordinate with the Virginia Department of Rail and Public Transportation (VDRPT) and local and regional transit providers to identify needs for bicycle and pedestrian access to public transportation services and facilities.

#### **4.2 Funding**

Highway construction funds can be used to build bicycle and pedestrian accommodations either concurrently with highway construction projects or as independent transportation projects. Both types of bicycle and pedestrian accommodation projects will be funded in the same manner as other highway construction projects for each system (i.e., interstate, primary, secondary, or urban). VDOT's participation in the development and construction of an independent project that is not associated with the interstate, primary, secondary, or urban systems will be determined through a negotiated agreement with the locality or localities involved.

Other state and federal funding sources eligible for the development of bicycle and pedestrian accommodations may be used, following program requirements established for these sources. These sources include, but are not limited to, programs for highway safety, enhancement, air quality, congestion relief, and special access.

VDOT may enter into agreements with localities or other entities in order to pursue alternate funding to develop bicycle and pedestrian accommodations, so long as the agreements are consistent with state and federal laws.



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#### 4.3 Design and Construction

VDOT will work with localities to select and design accommodations, taking into consideration community needs, safety, and unique environmental and aesthetic characteristics as they relate to specific projects. The selection of the specific accommodations to be used for a project will be based on the application of appropriate planning, design, and engineering principles. The accommodations will be designed and built, or installed, using guidance from VDOT and AASHTO publications, the MUTCD, and the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)*. Methods for providing flexibility within safe design parameters, such as context sensitive solutions and design, will be considered.

During the preparation of an environmental impact statement (EIS), VDOT will consider the current and anticipated future use of the affected facilities by bicyclists and pedestrians, the potential impacts of the alternatives on bicycle and pedestrian travel, and proposed measures, if any, to avoid or reduce adverse impacts to the use of these facilities by bicyclists and pedestrians.

During project design VDOT will coordinate with VDRPT to address bicyclist and pedestrian access to existing and planned transit connections.

Requests for exceptions to design criteria must be submitted in accordance with VDOT's design exception review process. The approval of exceptions will be decided by the Federal Highway Administration or VDOT's Chief Engineer for Program Development.

VDOT will ensure that accommodations for bicycling and walking are built in accordance with design plans and VDOT's construction standards and specifications.

#### 4.4 Operations

VDOT will consider methods of accommodating bicycling and walking along existing roads through operational changes, such as traffic calming and crosswalk marking, where appropriate and feasible.

VDOT will work with VDRPT and local and regional transit providers to identify the need for ancillary facilities, such as shelters and bike racks on buses, that support bicycling and walking to transit connections.

VDOT will enforce the requirements for the continuance of bicycle and pedestrian traffic in work zones, especially in areas at or leading to transit stops, and in facility replacements in accordance with the MUTCD, *VDOT Work Area Protection Manual*, and *VDOT Land Use Permit Manual* when construction, utility, or maintenance work, either by VDOT or other entities, affects bicycle and pedestrian accommodations.

VDOT will continue to research and implement technologies that could be used to improve the safety and mobility of bicyclists and pedestrians in Virginia's transportation network, such as signal detection systems for bicycles and in-pavement crosswalk lights.



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### **4.5 Maintenance**

VDOT will maintain bicycle and pedestrian accommodations as necessary to keep the accommodations usable and accessible in accordance with state and federal laws and VDOT's asset management policy. Maintenance of bike lanes and paved shoulders will include repair, replacement, and clearance of debris. As these facilities are an integral part of the pavement structure, snow and ice control will be performed on these facilities.

For sidewalks, shared use paths, and bicycle paths built within department right-of-way, built to department standards, and accepted for maintenance, VDOT will maintain these bicycle and pedestrian accommodations through replacement and repair. VDOT will not provide snow or ice removal for sidewalks and shared use paths. The execution of agreements between VDOT and localities for maintenance of such facilities shall not be precluded under this policy.

### **5. Effective Date**

This policy becomes effect upon its adoption by the Commonwealth Transportation Board on March 18, 2004, and will apply to projects that reach the scoping phase after its adoption.

This policy shall supersede all current department policies and procedures related to bicycle and pedestrian accommodations. VDOT will develop or revise procedures, guidelines, and best practices to support and implement the provisions set forth in this policy, and future departmental policies and procedural documents shall comply with the provisions set forth in this policy.



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### **Appendix C**

### **Bicycle and Pedestrian Facility Costs Estimates**

The following provides a summary of generalized cost estimates for the various pedestrian and bicycle facilities. There are considerable sources for estimated facility costs. The information presented in this plan is based on estimates provided by the Virginia Department of Transportation -Transportation and Mobility Planning Division, 2009. It should be noted that these represent estimated costs and it should be noted that costs can change over time and that many factors can affect the actual costs of facility development. In all cases, the ability to provide facility improvements as a component of other road and utility infrastructure improvements will represent cost savings.



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## **Appendix D**

### **Pedestrian and Bicycle Planning and Development Resources**

The following is a list of some key resources for obtaining more detail on planning, designing, implementing, and funding pedestrian improvements.

Federal Highway Administration (FHWA) – Bicycle & Pedestrian Program  
<http://www.fhwa.dot.gov/environment/bikeped/>

Virginia Department of Transportation (VDOT) – Bicycling and Walking in Virginia  
<http://www.virginiadot.org/programs/bk-default.asp>

National Center for Bicycle and Walking  
<http://www.bikewalk.org/>

Pedestrian and Bicycle Information Center  
<http://www.bicyclinginfo.org/>

University of North Carolina Highway Safety Research Center  
<http://www.hsrc.unc.edu/index.cfm>

Manual on Uniform Traffic Control Devices  
[http://mutch.fhwa.dot.gov/kno-millennium\\_12.28.01.htm](http://mutch.fhwa.dot.gov/kno-millennium_12.28.01.htm)

Association of Pedestrian and Bicycle Professionals  
<http://www.apbp.org/website/>

National Center for Safe Routes to School  
<http://www.saferoutesinfo.org/>

Walkable Communities  
[www.walkable.org](http://www.walkable.org)



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## **Appendix E**

### **Appomattox Elementary and Appomattox Middle School Travel Plans**

As a component of creating a safe and efficient pedestrian and bicycle system within the community, the Town of Appomattox determined that a necessary and vital step in communicating the value of walking and biking and creating a safe network is to create a connection to the local schools, students, and families. Therefore, as a component of creating the Town's Pedestrian and Bicycle Plan, the Town and Appomattox County School Division, in the fall on 2008 began the development of a Safe Routes to School Travel Plan for both the Appomattox Elementary and Appomattox Middle Schools.

The Appomattox Elementary and Appomattox Middle School Travel Plans aim to bring to fruition the following vision and goals:

**Vision:**

Appomattox will work to make walking and biking as a form of physical activity and as a means of transportation to community schools a norm in our community, thus improving the physical health of our youth.

**Goals:**

- Appomattox County students will have the opportunity to safely walk or bike to community schools as a daily transportation option.
- Our Safe Routes to School Program will result in fewer vehicles approaching the school in the morning and afternoon.
- By 2018, 10 years, our schools will be surrounded by a network of sidewalks, bike facilities, and trails that support safe non-vehicular access to the schools by students and families.

To achieve the vision and goal, the Plans present and address solutions to the issues that impede active alternative transportation as an option to access the area schools and seek to strategically solve any impediments. Each of the Plans provide an overview of activities within the following categories to eliminate barriers and promote encouragement and ultimately the actions of students and parents to begin walking and bicycling programs:

- Education Strategies;
- Encouragement Strategies;
- Enforcement Strategies;
- Evaluation Strategies; and
- Engineering Strategies.



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Development of each of the Travel Plans included a public outreach process and oversight of a steering committee. Public outreach and input included a public workshop held on October 2, 2008, Parent Surveys that were provided to all of the students attending the middle and elementary school, and a teacher survey that tallied the travel information of students over a three day period in October.

A complete copy of the Appomattox Elementary School Travel Plan and the Appomattox Middle School Travel Plan can be obtained through the following methods:

1. A hard copy of each Plan is available for viewing at the:
  - Town of Appomattox Administrative Office  
210 Linden Street  
Appomattox, VA 24522
  - Appomattox County School Division Administration Office  
316 Court Street  
Appomattox, VA 24522
2. An electronic copy of each Plan is available by contacting the Town of Appomattox Office at 434-352-8268; or
3. An electronic copy of each Plan is available on the Region 2000 Local Government Website at <http://www.Region2000.org>.



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## Appendix F Plan Resources

- Appomattox County Comprehensive Plan;
- Appomattox Heritage and Recreational Trail Plan – A Vision of Connectivity; 2007
- The Appomattox Greenways Master Plan – A Vision for Your Future; October, 2008
- Central Virginia Planning District Commission Regional Bicycle Plan; May 18, 2000
- Region 2000 Greenways and Blueways Plan; 2003
- Virginia Bicycle Facility Resource Guide; Virginia Department of Transportation, 2002
- Damascus Bicycle and Pedestrian Master Plan; August 2008
- Amelia Court House Village Pedestrian Plan; June 20, 2007
- City of Lynchburg Pedestrian Access Study, 2008
- Access Board Research website; <http://www.access-board.gov/research/roundabouts/bulletin.htm>
- Virginia Department of Transportation website; <http://www.virginiadot.org>
- Roanoke Valley-Alleghany Regional Commission Rural Bikeway Plan; 2006
- Alternative Transportation Funding Sources Available to Virginia Localities, Virginia Transportation Research Council, March 2006 (VTRC 06-R17)
- Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, 2000
- Connecting our Commonwealth – The Virginia Greenways and Trails Toolbox; Virginia Department of Conservation and Recreation, 2000