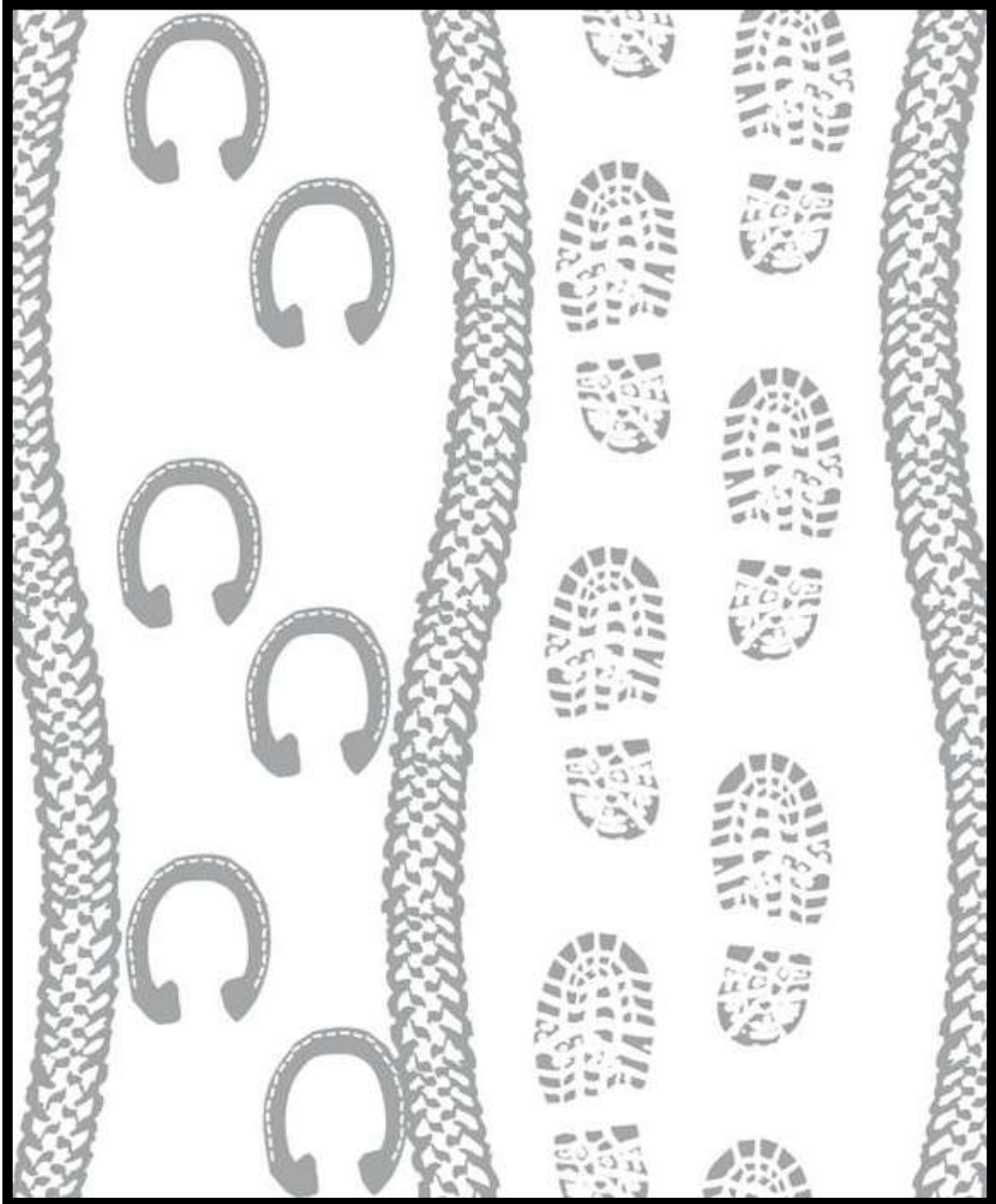


Countywide Park Trails Plan

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION



Montgomery County Department of Parks
Park Planning and Stewardship Division

**Approved and Adopted July 1998
As amended through September 2008**

Abstract

Title	Update to the Countywide Park Trails Plan
Author	The Maryland-National Capital Park & Planning Commission
Subject	Countywide Park Trails Plan Update in accordance with M-NCPPC Planning Board adoption of new Community, Park and Trail Corridor Master Plans
Date	September, 2008
Agency	The Maryland-National Capital Park and Planning Commission
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Abstract	<p>This Plan provides background materials, describes the planning processes and outlines a plan for the development of Countywide Park Trails in Montgomery County, Maryland. It contains materials on natural and hard surface trail corridors and planning, needs assessments and implementation strategies.</p> <p>The maps in this Plan are for use solely as a planning tool. Proposed trail routes indicate desire lines and should not be considered specific trail alignments. These routes require further study. Several of these routes are being studied and relevant master plans will determine the nature and location of the trail. Alignments will be selected and developed pursuant to the trail implementations and recommendations set forth in the Plan text, the Plan Implementation Guide, and applicable Local, State and Federal regulations.</p>



COUNTYWIDE PARK TRAILS PLAN



Prepared by

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Montgomery County Department of Parks
Park Planning and Stewardship Division

8787 Georgia Avenue
Silver Spring, Maryland 20910

Approved and Adopted July 1998
As Amended through September 2008

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Elizabeth M. Hewlett, Chairman
William H. Hussmann, Vice Chairman

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PART 1

Introduction

The *Countywide Park Trails Plan (CWPTP)* was initially adopted in 1998. The Plan proposed a 250-mile interconnected system of hard surface and natural surface trails of countywide significance. Since 1998, many amendments to the Plan have been adopted as part of more detailed Park and Community Master Plans. This edition of the *Countywide Park Trails Plan* reflects these amendments as of September 2008. Although the Plan focuses on trails within the more than 25,000 acres of parkland owned by The Maryland-National Capital Park and Planning Commission (M-NCPPC), some trails in parkland owned by Federal, State, and Municipal agencies have also been included.

The Plan also addresses the importance of facilities such as bike paths that are located outside of parkland but provide safe, attractive access to park trails.

History

Park trail planning in Montgomery County has a long tradition beginning in the 1930's with the planning and development of Rock Creek and Sligo Creek stream valley parks.

Over the years, trail planning has continued as master plans for different parts of the county and different parks have been completed. A Planning Guide to Trails was done in 1991 but focused primarily on trails within county parks and left the issue of connecting to trails and bikeways outside the park system largely un-addressed. A Staff Draft Update to this Guide was distributed in 1995 but the Update was never finalized.

The absence of an updated countywide concept for Trails has made it difficult to understand how a particular trail proposal relates to an overall county system and has made prioritizing funding for trails difficult.

In the summer of 1996, the Montgomery County Planning Board recognized the need to comprehensively examine all these planning efforts and establish from them an integrated, countywide vision for park trails. The Planning Board directed staff to prepare a plan of trails of countywide significance. This Plan is the result of that directive and has been reviewed and approved by The Planning Board.

What this Plan IS - and What this Plan is NOT

This Plan IS a concept plan that:

- **Proposes an overall vision for Countywide Park Trails.**
- **Identifies potential trail and bikeway linkages between key destinations.**
- **Relies on approved and adopted master plans as a starting point.**
- **Proposes routes and corridors that are of countywide significance.**
- **Focuses on hard surface and natural surface trails.**

This Plan is NOT:

- **A detailed plan of trail alignments that have been field checked and approved by all involved.**
This level of analysis will occur sometime after the concept plan has been approved. Potential connections must be subjected to an analysis of alternatives and appropriate environmental and engineering feasibility analysis.
- **A trail management plan that designates which user groups should use which trails.**
This Plan focuses on two major types of trails: hard surface and natural surface. Decisions about what user groups should be allowed on what trail must await more detailed planning. Guidelines for making these decisions are included in the Plan
- **An acquisition plan.**
This Plan does recommend some trail corridors in areas not owned by the public. Determining the appropriate location of a trail and whether easements could be used in lieu of purchase should be made in the context of subsequent trail studies and future master plans.
- **A comprehensive map of all the recreational trails and bikeways in Montgomery County.**
This Plan focuses on trails of **countywide significance**. There are many trails (such as public use easements obtained for equestrian enjoyment) and bikeways that exist or are planned which are not reflected in this Plan. The intent of this Plan to reflect “big picture” concepts and to rely on local master plans and park master plans to show the complete local network.
- **Everyone’s ideal plan.**
Preparation of this Plan included numerous public meetings and workshops. Although there seems to be general agreement that a comprehensive concept plan like this is needed, individual comments vary as to what this Plan should include and propose. The concepts proposed in this Plan are intended to strike a balance among all viewpoints heard during the Plan process.

Terminology

In terms of park trails, this Plan uses the terms “hard surface” and “natural surface” trails rather than “paved” and “unpaved.” Hard surface trails may include paved surfaces but they may also be any firm and stable surface capable of supporting most on-road or hybrid bicycles (the C&O Canal towpath, for example). Natural surface trails are typically narrow (2-4 feet wide) dirt trails. Surfaces may include wood chips or stones. These trails generally involve no major tree cutting, but may involve water bars, stairs, boardwalk or erosion control measures, where necessary.

In terms of non-park trail connectors, this Plan identifies bikeways, public use easements, utility rights-of-way and sidewalks as ways of providing safe and attractive access to park trail corridors.

Planning Process and Public Involvement

The Countywide Park Trails Plan planning process is shown in [Figure 01](#). Public input has guided the development of the trail concepts contained in this draft. A complete list of meetings and other activities is included in the [Technical Appendix](#).

Figure 01 - Plan Process

Countywide Park Trails Plan Process
Plan Process Initiated (August 1996)
Staff Draft Plan (September 1997)
Public Hearing Draft Plan (December 1997)
Planning Board Public Hearing (January 1998)
Planning Board Worksessions (February - July 1998)
Planning Board Approval (July 1998)
Updated (March 2004)
Updated (September 2008)

Relationship to the General Plan Refinement of the Goals and Objectives for Montgomery County

As with most planning efforts in Montgomery County, this Master Plan relies on the County’s General Plan for guidance. Originally adopted in 1964 and amended in 1993, the General Plan establishes the vision for the County’s future, taking into account land use, housing, employment, transportation, community facilities and the environment. A summary of the General Plan Refinement Goals related to this Plan is included on the next page in [Table 1.1](#)

Relationship to Regional Trail Network

The trail network does not stop at the County borders. Many of the trails described in this Plan connect to similar facilities outside Montgomery County.

Using these existing and proposed connections, hikers, cyclists, and other trail users can reach trails and bikeways of regional and even national significance. This Plan seeks to reinforce the county’s links to the regional trail system. Major regional trails are shown in [Figure 02](#). Descriptions of the regional trails and how they link to Montgomery County trails is discussed below.

- **C&O Canal Trail**

One of the oldest trails in the region, the C&O Canal Trail runs from Georgetown to Cumberland, Maryland. The canal corridor is managed by the National Park Service as the Chesapeake and Ohio Canal National Historical Park. The hard-packed soil of the towpath allows for use by most bicycles as wells as hikers and other uses. Montgomery County residents can access the trail at several spots including Great Falls Tavern Visitor’s Center Park. The Capital Crescent trail parallels the towpath for 2.5 miles between the Key Bridge and Fletcher’s Boathouse with many connections in between. However, north and east of Fletcher’s Boathouse, connections between trails in Montgomery County and the towpath are more difficult and less direct.

- **Mount Vernon Trail**

The Mount Vernon Trail runs from Theodore Roosevelt Island to Mount Vernon along the west bank of the Potomac. Connections to Montgomery County include the Capital Crescent and Rock Creek Trails via the Key Bridge and Memorial Bridge respectively.

- **Washington and Old Dominion Trail**

Combined with Arlington Virginia’s Four Mile Run Trail, the W&OD trail stretches from the Mount Vernon Trail along the Potomac to Bluemont, Virginia in Loudon County. The W&OD trail can be reached from Montgomery County through DC via the Rock Creek or Capital Crescent Trails and one of several bridges crossing the Potomac to Arlington, or via ferry at White’s Ferry to Leesburg.

- **Monocacy Scenic River Greenway Trail**

Frederick County has proposed a greenway and trail along with Monocacy River, which flows from Pennsylvania to the Potomac River at the Montgomery County Border. Such a trail would link the C&O Canal, Sugarloaf Mountain Park, the Monocacy Natural Resource Management Area, and Buckeystown Community Park. Montgomery County residents could access the proposed trail from the C&O Canal towpath.

- **Rock Creek Trail**

The Rock Creek Trail in Montgomery County terminates at Beach Drive at the District of Columbia border,

- **Capital Crescent and Metropolitan Branch Trails**

These trails, described in more detail later, are the backbone of the down-county system and important connections to the District of Columbia.

- **Anacostia Trail System**

Prince George’s County recently completed the Anacostia Tributary Trail System, a network of paved trails in the Northwest Branch, Sligo Creek, Northeast Branch, Indian Creek and Paint Branch stream corridors. Some of these trails are part of the coast-to-coast American Discovery Trail. Montgomery County residents can access the trail system from Sligo Creek or Northwest Branch Trails. This Plan also shows a desire line along the Paint Branch that would connect into the Anacostia Tributary trails.

- **Washington, Baltimore and Annapolis Trail**

The proposed WB&A rail trail runs along an old trolley line from the Glenarden (near the Beltway in Prince George’s County) to the Baltimore and Annapolis Trail in Anne Arundel County. Both Anne Arundel and Prince George’s Counties have budgeted money for design and construction of the trail. Montgomery County residents will be able to use the Anacostia tributary system to reach the WB& A Trail.

Table 1.1: General Plan Refinement of the Goals, Objectives & Strategies Related to Trails

<p>Provide a coordinated and comprehensive system of parks, recreation and open space (Land Use Objective 8).</p> <ul style="list-style-type: none"> ● Give priority to open space, park and recreation investment in areas with the greatest existing or proposed residential density and in areas with important environmental features. ● Use open space, parks, and recreation facilities to shape and enhance the development and identity of individual neighborhoods, cluster developments, existing communities, and transitions between communities. ● Integrate open space, parks and recreational facilities into urbanized areas to promote public activity and community identity. ● Plan for and encourage the provision of greenway to connect urban and rural open spaces, to provide access to parkland, to connect major stream valley park areas, and for recreational purposes such as walking and biking.
<p>Provide pedestrian and bicyclists safe, direct and convenient means of travel for transportation and recreation (Transportation Objective 6).</p>
<p>Connect parks and conservation areas to form an open space and conservation-oriented greenway system (Transportation Objective 2B).</p> <ul style="list-style-type: none"> ● Conserve County waterways, wetlands, and sensitive parts of stream valleys to minimize flooding, pollution, sedimentation, and damage to the ecology and to preserve natural beauty and open space (Environment Objective 4). ● Identify and protect wetlands and other sensitive parts of watersheds. ● Prohibit development too close to streams, in the 100-year ultimate floodplain, and in flooding danger reach areas of dams, unless no feasible alternative is available. ● Maintain the natural character of drainage areas in the immediate vicinity of streams, rivers and lakes. ● Minimize impacts from construction and operation of public and private facilities located in stream valleys, buffers and floodplains; first priority should be given to preserving natural areas (avoidance), second priority to mitigation, and third priority to replacement with functional equivalents. ● Mandate “no net loss” of wetlands.☒
<p>Preserve and enhance a diversity of plant and animal species in self-sustaining concentrations (Environment Objective 6).</p> <ul style="list-style-type: none"> ● Plan a system of parks, conservation areas, subdivision open space, and easements to support a diversity of species in self-sustaining concentrations. ● Ensure protection of environmentally sensitive habitats and un-buildable land through the master plan and development review process. ● Minimize forest fragmentation to protect habitat continuity.

Figure 02 - Regional Trails Map

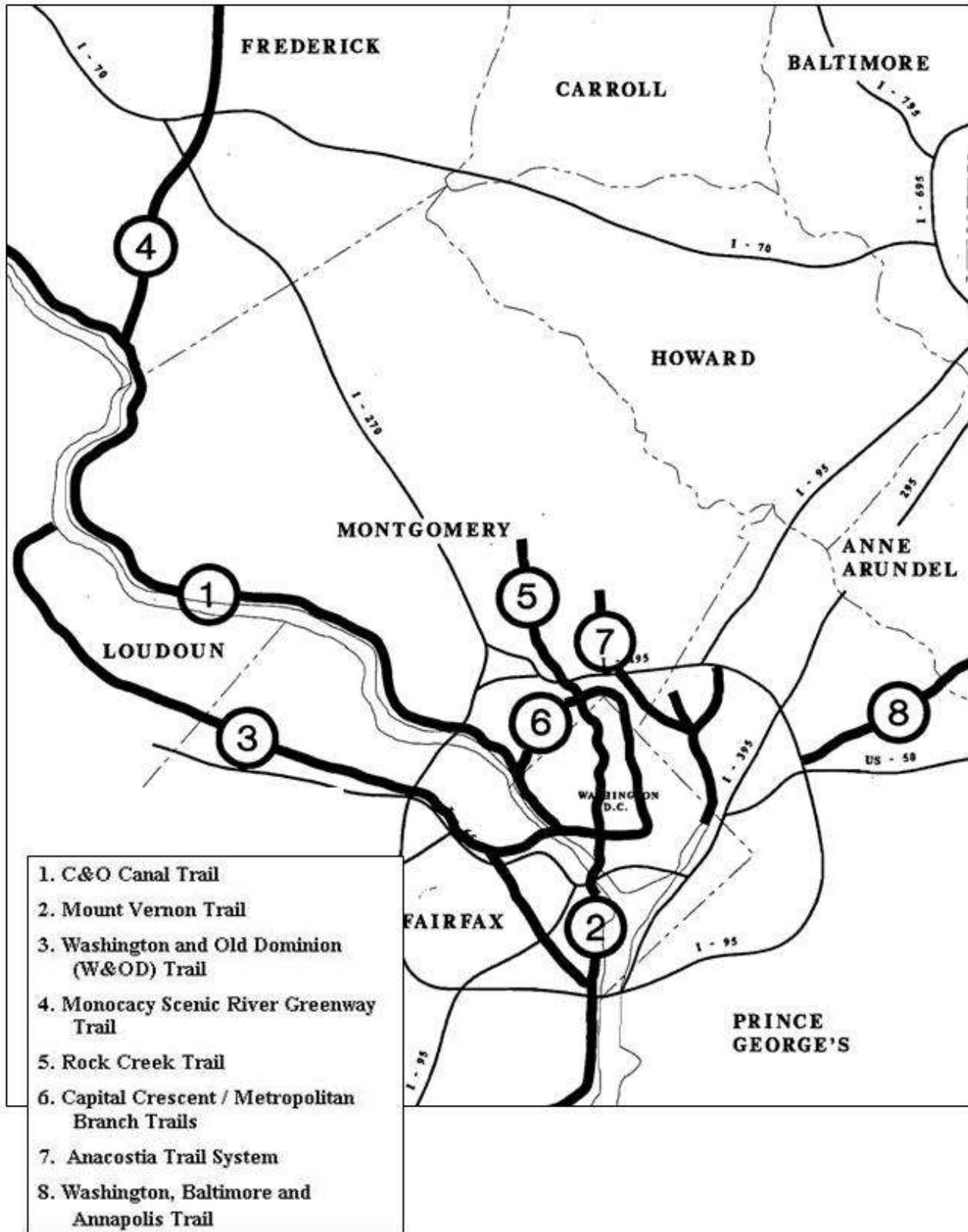


Figure 03 - Regional /Recreation Park Destinations

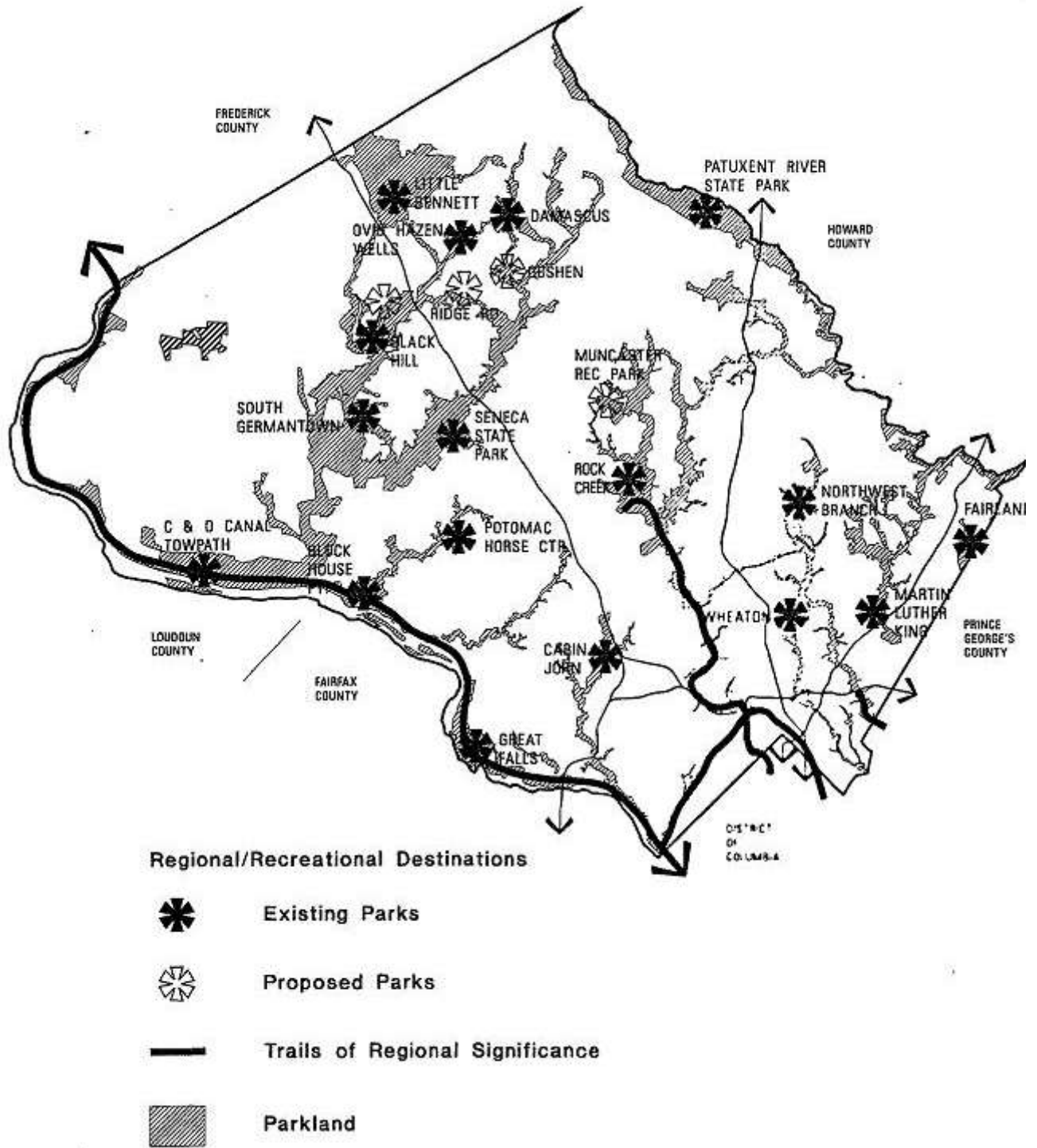
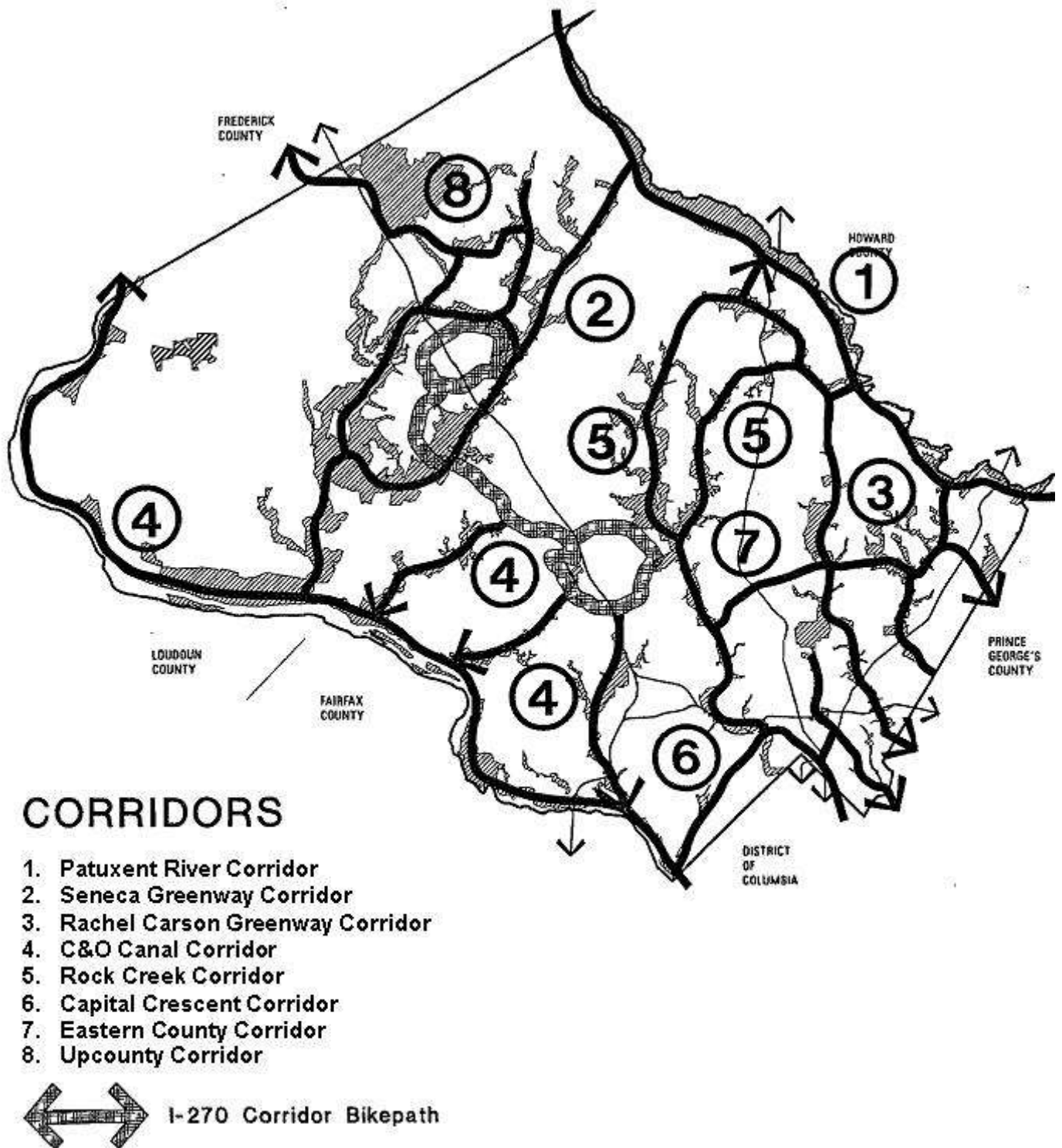


Figure 04 - Countywide Trail Corridors



Plan Concepts

Guiding Principles

The following principles have guided preparation of this Plan:

- **Maintain a Countywide perspective**
- **Emphasize connectivity**
- **Provide variety**
- **Establish guidelines to aid decisions at the local planning level**
- **Seek balance among recreation, transportation and environmental concerns**
- **Establish the priority of key components of the Countywide network**
- **Designate a network which is responsive to population centers, both existing and planned recommend implementation strategies**

Trail Destinations

Parkland in Montgomery County totals over 50,000 acres (*see Table 1.2 below*).

The largest component of the park system consists of over 31,000 acres owned by M-NCPPC. The M-NCPPC park system is categorized into different park “types” for planning purposes. Larger parks that serve countywide recreation or conservation needs include regional, recreational, special, conservation, and stream valley parks. These parks contain more than 25,000 acres, over 90% of the total acreage owned by M-NCPPC.

This Plan identifies many of these countywide parks as destinations for purposes of trail planning (*see Figure 03*). These park destinations are the basis for a comprehensive, countywide park trail system

Table 1.2: Park Acreage

2003 PARK ACREAGE	
Agency	Acres
M-NCPPC	31,800
State of Maryland	12,3673
National Park Service	3,146
Municipalities	1,401
Washington Suburban Sanitary Commission	3,100
TOTAL ¹⁵	1,814

Trail Corridors

The eight park trail corridors shown in *Figure 04* are keyed to parks and recreation areas of countywide significance, whether they are owned by federal, state, county or municipal agencies. The recreational trail corridors incorporate all the trail destinations and interrelate to create a natural surface and hard surface trail network for the county.

The Plan objectives for each of the trail corridors are shown in *Table 1.3*.

The Patuxent River, Seneca Greenway, Rachel Carson Greenway and C&O Canal Corridors include the most important elements of the proposed natural surface trail network.

The Rock Creek, Capital Crescent, Eastern County and Upcounty Corridors include the most important elements of the hard surface trail network.

Table 1.3: Trail Corridors and Related Plan Objectives

TRAIL CORRIDORS	PLAN OBJECTIVES
1 Patuxent River	Provide a continuous natural surface trail system along the river.
2 Seneca Greenway	Provide a continuous natural surface trail from the Potomac to the Patuxent.
3 Rachel Carson Greenway	Provide a natural surface trail that provides a high-quality passive recreational experience.
4 C&O Canal	Improve trail connections to the C&O Canal towpath.
5 Rock Creek	Expand the trail system in Rock Creek Regional Park northward to Olney and the Patuxent River and southward to the Potomac River.
6 Capital Crescent	Provide a continuous trail corridor through Bethesda and Silver Spring to the Metropolitan Branch Trail in the District of Columbia.
7 Eastern County	Enhance east-west hard surface trail connectivity between parks and park trail systems.
8 Upcounty	Provide a hard surface recreational trail to serve the existing and future residents of Germantown, Clarksburg and Damascus.

Natural Surface Trail Plan

The Plan concept for natural surface trails takes advantage of Montgomery County’s extensive frontage along two significant rivers: the Potomac to the south and the Patuxent to the north. The C&O Canal extends the length of the Potomac. The State of Maryland and the Washington Suburban Sanitary Commission own or intend to acquire most of the frontage along the Patuxent. Natural surface trails already exist in the state-owned portions of the Patuxent River waterfront.

This Plan:

- **Supports sustainable trails that accommodate appropriate trail uses with minimal impact to adjoining natural systems and cultural features.**
- **Proposes a natural surface trail system along the entire length of the Patuxent River.**
- **Proposes three cross-county natural surface trails to link the Potomac and Patuxent Rivers (see Figure 05):**

The **Rachel Carson Greenway Corridor** includes a natural surface trail that extends from the Capital Beltway to the Patuxent River.

The **Muddy Branch-Watts Branch Rock Creek Corridor** is largely in public ownership. The City of Gaithersburg has designated the Muddy Branch stream valley a part of the City’s greenway system. Gaps in trail connectivity in northern Olney are being addressed as part of the subdivision review process; public use easements are being obtained as development occurs. Gaps in the Shady Grove area will need further study.

The **Seneca Greenway Corridor** is already owned by public agencies and only one “gap” near the Patuxent River needs to be closed to make the greenway continuous from the Potomac to the Patuxent.

- **Proposes natural surface trail access be improved to the C&O Canal.**
- **Proposes trails associated with the Underground Railroad in Montgomery County be identified and integrated into trail planning for Montgomery County.**
- **Recognizes natural surface trails may be single-use (such as hiking only) or shared use (hiking, horseback riding, and cycling, or hiking and horseback riding, or hiking and cycling).**

Hard Surface Trail Plan

Hard surface, multi-use trails are increasingly popular in Montgomery County with cyclists, walkers and in-line skaters (depending on surface type). This Plan seeks to enhance the hard surface trail system, particularly in the Upcounty where such facilities are scarce. The Plan's intent for the Downcounty is to improve connections between existing trails (some of which were built in the 1930's) and to extend trails to population centers like Olney.

The proposed Upcounty and Downcounty trail networks are connected by a bike path, which adjoins roadways in the I-270 Corridor.

This Plan:

- **Proposes an Upcounty hard surface trail system to serve the residents of Germantown, Clarksburg, and Damascus (see Figure 06).**

Although the *Germantown Master Plan* addresses pedestrian circulation in great detail and the planning area enjoys an extensive network of bike paths along roadways, the Germantown area does not have many recreational trails for cyclists and walkers. This Plan suggests a hard surface recreational trail concept that includes the Clarksburg Greenway Concept proposed in the *1994 Clarksburg Master Plan*, the existing Magruder Trail in Damascus; the North Germantown Greenbelt and a portion of the Seneca Greenway.

- **Recommends a hard surface trail system for Downcounty which links the existing Sligo Creek, Rock Creek, and Capital Crescent hiker-biker trails to proposed trails in the eastern portion of the County (Montrose parkway, Matthew Henson Park, and the ICC right-of-way).**
- **Recommends hard surface trail access to the C&O Canal towpath be improved west of I-270.**
- **Recommends that an already planned and largely implemented bike path in the I-270 Corridor link the Upcounty and Downcounty hard surface trail systems.**
- **Does not distinguish between paved or packed surfaces.**

The type of trail surface should be determined by studies that are more detailed at time of trail design.

Figure 05 - Natural Surface Trail Plan Connectivity to Potomac & Patuxent Rivers

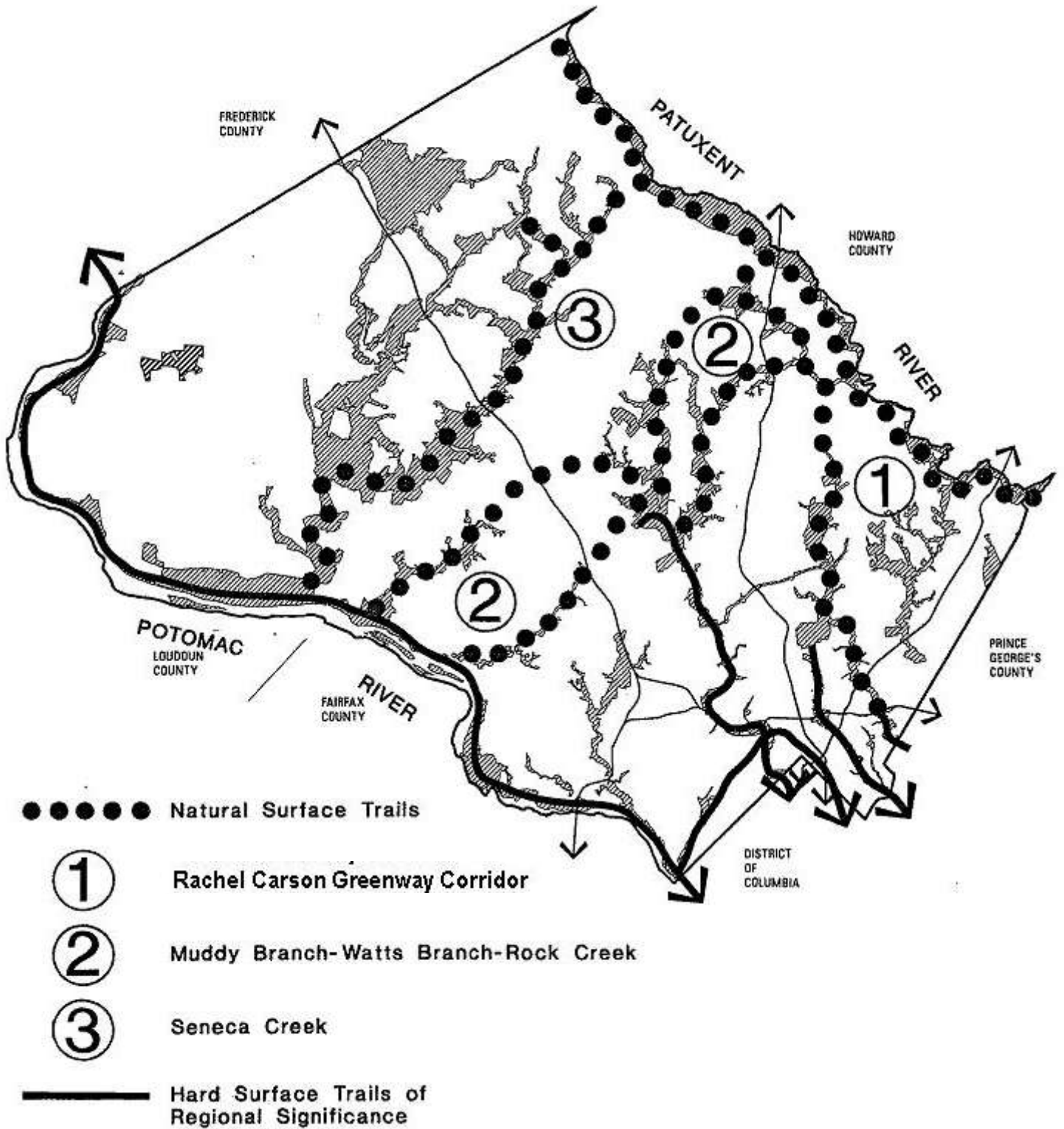
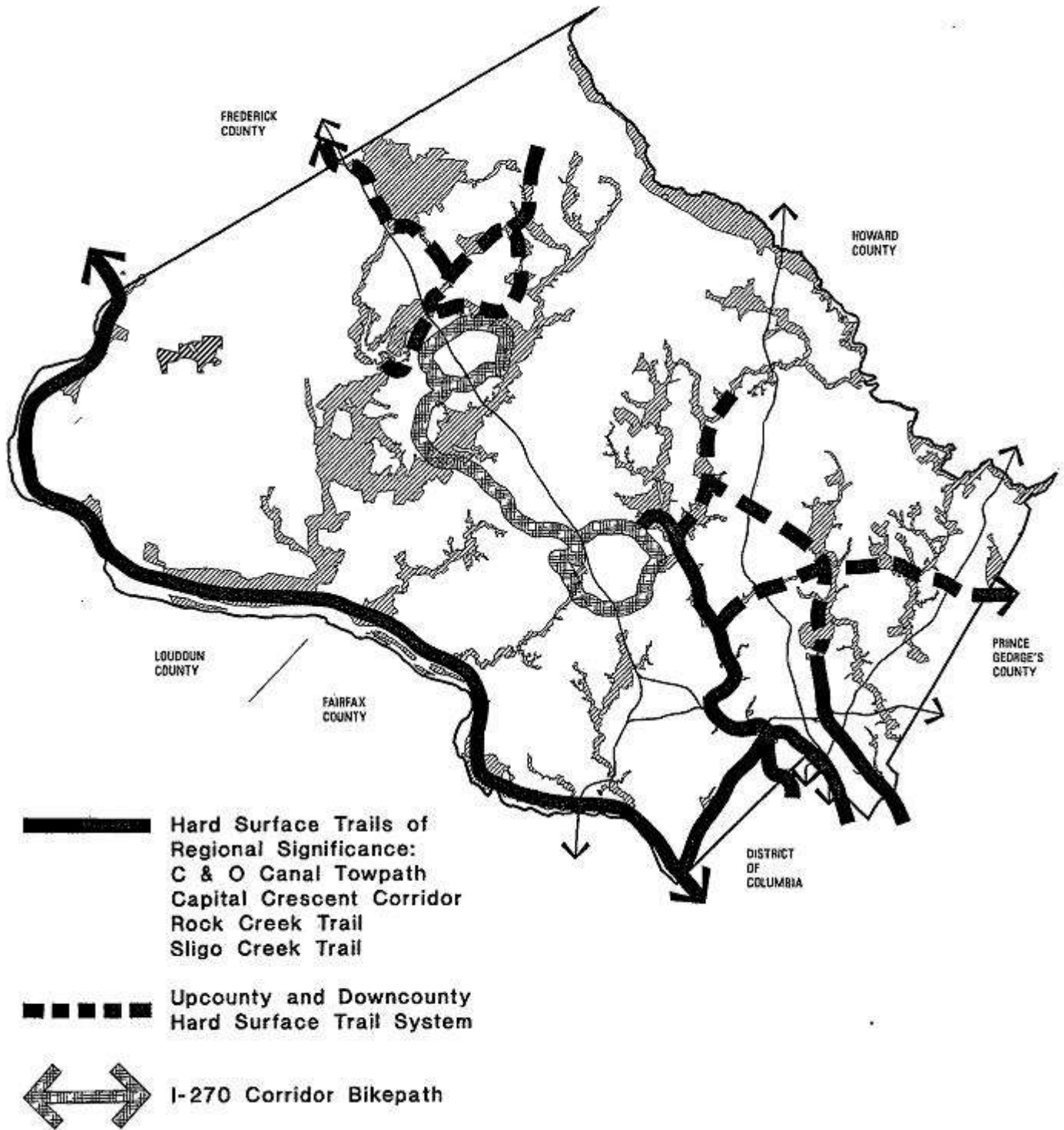


Figure 06 - Hard Surface Trail Plan: Interconnected Upcounty & Downcounty Trails



Non-park Trail Connectors

This Plan focuses on park trail “corridors.” For the most part, land in these corridors is either owned or envisioned to be owned by federal, state, or local governmental agencies. When this is not the case, trail connectivity will depend on non-park trail connectors such as:

- **Bikeways**
- **Public Use Easements**
- **Utility Rights-Of-Way**
- **Sidewalks**

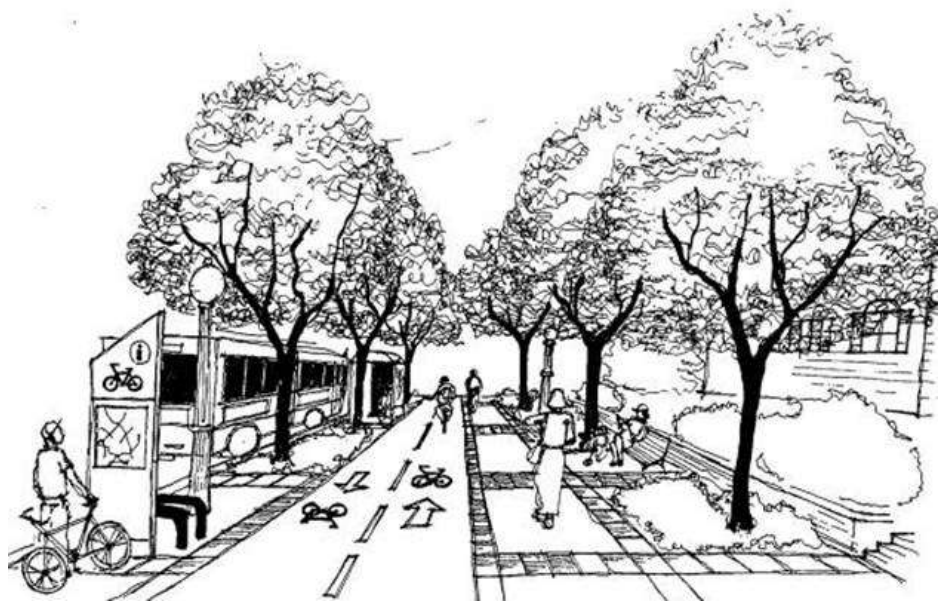
All four types of connections are essential to achieve a comprehensive network of countywide trails.

The illustration below is an example of how a public road right-of-way can be re-designed to serve as a safe, attractive connection between park trails.

The Wayne Avenue Green Trail, proposed in the *Silver Spring Master Plan*, will link the Rock Creek and Sligo Creek regional trails. The Wayne Avenue right-of-way will be reconfigured to provide separate trails for pedestrian and cyclists while still accommodating bus and automobile traffic. The Green Trail will consist of a two-way bike path and a separate sidewalk flanked by two rows of trees.

In the Western part of the County, public use easements will help provide a 220 mile regional trail system that will eventually connect the Woodstock Equestrian Park to the C&O Canal, Sugarloaf Mountain, Black Hill Regional Park, Bucklodge Conservation Park, Little Bennett Regional Park, Rickman Farm Horse Park, and Seneca State Park. Many of the future trail corridors rely on property owners allowing narrow trail easements through their properties. As much as possible, trail corridors are located through existing and future parkland that has been determined to be appropriate for equestrian trail development. The proposed trail pattern is shown in the following chapter titled, “*Bikeways and Other Non-Park Connectors*” in [Figure 17](#).

Illustration of a non-park trail connector in an urban setting.





Trail Recommendations by Corridor

Overview

This Plan identifies eight significant trail corridors oriented to recreational and regional parks and Plan objectives for each (*see Figure 04*).

These corridors are the basis of a long-range vision for a well-planned, organized, well maintained, and accessible trail network. This Plan focuses on trails of countywide significance and builds upon existing or planned trail systems. New trails are proposed to extend trail systems, to provide new trail opportunities for existing and/or planned population centers, or to improve access to key recreational destinations. This Plan recommends generalized trail routes within each corridor. These routes are conceptual.

The level of field work and site analysis associated with trail location and design is beyond the scope of this Plan. More detailed planning and design studies will be needed. The Trail Corridor Plans and Implementation chapters discuss how and when these studies will be undertaken.

Plan Analysis

This section describes the process used to arrive at this Plan’s recommendations.

Step #1: Identify Key Destination Points

- **The key destinations for the trail corridors are shown in *Figure 3* and include:**
- **Major parks including Recreational and Regional M-NCPPC Parks as well as State and municipal parks;**
- **The Potomac River (C&O Canal);**
- **The Patuxent River; and**
- **Existing or planned park trails.**

Step #2: Designate Corridors Which Link Key Destinations

After identifying destinations, potential linkages or corridors between the key destinations were mapped. Corridors may function as links between destinations but also as destinations themselves.

The Park Trail Corridors are depicted in *Figure 04*.

Step #3: Identify Generalized Trail Routes within Each Corridor

This Plan proposes generalized trail routes within each of the corridors for further study. These trails are discussed by corridor in the next section.

Step #4: Relation of Environmental Concerns to Trail Planning and Design

During the Master Plan process, public concern arose over environmental and other impacts of the proposed trails. It should be emphasized that the proposed trails, as described in the text and depicted on the maps are not specific alignments and are subject to further review of their feasibility. The feasibility review should consider a range of options that avoid environmentally sensitive areas.

Environmental concerns, which need to be addressed as trails are implemented, include:

- **Protection of stream and stream valley quality**
- **Protection of wetlands and other environmentally sensitive areas**
- **Protection of rare, threatened, or endangered plant and wildlife species**

In the discussion that follows, environmental features needing attention as planning proceeds are identified for each trail corridor. How environmental issues should be addressed and balanced with other planning objectives is discussed in more detail in the Corridor Planning chapter and in Appendices A, B, C and D.

The Trail Corridors shown in *Figure 04* are discussed in this chapter.

Corridor 1: Patuxent River

Plan Objective: Provide a continuous natural surface trail along the Patuxent River.

The extensive frontage along the Patuxent River is owned by two public agencies. The Washington Suburban Sanitary Commission (WSSC) owns approximately 2200 acres extending from the Prince George’s County line to Georgia Avenue (*see Figure 07*). The WSSC acquired and manages this waterfront acreage to protect two important water reservoirs: Triadelphia Reservoir and Rocky Gorge.

The balance of the Patuxent River acreage is owned or will be owned by the State of Maryland and managed by the Maryland Department of Natural Resources (DNR) as the Patuxent River State Park. Roughly, half of the 6,647-acre park falls in Montgomery County and half is in Howard County.

Several trail corridors proposed by this Plan terminate at the Patuxent including the Seneca Greenway, Rock Creek and Northwest Branch corridors. A natural surface trail system along the Patuxent would link all these trails.

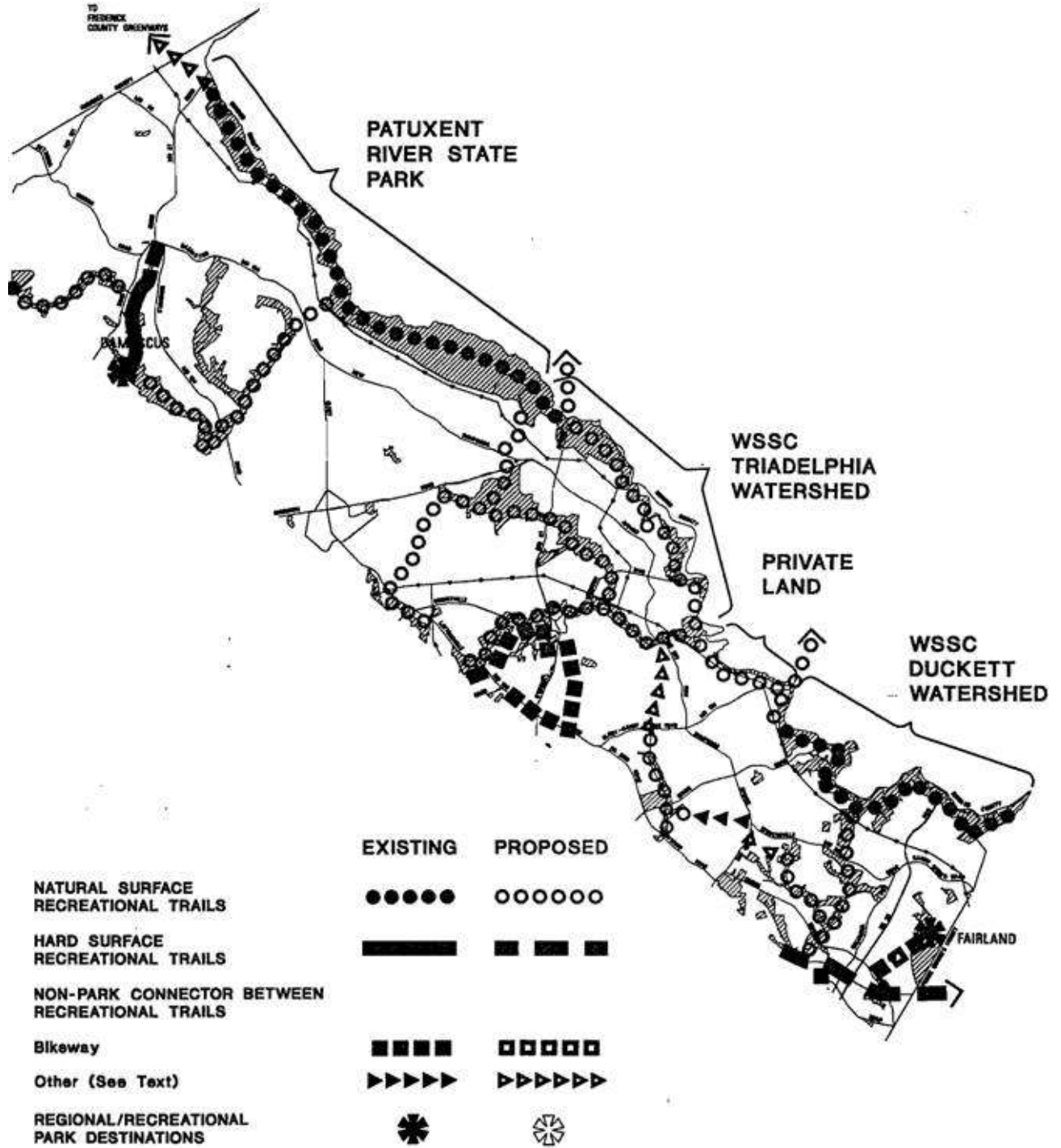
Existing Conditions and Plans

WSSC allows limited recreation in both Patuxent Watersheds. The Duckett Watershed contains an equestrian trail for most of its length on the Montgomery County side of the River. The Triadelphia Watershed contains a short nature trail at its western end as well as informal trails throughout the watershed, and a dirt road that runs along the perimeter of the watershed property boundary.

WSSC has not determined whether a formal trail the length of their watershed is desirable due to potential erosion and lack of resources for the maintenance of trails. M-NCPPC will continue to work with WSSC and its citizens’ advisory boards to address their concerns and pursue the possibility of a more extensive, formal trail system.

Northwest of the WSSC land lies the Patuxent River State Park, a relatively undeveloped park with limited public facilities. About 1,800 of the 6,647 acres are designated as State wildlands, where DNR only allows activities “consistent with wilderness character of the area, including hunting, fishing, trapping, hiking, horseback riding, nature interpretation, bird watching, research, and appreciation of natural processes.” Informal trails run throughout the State land, but there is no designated trail through the Patuxent corridor. DNR is not opposed to such a trail Concept. However, because Patuxent River State Park currently receives minimal staff time and funding, the State could not undertake the development and maintenance of a trail.

Figure 07 - Corridor 1: Patuxent River Corridor



Recommendation

- **Explore with representatives from M-NCPPC, WSSC, and the State of Maryland, how a continuous natural surface trail system could be provided along the Patuxent.**

Where State or WSSC-owned land is too narrow or constrained to support a trail, explore whether trail connections could be provided on private

Issues Needing Further Study

- **Extending trail system through land not owned by public agencies.**
- **Trail maintenance**
- **Connection to other trail corridors**
- **WSSC policies toward trails in watersheds**

Inter-agency coordination for trail development, maintenance and management

Corridor 2: Seneca Greenway

Plan Objective: Provide a continuous natural surface trail in the Seneca Greenway from the Potomac to the Patuxent.

Existing and planned State and County parkland combine to form a 30-mile greenway along Seneca Creek from the Potomac River to within one mile of the Patuxent River. About half of the corridor, from the Potomac to MD 355 is contained in Seneca Creek State Park. Most of the portion northeast of MD 355 is owned and managed by M-NCPPC as Great Seneca Extension Park and several properties within the Corridor north of Davis Mill Road are identified for future acquisition.

Existing Conditions and Plans

The Maryland Department of Natural Resources, in cooperation with volunteers from the Coalition for Seneca Creek Greenway Trail, has completed a 15-mile natural surface trail along Seneca Creek. The trail begins at the Potomac River near Riley's Lock on the C&O Canal and extends to a trailhead at MD 355 in Gaithersburg. With the help of volunteers, M-NCPPC has extended the trail another 10 miles

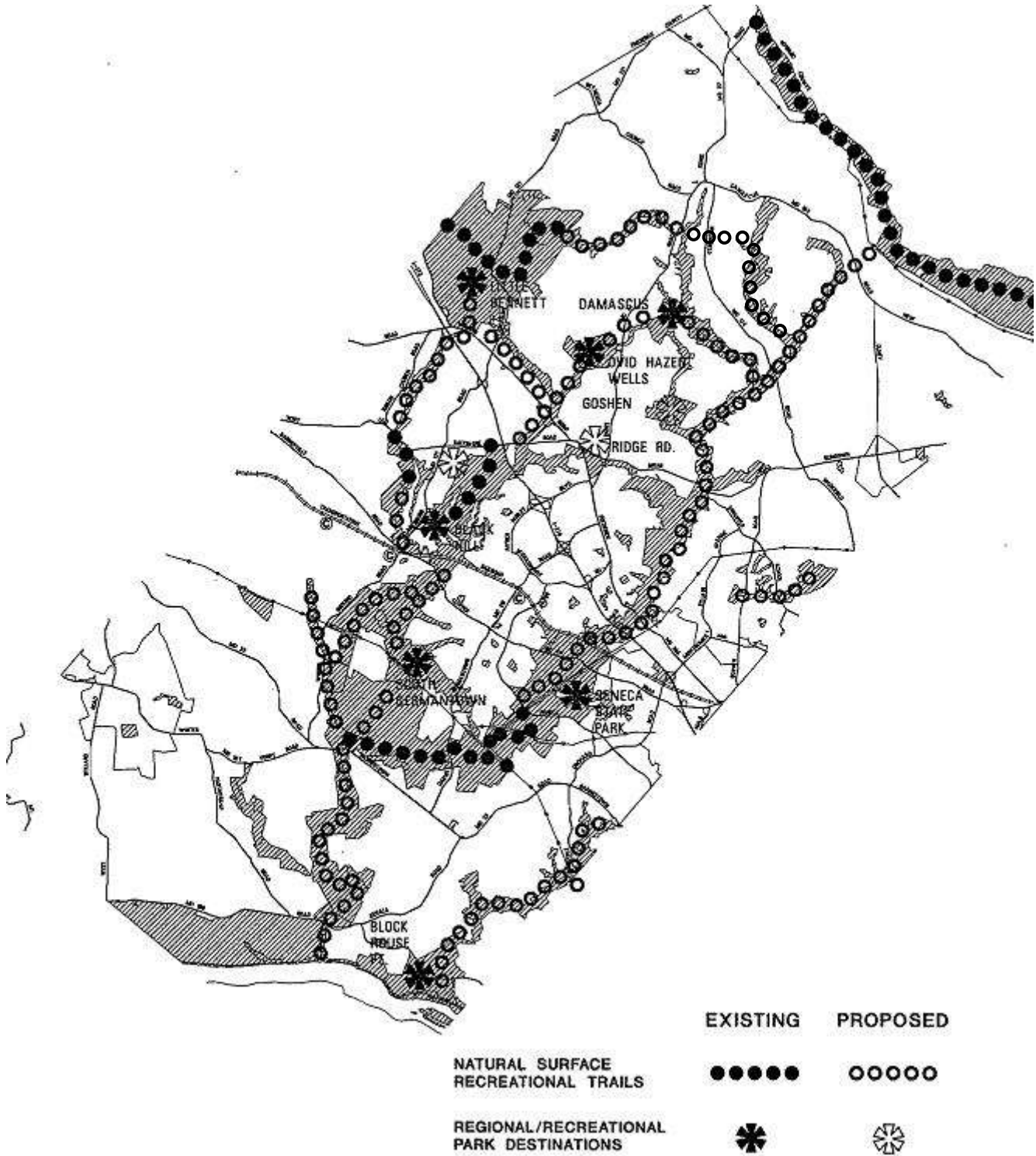
Recommendations

- **Complete a natural surface trail from Seneca Creek State Park through Great Seneca Extension Park to the Patuxent River (*see Figure 08*).**
- **Close the trail gap near the Patuxent River, the only gap in the Seneca Greenway Corridors.**
The only gap or break in the Seneca Greenway concept occurs between the M-NCPPC owned Great Seneca Extension Stream Valley Park Extension and the Patuxent River State Park. A strategy to close this gap needs to be explored, whether it is additional park acquisition or voluntary dedication of a public trail-use easement on private property.
- **Identify a desire line for a natural surface trail from the Seneca Greenway west to Little Bennett Regional Park.**

Support the efforts of private organizations and individuals seeking trail easements in this part of the county.

The alignment would be determined as public use easements are designated.

Figure 08 - Corridor 2: Seneca Greenway Corridor



Identify a desire line for a natural surface trail from Seneca Greenway eastward to the Rock Creek Corridor.

This trail would serve Montgomery Village and the upper Rock Creek area. The Green Farm Conservation Park would be an important link in this system.

- **Provide a hard surface trail connection from the trailhead parking lot on MD 355 to the proposed Upcounty Corridor.**

This Plan recommends a hard surface trail concept to serve the residents of the Upcounty (see Upcounty Corridor). This concept affects portions of the Seneca Greenway and is described more fully later in this chapter. Further study is needed of this concept, but it is the intent of this Plan to provide two trails: a hard surface trail and a natural surface trail in the County-owned Great Seneca Extension Park. This approach of providing two separate trails would be feasible in areas where a wide band of parkland is available but may prove more difficult where parkland narrows or where combinations of constraining conditions, such as steep slopes and large wetlands, present a barrier to implementation. In these areas, additional parkland may have to be acquired, or some neighborhood streets used for short distances.

Issues Needing Further Study

- **Any trail proposals for Little Seneca Creek from the B&O Railroad Bridge south of Little Seneca Lake downstream to the confluence with Bucklodge Branch must be**
- **Carefully evaluated since this is a Use-III stream area.**
- **Minimizing disturbance to Natural Heritage Protection Areas identified by Maryland Natural Heritage Program. There are five such protection areas in the Seneca Greenway Corridor.**
- **Safe Crossings of Roadways. Because the Seneca Greenway traverses densely populated areas along the I-270 Corridor, many major road crossings are involved. An underpass provides access below MD 355 and Great Seneca Highway, but more work is still needed to provide safe crossings on these roads and others such as Watkins Mill Road, Brink Wightman Road, Woodfield Road, Creamery Road and Damascus Road (MD 108). The DNR and the Coalition for the Seneca Creek Greenway Hiking Trail are resolving road crossings in the State Park for roads such as I-270, Clopper Road, and others.**
- **Analyzing of other potential constraints, such as steep slopes, rare and endangered species habitat, wetlands and forest interior bird habitat areas.**

Corridor 3: Rachel Carson Greenway

Plan Objective: Provide a natural surface trail from the Beltway north to the Patuxent River that provides a high-quality passive recreational experience.

The Rachel Carson Greenway extends 22 miles from the southern edge of the County northward to the Patuxent River. Originally referred to as the Northwest Branch Trail Corridor, the greenway was renamed to honor Rachel Carson, who lived in Montgomery County when she wrote *Silent Spring*, a book that exposed the dangers of modern pesticides. Carson is widely regarded as the founder of the modern environmental movement.

The southern part of the Greenway follows the Northwest Branch of the Anacostia River. Most of the stream valley lies in existing or proposed parkland. Because the stream and trail continue south into Prince George’s County and link with both Sligo Creek and the Anacostia River, Northwest Branch is a key component of the countywide trail system.

Northwest Branch is known for its diverse riverscapes and scenic areas, particularly south of Colesville Road, an area noted for its scenic beauty by Theodore Roosevelt. The stream is designated Use IV (Recreational Trout Waters) by the Maryland Department of Natural Resources, which stocks trout on a put-and-take basis. There are several areas of wetlands and sensitive species discussed in more detail below. In parts of the park, a “wilderness” feeling is created by the dense vegetation.

The northern part of the Greenway includes the Rachel Carson Conservation Park. Additional parkland is needed to extend the Greenway to the Patuxent River. In the Sandy Spring/Ashton area of the Greenway there are several historic homesteads, the Friends Meeting House, the Sandy Spring itself, and other sites that commemorate the area’s agrarian past and the County’s role in the Underground Railroad.

Existing Conditions and Plans

The portion of the Rachel Carson Greenway Trail Corridor currently owned by M-NCPPC extends from the Prince George’s County line to Woodlawn Manor Park in Sandy Spring, for a total length of 11 miles (*see Figure 9*). Existing and proposed unpaved trails extend nearly the entire length of Northwest Branch.

The *White Oak Master Plan*, which covers the Northwest Branch from the Beltway to the ICC right-of-way, shows an existing natural surface trail from the Beltway to Randolph Road and proposes a paved trail from Randolph Road north to the ICC right-of-way and improvements to neighborhood connections.

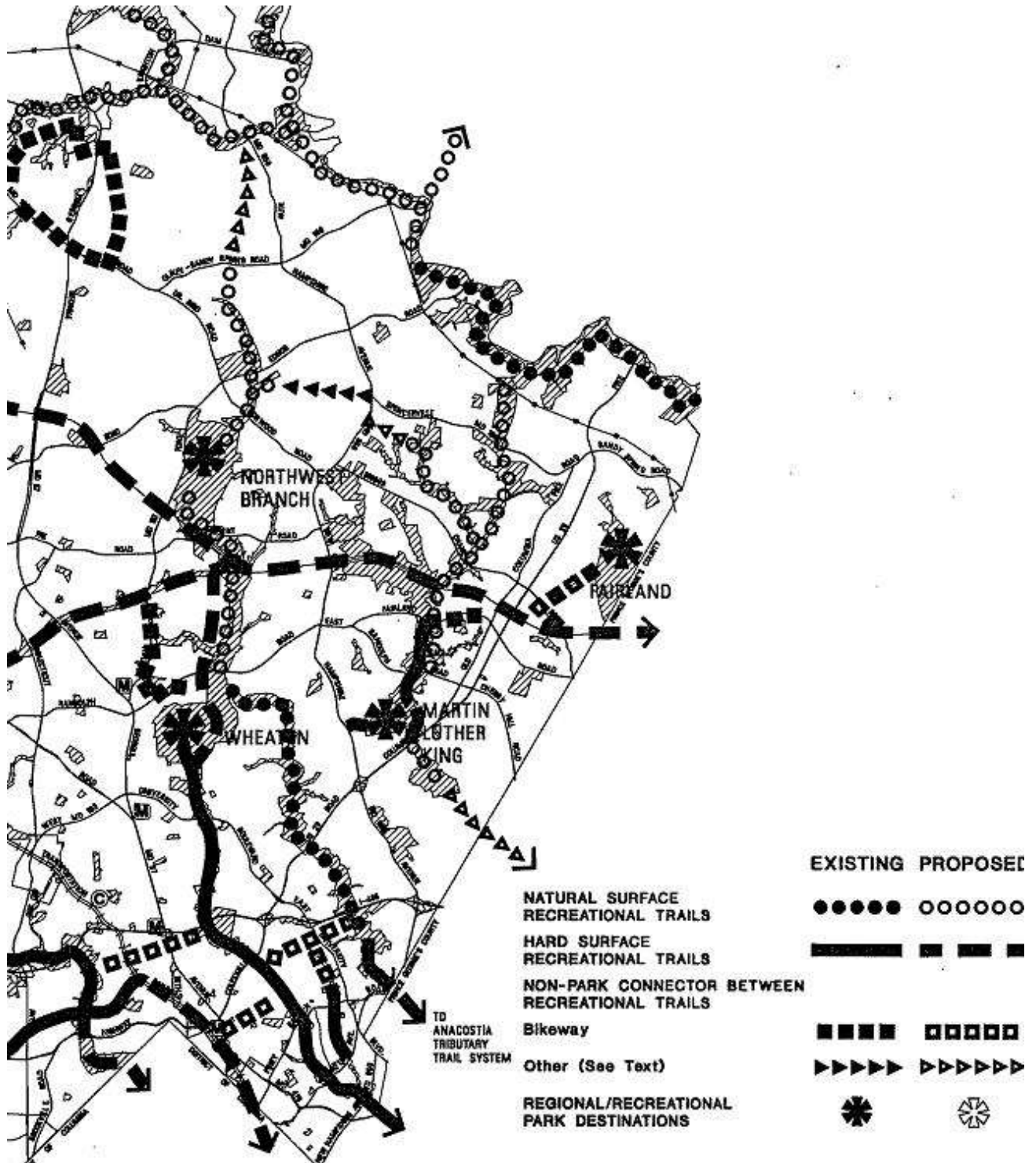
The *Cloverly Master Plan* recommends a bikeway between the ICC right-of-way and Ednor Road, the location and surface to be determined in an environmental feasibility study. Both plans reference the environmental sensitivity of the Northwest Branch and the potential conflict between intensive use and resource protection.

The *Sandy Spring/Ashton Master Plan* proposes a Rural Legacy Trail along the portion of Northwest Branch between Ednor Road and MD 108.

The *Rachel Carson Greenway Trail Corridor Plan* recommends the extension of the Rachel Carson Greenway north of MD 108 to the Hawlings River through public use easements or possible acquisition of land for a trail.

The *Cloverly Master Plan* proposes an equestrian trail connection between the Paint Branch main stem and Northwest Branch via the Left Fork and the equestrian trail in the Hampshire Greens Golf Course.

Figure 09 - Corridor 3: Rachel Carson Greenway



Recommendations

NOTE: See the Rachel Carson Greenway (RCGW) Trail Corridor Plan (June 2005) for detailed discussion of recommendations.

- **Provide a continuous 25-mile greenway corridor that will one day feature a natural surface trail its entire length.**
- **Provide trail locations that ensure the right balance between stewardship of natural and cultural resources and public access and interpretation.**
- **Develop signage and thematic programs focusing on appreciation of the natural world and interpretation of county history, culture and archaeology.**

Issues Needing Further Study

The following implementation issues are included in the RCGW Trail Corridor Plan. These issues will be addressed in more detail as the greenway trail system is implemented. Every other year the Planning Board establishes trail work program priorities. As part of this effort, the following implementation issues related to the Rachel Carson Greenway will be addressed:

- **What trail recommendations and trail segments should receive the highest priority?**
- **What is the best strategy for assuring the most effective management of the Rachel Carson Greenway?**
- **How can public/private partnerships help implement the vision for the greenway?**
- **How can safe crossings of roadways be provided?**

Corridor 4: C&O Canal

Plan Objective: Improve trail connections to the C&O Canal towpath.

The most significant trail in the western part of the County is the C&O Canal towpath (*figure 10*) managed by the National Park Service as the C&O Canal National Historical Park. The Canal towpath extends 180 miles from Washington, D.C. to Cumberland, Maryland; the portion of the trail in Montgomery County is approximately 38 miles in length. The C&O Canal towpath is a compacted mix of gravel and clay. An estimated 300,000 cyclists, pedestrians, and equestrians use the trail each year.

Existing Conditions and Plans

In the western, less densely populated portion of the County, hard surface trail access to the C&O Canal towpath occurs on roadways which cyclists share with motorists. Several scenic bike routes have been identified by M-NCPPC in the vicinity of the Canal.

In the more populated Potomac planning area, over 130,000 people live in residential communities within four miles of the C&O Canal towpath. Three linear M-NCPPC parks offer varying degrees of access to the towpath from these communities:

- **Cabin John Regional Park has a signed and maintained natural surface trail (5.8 miles in length), courtesy of the Potomac Appalachian Trail Club that extends to the Cabin John Local Park at MacArthur Boulevard. A Master Plan for Cabin John Regional Park is now underway and the need for an improved network of trails will be one of the issues studied. Passage from Cabin John Local Park to the C&O Canal is possible, but involves a dangerous crossing on MacArthur Boulevard and a steep combination of an informal dirt path and old steps in poor condition.**
- **Watts Branch Stream Valley Park contains an informal trail from the PEPCO right-of-way to just south of Piney Meeting House Road.**
- **Muddy Branch Stream Valley Park extends to Blockhouse Point at the C&O Canal towpath. In addition to the informal trails which run throughout Muddy Branch, there are some formal trails near the Maryland Horse Center and a formal trail system in Blockhouse Point Conservation Park. Federal, state, and M-NCPPC lands meet at the point where the Blockhouse Point trail meets the C&O Canal.**

All of the above trail systems which offer, or potentially offer, access to the towpath are natural surface.

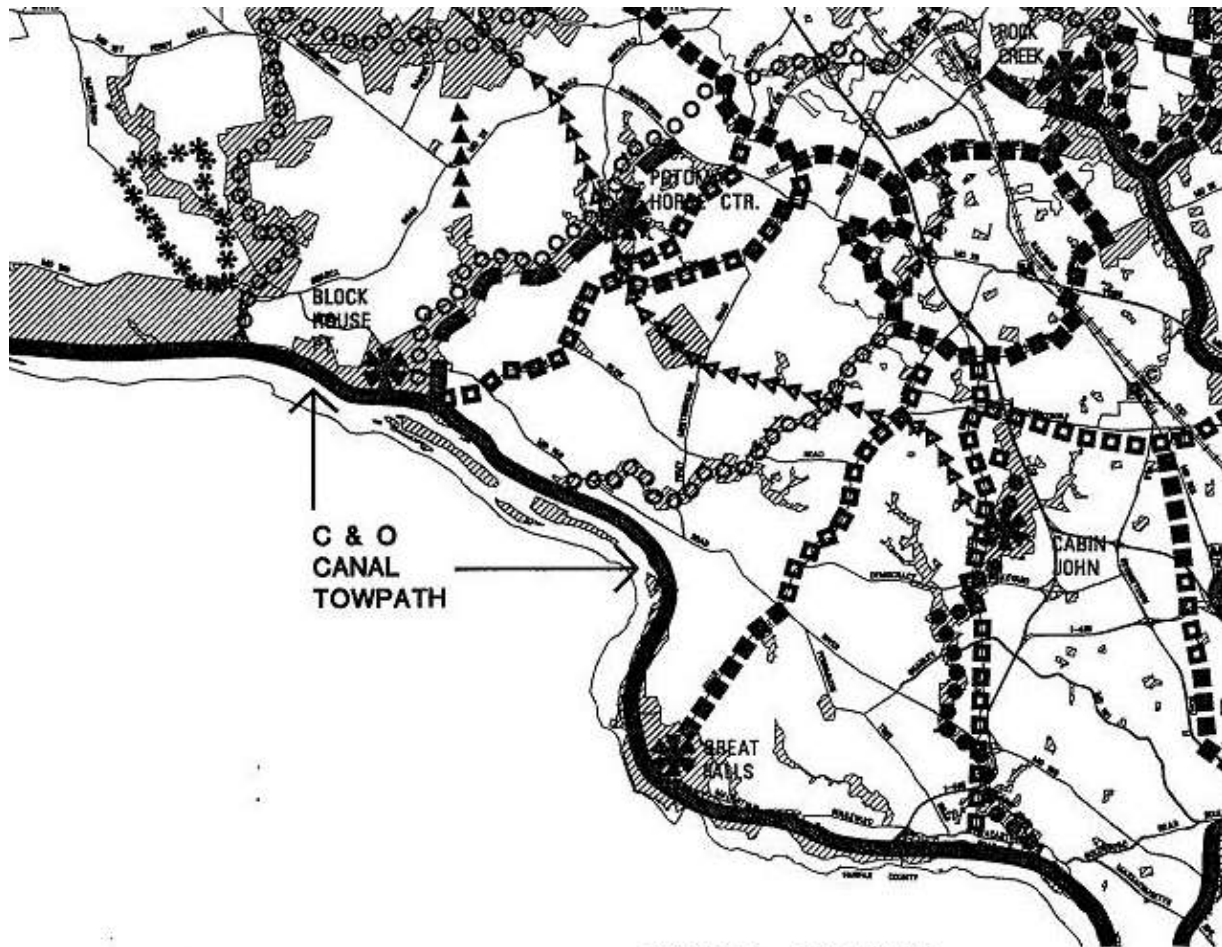
Recommendations

- **Rely on natural surface trails in the Muddy Branch; Blockhouse Point Conservation Park, Watts Branch and Cabin John Stream Valley Parks as the primary trail access to the C&O Canal towpath.**

Natural surface trails are located and used by the public in all three stream valley parks. In Cabin John, a natural surface trail extends the length of the stream valley and is formally maintained and signed. Trails in the Muddy Branch and Watts Branch parks are informal. This Plan recommends the pattern of informal, people's choice trails be evaluated and preferred alignments selected and signs be provided to guide trail users.

- **Retain a proposal for a hard surface trail in the upper portion of the Muddy Branch Stream Valley Park.**

Figure 10 - Corridor 4: C&O Canal Corridor



	EXISTING	PROPOSED
NATURAL SURFACE RECREATIONAL TRAILS	●●●●	○●○●○●
HARD SURFACE RECREATIONAL TRAILS	————	■ ■ ■ ■
NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS	■ ■ ■ ■	□ □ □ □
Bikeway	▶▶▶▶	▷▷▷▷▷▷
Other (See Text)	****	
ON ROAD SCENIC BIKE ROUTES		
REGIONAL/RECREATIONAL PARK DESTINATIONS	✱	⊗

This proposal will:

- **Provide a safe, attractive trail connection northward to the Gaithersburg Muddy Branch Greenway trail system**
- **Provide a connection to the I-270 Corridor bikeway**
- **Provide access to the C&O Canal towpath bike path in concert with a proposed bike path along Travilah Road.**

The hard surface trail proposal for Muddy Branch Stream Valley is discussed in more detail in the *Muddy Branch Stream Valley Park Trail Corridor Plan*. The trail concept for the park is shown **as Figure F.1**. A final decision as to whether or not to construct the hard surface trail should await completion of a Facility Plan to address the issues and concerns identified in the Corridor Plan.

- **Remove a hard surface trail proposal from the lower 2/3 portion of the Muddy Branch Stream Valley Park.**

The lower two-thirds of the stream valley is characterized by a wide, flat wooded floodplain, wetlands, wooded ravines, steep rock outcrops and high quality upland forest. The steepness in this portion of the stream valley would require switchbacks and extensive grading to accommodate a hard surface trail. For these reasons, a natural surface trail is more appropriate.

- **Implement the recommendation in the *Potomac Master Plan* to provide a bike path along Travilah Road.**

Providing a bike path along Travilah Road is critical to providing continuous access for hikers and cyclists to the C&O Canal towpath.

Issues Needing Further Study

- **Coordinate with State and federal agencies to provide natural surface trail access from the three stream valleys to the C&O Canal.**
- **Add the Muddy Branch hard surface trail to the Capital Improvement Program as a Facility Planning Project.**
- **Explore ways to improve trail connectivity to the cities of Rockville and Gaithersburg.**
- **Improve east-west trail connectivity between Cabin John, Muddy Branch and Watts Branch Stream Valley Parks. One possible option would be use of a power line right-of-way, which traverses all through parks**

Corridor 5: Rock Creek

Plan Objective: Expand the trail system in Rock Creek Regional Park northward to Olney and the Patuxent River.

The Rock Creek Corridor (*Figure 11*), which extends from the District of Columbia to the Patuxent River, includes both the main stem and North Branch of Rock Creek. A 14-mile hard surface hiker-biker trail and numerous informal natural surface trails exist in Rock Creek Stream Valley Park. The hard surface trail system in Rock Creek Regional Park extends from Lake Needwood to the District line. The *2008 Upper Rock Creek Trail Corridor (URCTC) Plan* consolidates all these trails into a unified trail network

Existing Conditions and Plans

A Master Plan for Rock Creek Regional Park was approved in 2000. Trail planning was an important component of the Plan. The *Rock Creek Regional Park Master Plan* recommends expansion of the hard surface (and natural surface) recreational trail system within the regional park, as well as beyond its boundaries. By connecting to proposed on-road bikeway connectors and by extending through both stream valley branches of Rock Creek: 1) Rock Creek S.V. Park as natural surface to Agricultural History Farm Park; and 2) North Branch S.V. Park as hard surface and natural surface to Olney and the Patuxent River.

Recommendations

- **Support the concept of a mid-county greenway trail corridor extending from the Potomac River to the Patuxent River (*Figure 06*).**
- **Support trail locations that achieve environmental stewardship objectives.**
- **Propose a series of trail loops within the corridor**
- **Recommend a hard surface trail connection from Rock Creek Regional Park to Olney.**
- **Recommend a natural surface trail network that accommodates hikers, equestrians and cyclists.**

Issues Needing Further Study

The following implementation recommendations are part of the *2008 URCTC Plan*:

- **Implement the trail connection of Lake Frank and Lake Needwood as an ICC community enhancement project.**
- **Prepare a natural surface trail assessment study for new trail proposals in the Upper Rock Creek Trail Corridor Plan**
- **Provide a continuous natural trail around Lake Frank**
- **Designate a continuous hard surface trail around Lake Needwood.**
- **Initiate a facility plan as the first step in providing a hard surface trail connection from Rock Creek Regional Park to Olney.**
- **Revisit the current master plan for George Carson Special Park.**
- **Implement a series of interconnected loop trails at time of subdivision and in accord with any related road improvements.**

Add interpretive signage related to historic mills as related trails are open to the public.

Figure 11 - Corridor 5: Rock Creek Corridor



	EXISTING	PROPOSED
NATURAL SURFACE RECREATIONAL TRAILS	●●●●	○ ○ ○ ○ ○
HARD SURFACE RECREATIONAL TRAILS	—————	— — — — —
NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS	▶▶▶▶	▶▶▶▶▶
Bikeway	■ ■ ■ ■ ■	□ □ □ □ □
Other (See Text)	▶▶▶▶	▶▶▶▶▶
REGIONAL/RECREATIONAL PARK DESTINATIONS	✱	✱

Corridor 6: Capital Crescent

Plan Objective: Provide a continuous trail corridor through Bethesda and Silver Spring to the Metropolitan Branch Trail in the District of Columbia.

The Capital Crescent Trail Corridor serves as the backbone of the trail system in southern Montgomery County (*see Figure 12*). The trail corridor follows an abandoned rail line that runs from Washington, D.C. to Silver Spring. From Silver Spring, it continues as the Metropolitan Branch along an active CSX rail line into the District of Columbia, terminating at Union Station. Over 115,000 county residents live within roughly one mile of the Capital Crescent/Metropolitan Branch corridor. Recreation destinations along the Capital Crescent include:

- **C&O Canal, a national park, canal, and trail that runs from Georgetown in the District of Columbia to Cumberland, Maryland.**
- **Little Falls Stream Valley Park which parallels the trail for two miles.**
- **Rock Creek Stream Valley Park with its trail south to Rock Creek National Park and north to Needwood Lake.**
- **Sligo Creek Stream Valley Park, which connects north to Wheaton Regional Park and south to the Anacostia system in Prince George’s County.**

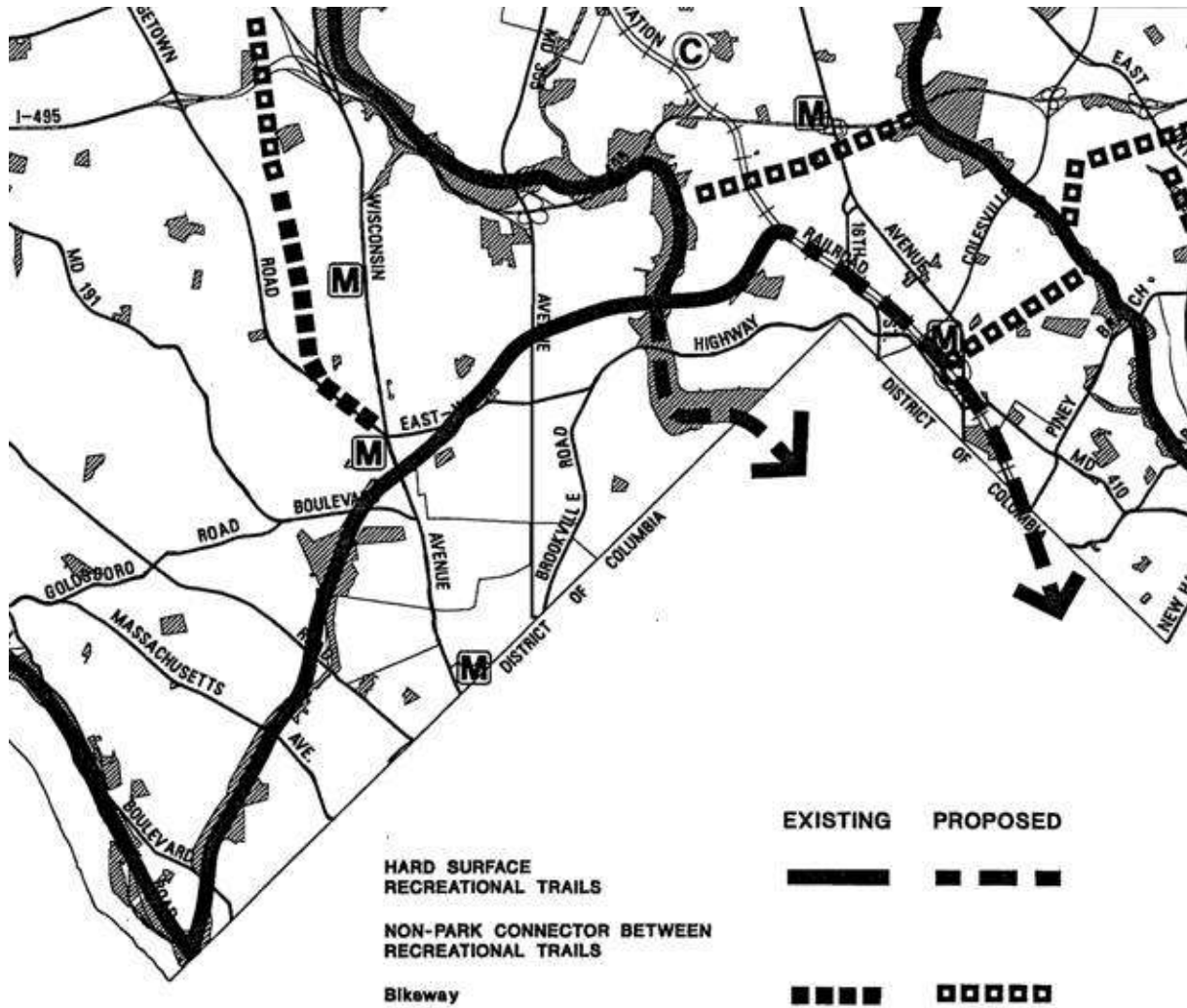
Existing Conditions and Plans

The first stage of the Capital Crescent Corridor, a hard surface 10-foot wide trail from Georgetown to Bethesda, completed in 1996, is already the most popular trail in the county and one of the busiest trails in the country. An interim trail made of crushed stone is in place from Bethesda to Silver Spring while state and county governments determine the fate of the proposed Georgetown Branch Transitway. All transitway alternatives include or allow for a trail. The Silver Spring CBD Plan of 1993 describes the proposed route of the Metropolitan Branch Trail from the Silver Spring Transit Center to the DC line. The proposed design for the Transit Center also provides for the bikeway as part of the multi-modal facility.

Issues Needing Further Study

- **Appropriate signs should direct trail users from the Silver Spring Transit Center, where the Capital Crescent and Metropolitan Branch trails meet to downtown Silver Spring and to the Sligo Creek Trail.**
- **Appropriated well marked bike facilities should direct trail users from the end of the partially completed Bethesda Trolley trail near NIH, through downtown Bethesda to the Capital Crescent Trail.**
- **Whether or not a transitway is built is a key decision that must be made before a permanent trail can be completed from Bethesda to Silver Spring. Cyclists and other trail users are divided on the issue of the transitway. Some see it as a viable trail partner, while others see a light rail system or busway as incompatible with the trail. For most of the corridor, current studies show a 10-foot trail adjacent to the transitway. In certain areas, the transitway would compromise trail design (width, clearance) such as the Rouse Building (Silver Spring Metro Plaza) in Silver Spring adjacent to the Transit Center, where the proposed trail would be only five to six feet wide. An alternative alignment for the trail would follow sidewalks on Second Street**

Figure 12 - Corridor 6: Capital Crescent Corridor



Corridor 7: Eastern County

Plan Objective: Enhance east-west hard surface trail connectivity between parks and park trail systems.

The County's most extensive and widely used hard surface, multi-use trails are located in the eastern part of the County. Sligo Creek and Rock Creek Trails are of regional importance as they extend beyond Montgomery County. In the Paint Branch Stream Valley, a paved trail extends from Martin Luther King Park north to Fairland Road. All of these trails, shown in *Figure 13*, extend in a north-south direction with no east-west links. The Capital Crescent Trail intersects the Rock Creek Trail system but not Sligo Creek.

Existing Conditions and Plans

Virtually all of the existing east-west links in the eastern portion of the County are sidewalks or bike paths along roads, including Randolph Road, Fairland Road and Forest Glen Road. Master Plans for the eastern portion of the county have proposed the following east-west hard surface trail connections:

- **Forest Glen.** The Forest Glen Sector Plan proposes a bikeway on Forest Glen Road that will help connect Sligo Creek with Rock Creek.
- **The North and West Silver Spring Master Plan** recommends that a combination of Seminary Road, Columbia Boulevard, and Linden Lane be utilized as an alternative connection between Sligo Creek and Rock Creek.
- **Matthew Henson Right-of-Way.** The *1994 Aspen Hill Master Plan* proposes a bike trail in the Matthew Henson right of way.
- **The ICC Bikeway:** The Cloverly, Fairland and White Oak Master Plans recommend a bikeway within the ICC Right-of-Way. The bikeway would be part of the design and construction of the master planned major highway.
- **The Cloverly and Fairland Master Plans** recommend a bikeway trail within the Potomac Electric Power Company (PEPCO) right-of-way in the Patuxent watershed. This trail begins at the county line and ends at Ednor Road.
- **The Cloverly and Fairland Master Plans** recommend a bikeway along MD 198 from Prince George's County to the Northwest Branch. The bikeway would be constructed as part of the proposed MD rte. 198/Norbeck Connector. This bikeway provides east-west connectivity between the Northwest Branch and the Paint Branch stream valley parks.
- **The Cloverly, Fairland and White Oak Master Plans** recommend extensions of the Northwest Branch and Paint Branch stream valley trail system. These extensions need to be implemented in order to connect to the east-west connections recommended in this Plan.

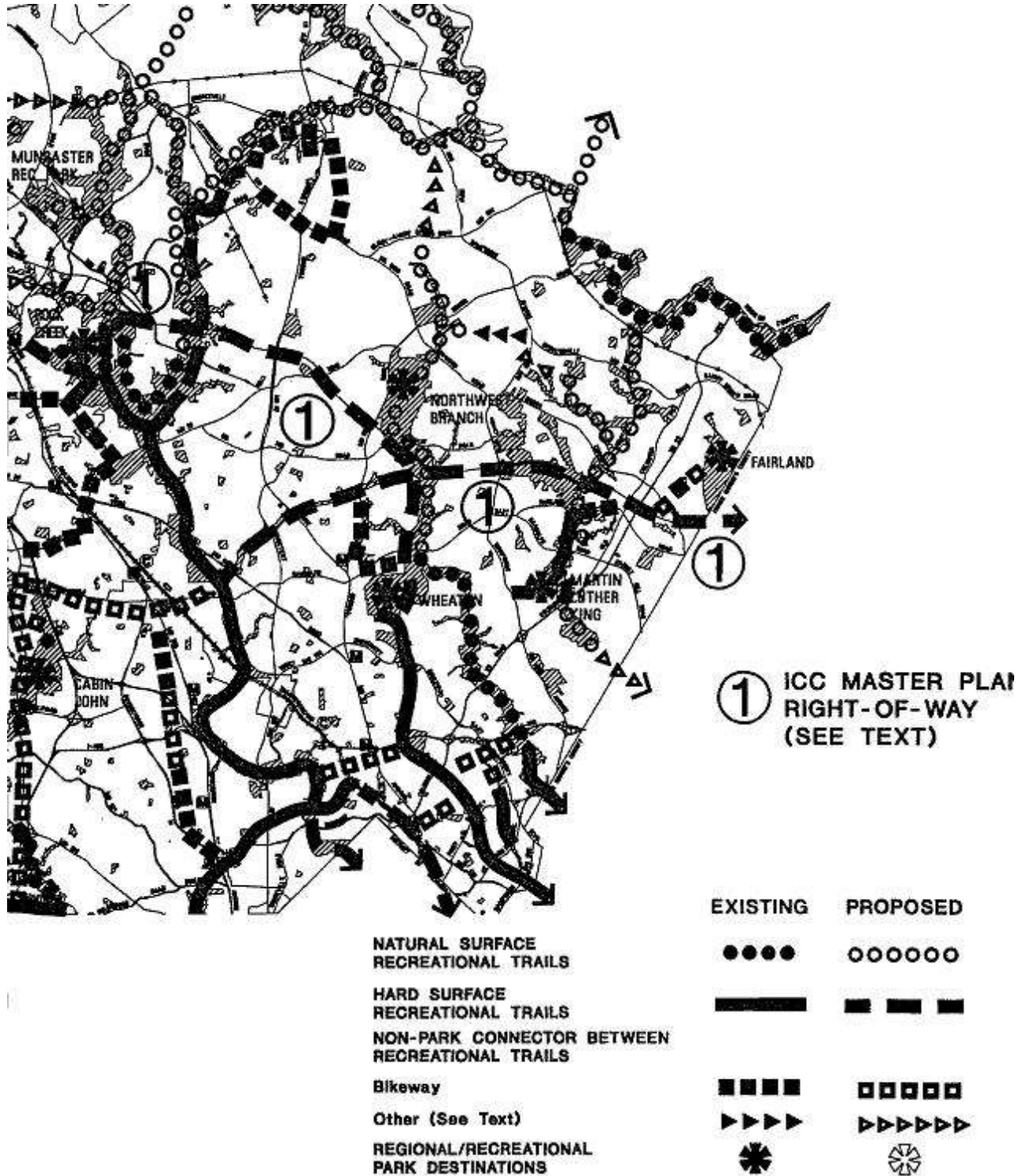
Recommendations

- **Implement the Paint Branch Stream Valley trail recommendations made in the Fairland and White Oak Master Plans.** The key recommendations are summarized as follows:

The White Oak and Fairland Plans recommend extension of the Paint Branch Trail south to Old Columbia Pike crossing under US 29, on the east side of the stream. The Fairland Plan recommends extension north from Fairland Road to Columbia Local Park with connections to

the ICC, adjoining streets and communities using alternative routes on local streets north of the ICC because of environmental constraints. Both Plans acknowledge the environmental

Figure 13 - Corridor 7: Eastern County



conditions that may make a hard surface trail difficult to locate and construct in any of the proposed segments and reference the need for environmental feasibility studies to determine location and surface of the trail.

The Plans also note the need for safe crossings at Randolph Road and Fairland Road.

- **Explore ways to provide a natural surface recreational trail connection between US 29 and the trail system in Prince George’s County.**

This Plan shows a potential future extension of the Paint Branch trail south of US 29. This connection is not recommended in either the White Oak or Fairland Master Plans. Although the White Oak Plan does recommend that parkland additions to the Paint Branch Stream Valley Park should be pursued if compatible with the General Services Administration’s master plan for the FDA relocation. Although there will be difficulties in trying to cross two other federal installations along the Paint Branch (the Adelphi Laboratory and the Beltsville Agricultural Research Center) and the I-495/I-95 interchange area to reach the paved trail at Cherry Hill Road in Prince George’s County, this Plan supports a connection between the two trail systems.

- **Explore ways to provide a trail connection between the existing and proposed Paint Branch hard surface trail and a future hard surface trail in the ICC right-of-way.**

Finding a way to link the existing Paint Branch paved trail to a future hard surface trail in the ICC right-of-way is extremely important if the Paint Branch trail is to be part of a larger trail network. This Plan proposes a hard surface connection, which uses a sidewalk/bikeway along the south side of Fairland Road, to a connection north to the ICC right-of-way proposed in *The Fairland Master Plan*.

- **Provide east-west connections between existing north-south hard surface trails in the vicinity of Silver Spring and Forest Glen.**

The master plans for the Silver Spring/Takoma Park area recommend several on-road and off-road connectors, including the Silver Spring Green Trail along Wayne Avenue.

Provide a hard surface trail in the vicinity of the InterCounty Connector (ICC) right-of-way, whether or not the highway is built.

The *ICC Master Plan* right-of-way is shown in [Figure 13](#). If a highway is built on any portion of the right-of-way, a bike/pedestrian path will also be provided. This path will provide east-west connectivity between the I-270 Corridor/Gaithersburg area and Rock Creek Regional Park, Martin Luther King Regional Park, and Fairland Recreational Park.

Staff recommends a trail throughout the length of the ICC (with or without a highway). However, its exact location and design should remain flexible in order to minimize its environmental impact.

This portion of the ICC right-of-way in combination with Matthew Henson Greenway would help provide an integrated hard surface trail system, which would connect every major park facility in Eastern Montgomery County. For this reason, this area is critical to implementing the overall trail concept for Eastern County. If the ICC is not built, trail opportunities along the ICC right-of-way should be considered. Trail opportunities outside the right-of-way should also be explored.

- **Initiate a comprehensive trail study in the Northwest Branch Corridor once the future of the ICC is determined.**

The issue of trail connectivity between Northwest Branch and Wheaton Regional Parks needs to be addressed comprehensively. The *Wheaton Regional Park Master Plan* does not propose

any recreational trails in the northern part of the park and there is no park trail between the Sligo Creek hard surface trail and Wheaton Regional Park. The park acquisition areas proposed in this Plan need to be further refined to assure that hard surface and natural surface trails can be accommodated and still address environmental concerns in Northwest Branch. Finally, trail locations within Northwest Branch Park need to be identified. Whether or not a road is built in this portion of the ICC right-of-way will greatly affect the location and design of trails so this study should await final decisions on the ICC.

- **Provide trail connections between Rock Creek Regional Park and Sligo Creek Park trails.**

The hard surface trails in Rock Creek and Sligo Parks are the oldest in the county. Both these trails are of regional significance since they connect to adjoining counties and municipalities. Both go north south but there is no east-west connection between the two trail systems.

This Plan proposes connecting the two trails as shown in *Figure 14*, thereby creating a 16-mile hard surface downcounty “loop.”

The Matthew Henson State Park and Greenway and the Northwest Branch Stream Valley Park are both critical to this concept. This Plan recommends a hard surface trail in these parks be provided in two phases:

Phase I - Provide a hard surface park trail in the portion of Matthew Henson State Park and Greenway between Rock Creek Trail and Alderton Drive. Cyclists wishing to reach Wheaton Regional Park would do so via bike lanes on Layhill, Randolph and Kemp Mill Roads. Cyclists could ride north on Alderton to reach Bonifant Road and the future trail proposed in the ICC right-of-way.

Phase II - Provide a hard surface park trail from Alderton Drive east to Northwest Branch and south to Wheaton Regional Park. Phase II affects the Northwest Branch Stream Valley Park. The Northwest Branch includes sensitive environmental areas and is an important part of this Plan’s proposed natural surface trail system between the Potomac and Patuxent. For this reason, this Plan recommends that additional parkland be acquired to allow a hard surface trail connection outside the stream valley to emphasize protection of the Northwest Branch. An opportunity for such acquisition would occur if the Indian Springs Golf Course ever redevelops.

The Technical Appendix (published separately) includes the options studied for improving connectivity between Rock Creek and Sligo Creek trails. The Plan concept shown in *Figure 14* was selected because it:

- **Places the highest environmental protection priority on the Northwest Branch Stream Valley system and recommends alternative hard surface trail locations be studied.**

In comparison to the Matthew Henson Greenway, the Northwest Branch Stream Valley Unit #5 is a highly environmentally sensitive area. A natural surface trail in this stream valley would provide the best protection for the erodible and hydric soils, the mature trees; the herpetological pond areas, the breeding, migratory, and interior dwelling birds which use these woods and uncommon plants and their communities. In addition, the historically significant Kemp Mill pond and millrace are found in this area. In view of the existing intrusions by gas and WSSC utility lines, extraordinary steps are deemed appropriate to preserve the aesthetics of the natural forest setting experienced in this developing urban area.

- **Recognizes that a hard surface trail system in the Matthew Henson Greenway will provide residents of the more than 16,000 housing units with an attractive outdoor experience within roughly one mile of their homes.**

The Matthew Henson Park is the only backyard for the residents of nearby multi-family dwellings. A hard surface trail built to ADA standards would greatly expand the recreational opportunities in Matthew Henson. People using wheelchairs, roller blades and strollers are not able to use typical natural surface trails. Recent trail user counts in Montgomery County have indicated over 10 times as many people using hard surface versus natural surface trails.

- **Provides a connection to the Montrose Parkway Trail.**

The Matthew Henson Corridor was originally proposed for a highway. A corresponding right-of-way continues west of Rock Creek where the Montrose Parkway is proposed. Current designs call for a separate bike path along Montrose Parkway. A hard surface trail in Matthew Henson would complement the proposed Montrose Parkway trail.

- **Expands the Northwest Branch stream valley park boundaries to accommodate the trail while minimizing environmental impacts.**

Unlike in Matthew Henson Park, there is an opportunity to expand park boundaries in this portion of the Northwest Branch Park to accommodate a hard surface trail. Future park acquisition lines already exist on the Indian Springs Country Club property. Only slight revisions to these park take lines would be necessary to accommodate a hard surface trail.

This approach means construction of a hard surface trail would await redevelopment of the golf course. However, this is an appropriate trade-off given the opportunity to protect a highly sensitive environmental area, which deserves a high level of protection.

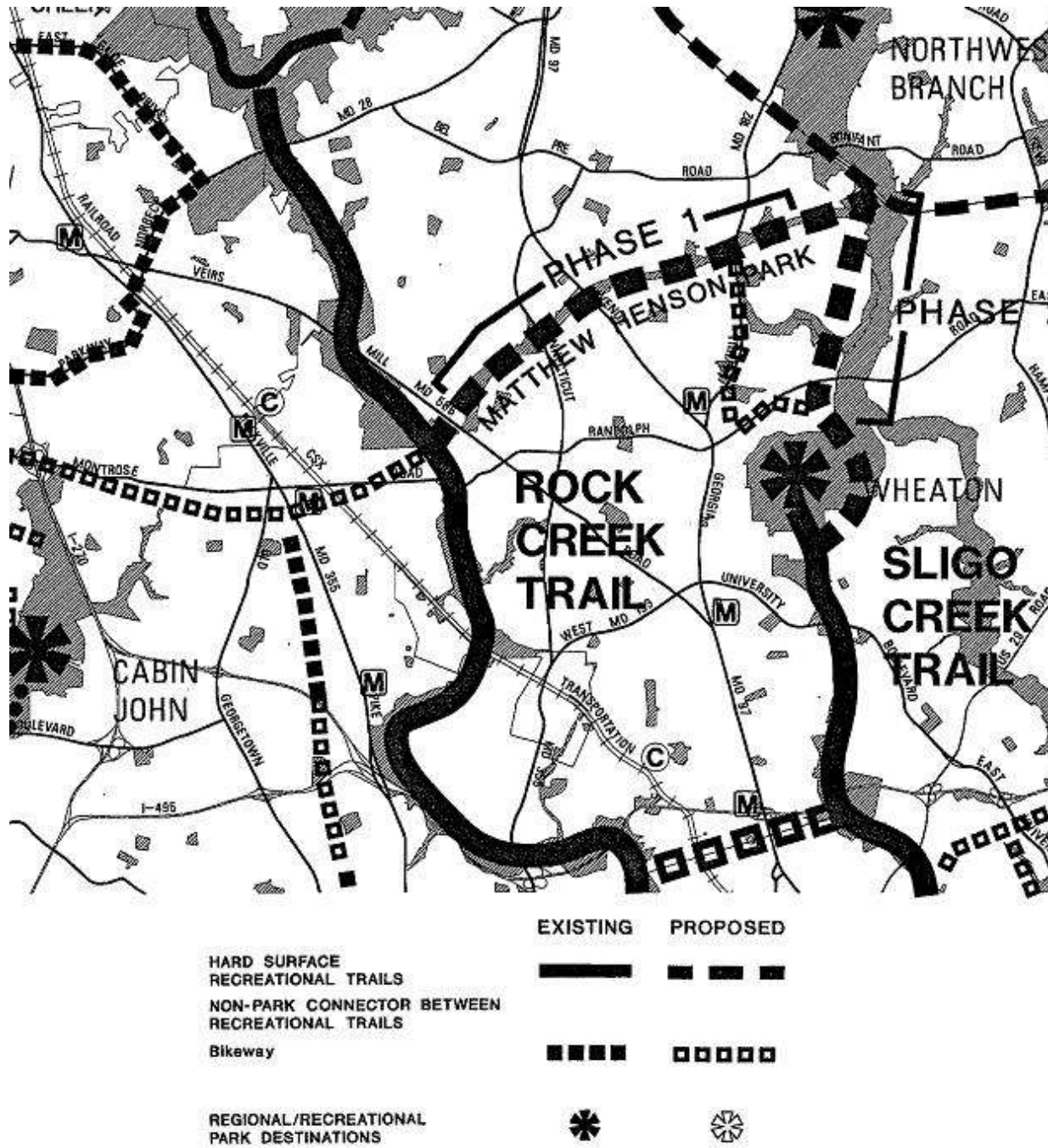
Reconstruction of sewer lines in the Stream Valley in the future may also provide opportunities for a hard surface trail.

In terms of the environment, studies were done as part of the Trail Environmental Feasibility Study of Matthew Henson State Park, Matthew Henson Greenway and Northwest Branch Stream Valley, prepared in 1995 and reviewed in January 1996. This study concluded that a multi-purpose trail could be developed that could be permitted under current environmental guidelines. The proposed alignment would require additional environmental evaluation and careful design and engineering in order to avoid and minimize to the extent possible impacts to wetlands, stream channels, floodplains and sensitive habitats.

More detailed environmental studies are beyond the scope of this plan but will be undertaken as part of the facilities planning process for the trail.

One study, which should be initiated immediately, is a survey of rare, endangered, and threatened species. Such studies may affect trail alignment options

Figure 14: Rock Creek –Sligo Creek Hard Surface Trail Connections



Corridor 8: Upcounty

Plan Objective: Provide a hard surface trail to serve the existing and future residents of Germantown, Clarksburg and Damascus.

Most of Montgomery County’s hard surface trails are located in the southern, more densely populated portion of the County. The 3.3-mile Magruder Branch hard surface multi-purpose trail in Damascus and approximately 3 miles of asphalt trail in Black Hill Regional Park are the only significant hard surface recreational trails in the Upcounty area.

The *1989 Germantown Master Plan* proposed an extensive and well-planned system of pedestrian connections and bike paths along roadways. However, community master plans have not traditionally proposed hard surface recreational trails, relying instead on park master plans to meet this need. Although individual park master plans in the Upcounty area, such as the Plan for Black Hill Regional Park, include paved trails, there is a strong need for a comprehensive look at how a better network of paved recreational trails can be provided in the Upcounty area.

Existing Conditions and Plans

The Magruder Branch and Black Hill trails do not connect to many of the growing neighborhoods in Germantown and Clarksburg or to other existing and proposed Upcounty parks.

The *1994 Clarksburg Master Plan* proposes a trail connection to Damascus Recreational Park as part of the 11-mile greenway network proposed for Clarksburg.

The *Germantown Master Plan* features a greenbelt concept that includes parkland owned by M-NCPPC and the State of Maryland. The *1995 update of the Planning Guide to Trails* proposes a multi-use trail through the North Germantown Greenbelt.

The Black Hill Regional Park Master Plan supports trail connectivity to other regional park facilities and planned communities.

Recommendations

- **Provide a hard surface trail system that links Little Bennett, Ovid Hazen Wells, Damascus Regional, Goshen Recreational and Ridge Road Parks.**

The concept, shown in *Figure 15*, features the existing Magruder Branch multi-purpose paved trail, the future Greenway Trail concept included in the *Clarksburg Master Plan*, the northern section of the Germantown Greenbelt, and a portion of the Seneca Greenway.

The concept also proposes a new trail connection extending in a north south direction from North Germantown Greenbelt through Goshen Recreation Park northward to Damascus Recreational Park. The concept recognizes Little Bennett Regional Park as a future major destination in the Upcounty.

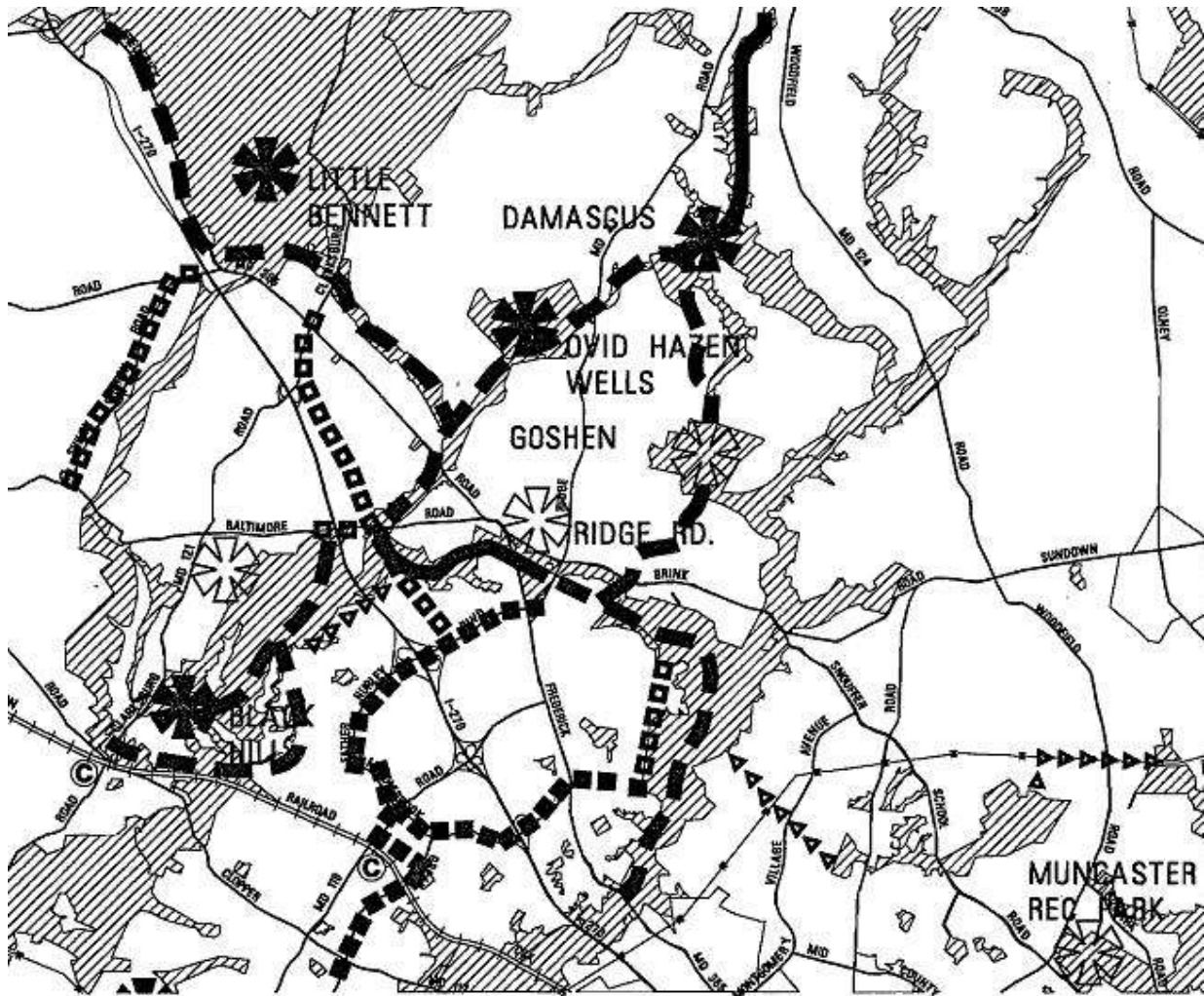
- **Assign the Upcounty hard surface trail system highest priority in the park planning work program.**

Several significant park planning studies affecting the Upcounty are presently underway or soon to be underway. They affect the following parks:

- **Ovid Hazen Wells Park**
- **The Clarksburg Greenway**
- **Little Bennett Regional Park**

At the same time, Germantown continues to build out and Clarksburg will soon open to development. A well thought out trail concept to guide both private and public development is essential now. Without such a concept, opportunities for public-private partnerships to

Figure 15 - Corridor: Upcounty



	EXISTING	PROPOSED
HARD SURFACE RECREATIONAL TRAILS		
NON-PARK CONNECTOR BETWEEN RECREATIONAL TRAILS		
Bikeway		
Other (See Text)		
REGIONAL/RECREATIONAL PARK DESTINATIONS		

implement trails will be lost and individual park master plans will suffer from the absence of an overall trail vision.

This Plan recommends the same type of concept plan is also needed for natural surface trails. This concept Plan should be established when this corridor is studied further.

Issues Needing Further Study

The following issues must be addressed during planning, design, and implementation of the proposed Upcounty trail system:

- **Providing hard surface trail access from Germantown neighborhoods to South Germantown Park.**
- **Connecting Magruder Branch Stream Valley trail system to the North Germantown Greenbelt.**

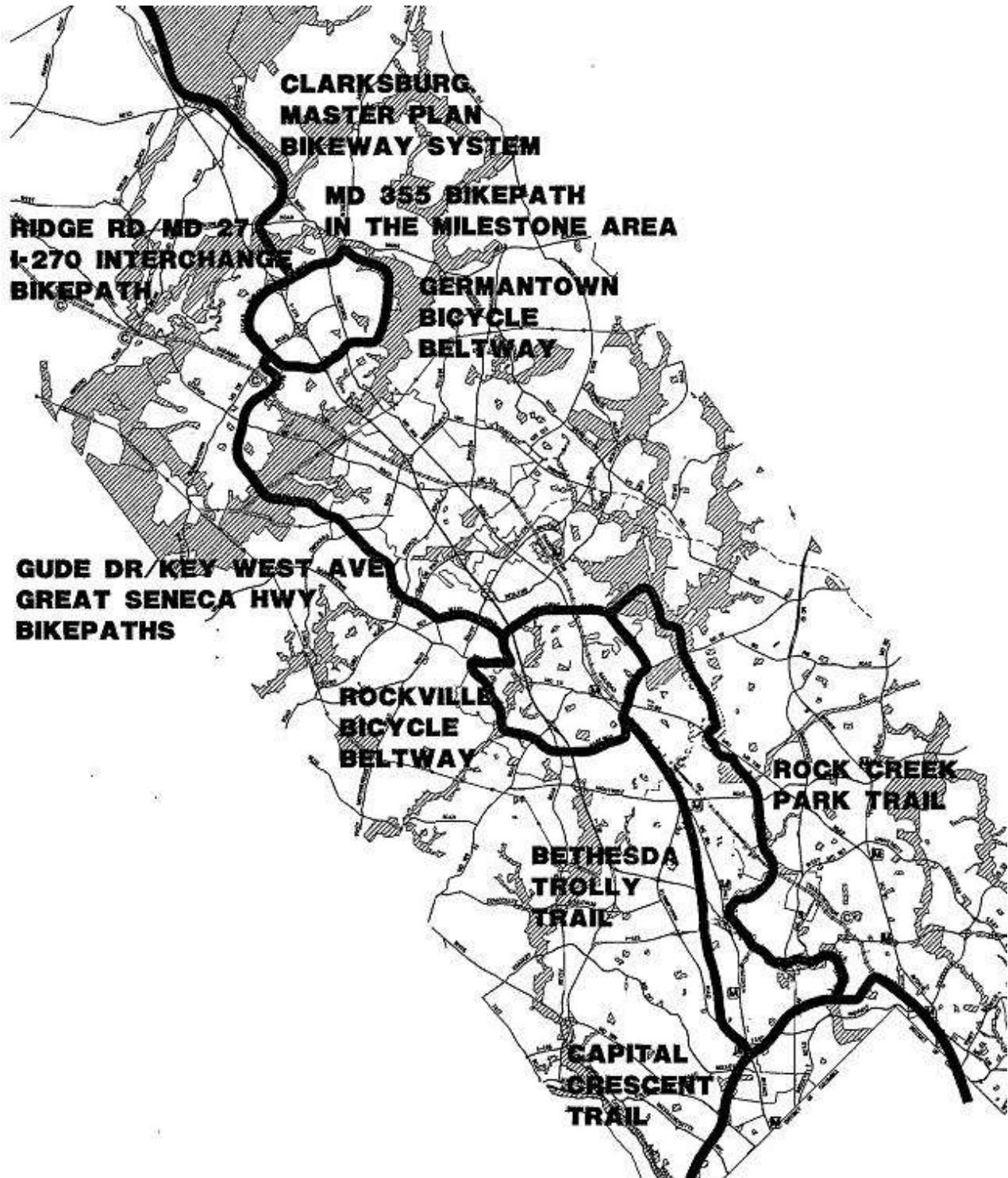
The Great Seneca Extension connects the Magruder Branch Stream Valley and the North Germantown Greenbelt, but opportunities for a hard surface trail in this portion of the Seneca Greenway may be limited due to topography, and the relatively narrow width of the Great Seneca Extension at this location.

For this reason, this Plan suggests an alternative hard surface trail connection be studied which avoids the Great Seneca stream valley. This suggested option, shown in *Figure 15*, would integrate Goshen Recreational Park (owned by M-NCPPC but not yet developed) into the trail system.

- **Evaluating the potential for hard surface trails in North Germantown Greenbelt.**
- **Providing safe trail crossings of key roadways, including MD 27, Clopper Road, and MD 355.**
- **Providing a hard surface trail in a segment of the Great Seneca Extension.**

Informal trails already exist in this area. It has excellent habitat for forest interior dwelling birds and other wildlife. Hard surface trails could open up the forest canopy and interrupt the contiguous wooded acreage that is necessary for these species. Trail proposals will be carefully evaluated.

Figure 16 - I-270 Corridor Bikeway Concept



Bikeways and Other Non-Park Trail Connectors

This Plan focuses on trails within parks. However, there are trail facilities outside parks which are critical to creating an integrated trail system. Bikeways built as part of roadway projects are a key example.

Others are public use easements, utility rights-of-way, and sidewalks. All these facilities can enhance connectivity both between and within the eight park trail corridors.

Bikeways

Bikeways that function as non-park trail connectors of Countywide significance should have the following characteristics (based on criteria developed by the Traffic Institute, Northwestern University):

- **Safety**
- **Attractiveness**
- **High quality pavement surface**
- **Security**
- **Good maintenance**
- **Safe intersection crossings**
- **Clear, informative signs**

For the most part, bikeways that are separate from roadways will be the most desirable type of bikeway connector. However, as long as the above characteristics can be achieved, on-street connections would be suitable.

Bikeway connectors of countywide significance are identified on each of the Trail Corridor maps.

I-270 Corridor Bikeway

Although not one of the eight park trail corridors, the I-270 Corridor Bikeway is an essential part of this Plan because bikeways here will connect the Upcounty and Downcounty hard surface park trails.

The opportunity exists in the I-270 Corridor to create a continuous bikepath, separate from major roads, the entire length of the corridor, from the Capital Crescent Trail to Clarksburg Town Center. This concept is shown in [Figure 16](#). Community master plans for Gaithersburg, Rockville, Shady Grove, Germantown, and Clarksburg include segments of the bike path and the bike path already exists in many areas.

This bike path offers wonderful access to key elements of this Plan's proposed park trail system and connects the hard surface recreational trails proposed for Upcounty and DownCounty as shown in [Figure 5](#).

Existing Conditions and Plans

The I-270 Corridor Bikeway includes the following existing or proposed bikeways:

- The **Bethesda Trolley Trail**, a combination of on-road bikeways and separate trails, provides a critical connection from Bethesda and the Capital Crescent Trail to the City of Rockville.
- The **Rockville Bicycle Beltway** is included in the City's 1997 bike plan update, as well as several other bikeways thorough Rockville.

- **Gude Drive/Key West Avenue/Great Seneca Highway bike paths** extend from Rockville north to Germantown.
- The proposed **Corridor Cities Transitway**, which runs from the Shady Grove Metro Station to Clarksburg, also includes a separate bike path, linking destinations such as the Shady Grove Life Sciences area, the National Institute of Standards and Technology, Germantown, and the Clarksburg town center.
- The **MD 355 bike path** is proposed for most of Md 355 north of Rockville.
- The **Ridge Road/Md 27 I-270 Interchange** bike path offers safe crossing of I-270.
- The **MD 355 bike path** in the Milestone area of Germantown east of I-270 continues the bikepath to the Clarksburg planning area.
- The **Clarksburg Master Plan** bikeway system, which will be built as development occurs, will complete the I-270 Corridor bikepath.

Recommendations

- **Designate a bike path from Rock Creek Park to Gude Drive as part of the *Gude Recreational Park Master Plan*.**
- **Improve and maintain the Gude Drive bike path.**
- **Sign the I-270 Corridor bikeway and make the necessary improvements to upgrade and maintain this important bike route.**
- **Designate bike routes between the Rockville Bicycle Beltway and the Capital Crescent Trail capable of accommodating basic cyclists.**
- **Implement the Bethesda Trolley Trail concept to Rockville’s bicycle beltway and the Rockville Metro**
- **Designate a route from the end of the Bethesda Trolley Trail near NIH to downtown Bethesda and Friendship Heights.**
- **Provide shoulders along Beach Drive in Rock Creek Park and Sligo Creek Parkway to accommodate advanced cyclists.**

Bikeway Planning

The *Countywide Bikeways Functional Master Plan* was adopted in 2005. The Plan endorses an integrated bikeway and park trail system and identifies existing and proposed bike paths that would enhance connections between park trail corridors.

Public Use Easements

Public use easements are deeded and recorded routes for use by the general public. They are typically natural surface. The Trail Riders of Today (TROT) have been very successful in obtaining equestrian/public easements. Public use easements are generally dedicated during the subdivision process and provide important connectors between park trails.

Public use easements are essential to implementing the Plan's proposal in the western part of the county for a 220 mile regional trail system (*see Figure 17*). This trail system will like Sugarloaf Mountain, the C&O Canal towpath, Black Hill Regional Park, and Rickman Farm House Park.

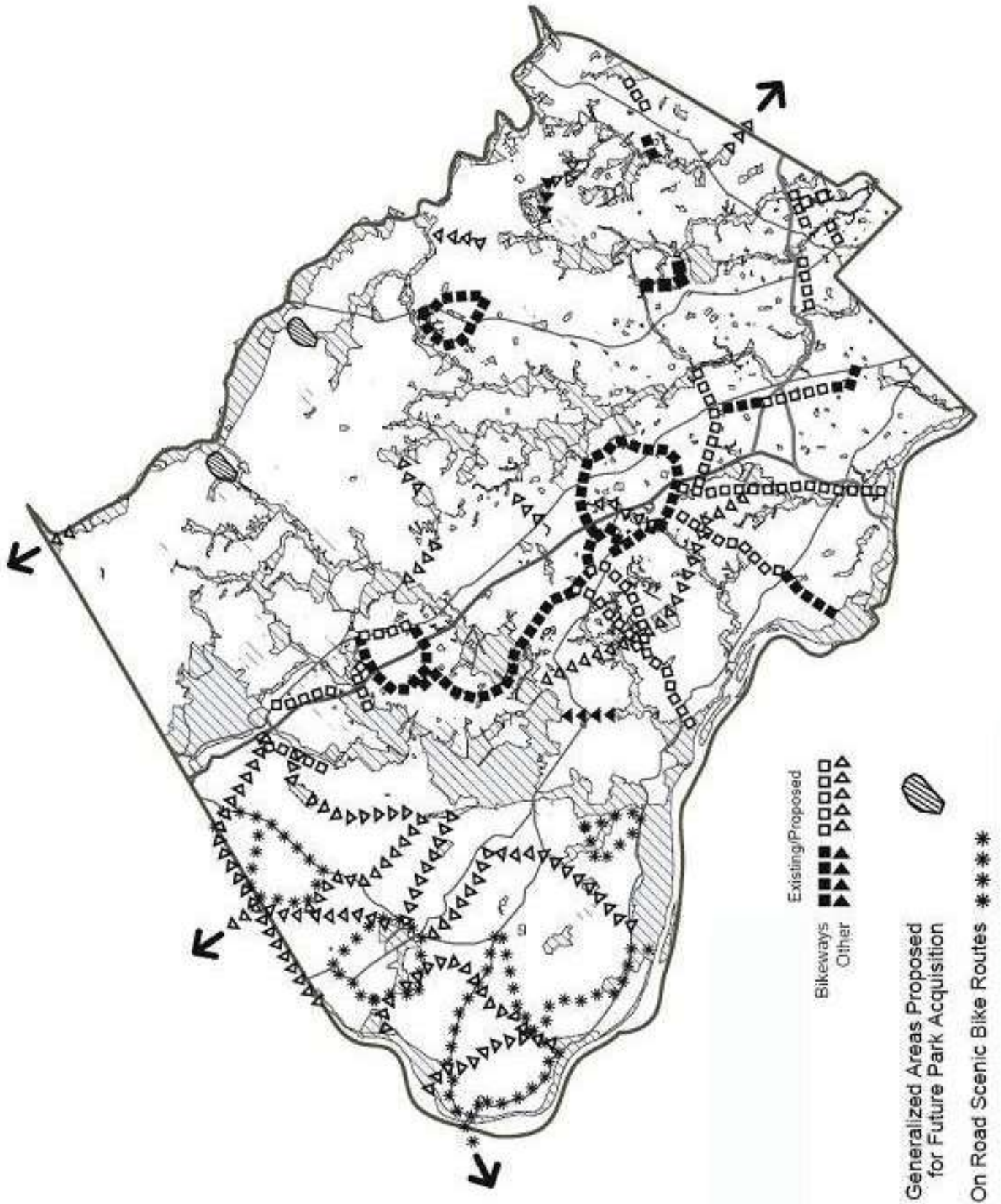
Utility Rights-of-Way

Overhead transmission rights-of-way and sewer line rights-of-way are linear in nature and crisscross the County. The opportunity exists to use some of these rights-of-way to provide connections between countywide park trails.

Sidewalks

Sidewalks become very important non-park connectors when leakages are needed through developed areas (such as the cities of Rockville and Gaithersburg).

Figure 17 - Hard Surface & Bikeways and Non-Park Connectors



PART 2

Trail Planning and Implementation Process

The Countywide Park Trails Plan identifies eight significant trail corridors and Plan objectives for each (*see Figure 04*). Generalized, conceptual trail routes are shown within each corridor. More detailed planning and implementation studies will be needed to refine concepts, explore trail alignment options and recommend trail type.

The process for more detailed trail planning and design is shown in *Figure 18*.

Types of Trail Plans

The principles and objectives of the Countywide Park Trails Plan will guide trail recommendations in:

- **Trail Corridor Plans**
- **Park Management Plans**
- **Park Master Plans**

Trail Corridor Plans will be prepared for each of the eight generalized corridors shown in (*Figure 04*). Other plans, such as park master plans and park management plans may include trail elements, but Trail Corridor Plans allow a comprehensive analyses of trail options within a larger geography.

Trail Corridor Plans

A Trail Corridor Plan focuses on one or more of the eight trail planning corridors identified in the Countywide Park Trails Plan and studies in more detail the general recommendations of the Countywide Park Trails Plan for that corridor. A Trail Corridor Plan is preceded by an environmental analysis.

A Trail Corridor Plan identifies trail opportunities and constraints, recommends generalized alignments for trails, recommends whether trails should be hard surface or natural surface, recommends natural surface trail categories (shared use or single use), relates trail recommendations to park stewardship objectives and to park accessibility guidelines, suggests trail related amenities (i.e., interpretation opportunities, areas for public access, potential community connections) and provides opportunities for connectivity to nearby recreational and community destinations.

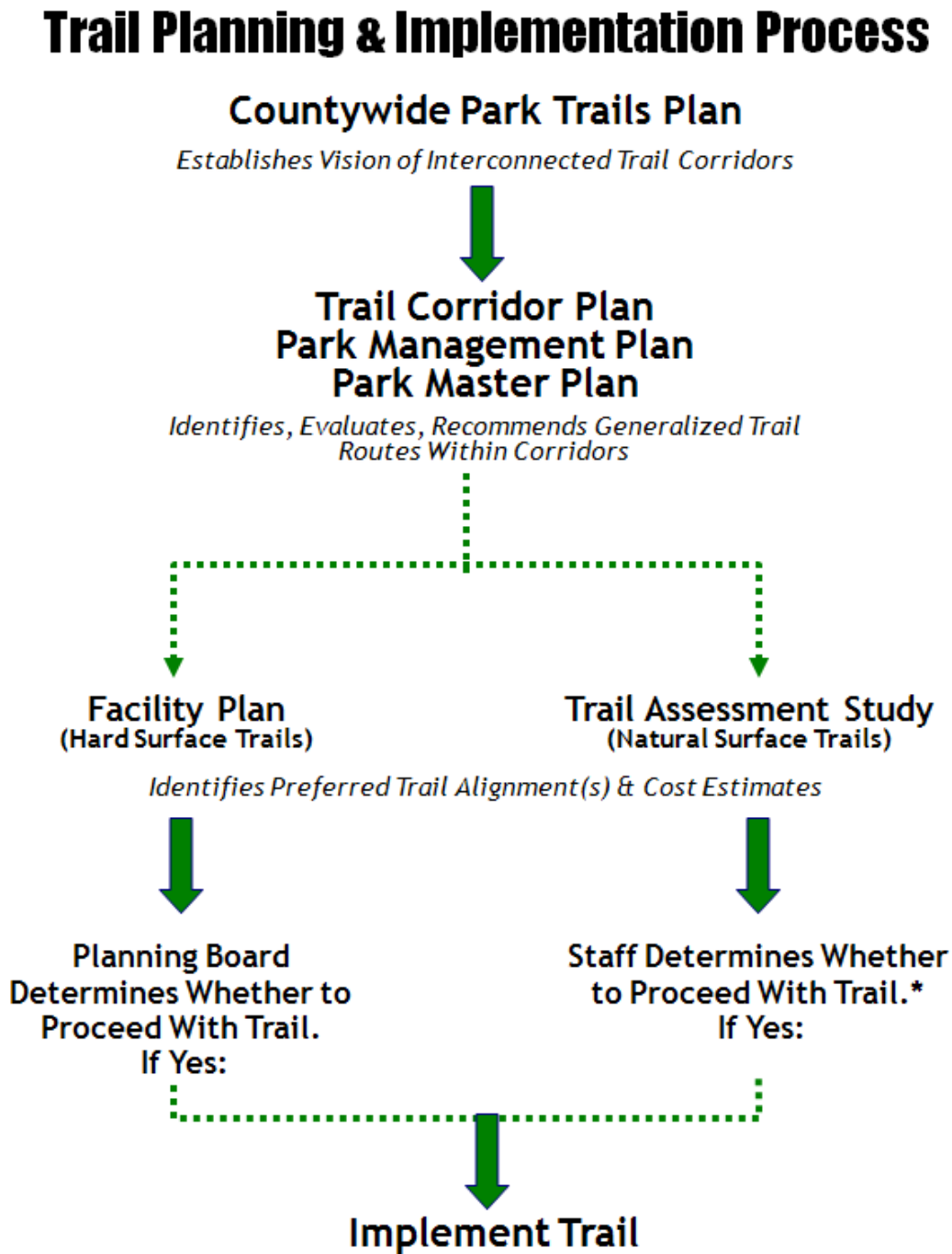
A Trail Corridor Plan includes a statement of goals and objectives, maps and text pertaining to existing conditions, public policy context, analysis of opportunities and constraints and a trail concept plan identifying generalized trail alignment. The level of detail in a Trail Corridor Plan will reflect the type, length and character of a trail proposal, particularly in terms of whether a hard surface or natural surface trail is involved.

The basic elements of a Trail Corridor Plan and the approval process are shown in *Table 03* and discussed below. The approach used in preparing community master plans has served as the basis for the process.

Phase 1 – Staff proposes a Trail Corridor Plan be added to the Trails Work Program.

The Trails Work Program is described in more detail in the Implementation Recommendations chapter. The Trails Work Program prioritizes the initiation and completion of Trail Corridor Plans. The Planning Board, after reviewing staff recommended planning projects, determines which Trail Corridor studies should go forward.

Figure 18 - Trail Planning & Implementation Process



**NOTE: Trail Assessment Studies for Natural Surface Trails That Are Not Part of An Approved Master Plan Will Be Reviewed by the Board Before Implementation*

Phase 2 – Staff prepares and presents an Issues and Outreach Strategy Report to the Planning Board.

Once a Trail Corridor Plan has been added to the Trails Work Program, staff will begin detailed data collection, including an environmental assessment, technical analysis and map preparation for the Trail Corridor area.

Informal meetings with community groups or a public forum may be held during this phase to report on preliminary findings of the data collection effort and to help identify planning issues.

Staff will then prepare an Issues and Outreach Strategy Report for review by the Planning Board. This report will identify the most significant issues in the corridor; propose a time-line for completing the Plan and recommend a citizen participation strategy.

Phase 3 – Staff Prepares a Staff Draft Trail Corridor Plan

After the Issues and Outreach Strategy Report is approved, the most intensive phase of the Plan process begins. Staff meets with the community to identify trail opportunities and constraints within the corridor, to review the environmental analysis and trail alignment alternatives, to discuss the character of trails and to identify trail concerns. Additional data and studies are completed as needed, including

- **Mapping of sensitive areas as defined by the Environmental Guidelines.**
- **Identification of historic and archaeological features and settings.**
- **Potential for connection to adjacent communities and other trail systems**
- **Identification of disturbed areas within corridor**
- **Identification of generalized areas where bridge crossings are needed.**
- **Analysis of grades and slopes to examine potential or accessibility to people with disabilities**

At the same time, staff within the Department of Park and Planning meet, discuss options and evaluate ideas and concepts resulting from community meetings.

At the end of this phase, staff prepares a Staff Draft Trail Corridor Plan.

Phase 4 – Planning Board Reviews and Revises Staff Draft Plan for Purposes of Public Hearing

After the Staff Draft is completed, it is reviewed by the Planning Board. The Planning Board determines if the Staff Draft is acceptable for purposes of a Public Hearing. After making any changes to the Draft Plan as directed by the Board, staff published the Public Hearing Draft Plan and notifies the community of the opportunity to testify on the plan. Anyone may testify either orally or in writing.

Phase 5 - Planning Board approves the Trail Corridor Plan.

After the close of the record of the Public Hearing, staff prepares a written summary and written responses to the Public Hearing testimony. The Planning Board holds work sessions with staff to review the testimony and to determine whether to revise the draft plan. The public is welcome to attend Worksessions but testimony is typically not taken because the opportunity for public input was provided by the public hearing.

During Worksessions, the Planning Board makes whatever changes they feel necessary to the Plan text. Staff incorporates these changes into the Draft plan.

The final action of the Planning Board is to approve the Trail Corridor Plan.

Table 2.1: Trail Corridor Planning Process

PHASE	PRODUCT	REVIEW	STUDY ELEMENTS
Phase 1 Staff proposes a Trail Corridor Plan be added to the Trails Work Program	Plan added to Planning Board Approved Trails Work Program	Community Meetings on Work Program Planning Board review	Establish priority of trail plans and projects.
Phase 2 Staff presents Purpose and Outreach Strategy Report to Planning Board	Purpose and Outreach Strategy Report	Community Meetings Planning Board review	Prepare Environmental Analysis Plan goals / objectives Opportunities / constraints Key issues Community Outreach Program
Phase 3 Staff prepares Staff Draft Trail Corridor Plan	Staff Draft Trail Corridor Plan	Community Meetings Planning Board reviews Staff Draft, makes changes, approves publication as Public Hearing Draft Plan	Relation to Countywide Park Trail Plan Document trail need Evaluate trail opportunities and constraints Balance recreational and environmental objectives Identify recommended trail alignments for purposes of further community input Recommend trail uses (shared use, hiking only) for natural surface trails Recommend amendments to Countywide Park Trails Plan
Phase 4 Planning Board review	Public Hearing Draft Trail Corridor Plan	Planning Board Public Hearing Planning Board Worksessions	Staff prepares written summary of Public Hearing Testimony. Staff responds in writing to testimony. Staff discusses recommended changes to Draft Plan based on analysis of testimony.
Phase 5 Planning Board approves Trail Corridor Plan	Approved Trail Corridor Plan	Briefing of County Council	Amended text and recommendations to reflect Planning Board Actions.

Other Types of Trail Plans

Trail Corridor Plans focus exclusively on trails. Other planning documents, however, may include trail proposals. These include:

A **Park Master Plan** is a comprehensive plan for a particular park. Trails are one of the park facilities studied.

A **Park Management Plan** addresses how to manage natural and cultural resources, identifies maintenance needs and recommends public access proposals. In some cases these plans may be “interim” plans until a more detailed Park Master Plan can be prepared. In other cases, the park management plan may guide use of the parks for many, many years.

A *Park and Trail Analysis Report* is prepared in conjunction with community master plans and provides the basis for the proposed parkland map contained in an Area Master Plan. The Park and Trail Analysis Report looks at opportunities to expand trail corridors to maximize the opportunities to locate trails outside sensitive environmental areas and explores the opportunities for integrating park trails with proposed off-road bike paths.

The above plans involve the basic components of the trail corridor planning process: an evaluation of opportunities and constraints, public input and Planning Board review and approval. Regardless of when or in what process trails are studied or planned, the guiding principles of the Countywide Park Trails Plan, including the balancing of recreational and environmental protections objectives, will be applied.

As discussed in the Implementation Recommendations chapter, subdivision proposals and site plan applications may include proposed trails. These trails are reviewed by staff in accordance with the guiding principles of the Countywide Park Trails Plan.

Trail Planning Guidelines

Included in the *Appendices* of this Plan are guidelines that are more specific relating to the following topics.

- **Balancing Recreational, Transportation and Environmental Concerns (Appendix A)**
 Protecting and preserving sensitive natural and cultural resources while providing a variety of high quality trail experiences is a fundamental objective in the trail planning process. Appendix A describes in more detail the approach used to help ensure the right balance between stewardship, recreation and transportation concerns.
- **Trail Planning Guidelines for Hard Surface Trails (Appendices B and C)**
 Hard surface trails provide the greatest recreational and mobility opportunities but they also pose environmental concerns. The guidelines in Appendices B and C help achieve a balance among environmental, recreation and mobility objectives.
- **Trail Planning Guidelines for Natural Surface Trails (Appendix D)**
 Natural surface trails are popular among many user groups, including hikers, bikers and equestrians. The planning guidelines in Appendix D will help create sustainable trails that support current and anticipated trails uses with minimal impact to adjoining natural systems and cultural resources.
- **Park Accessibility Goals and Objectives for People with Disabilities (Appendix E)**
 As stated in the *1998 Park, Recreation and Open Space Plan (PROS)*, the Department of Park and Planning seeks to provide public accessibility for all park visitors, consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone. One of the accessibility goals of the Department is “to increase utilization of Montgomery County Parks by persons with disabilities.” In order to implement this policy, the PROS Plan endorses providing accessible facilities in each region of the county to ensure convenient access to persons with disabilities. (*see Appendix E*).

During the Trail Corridor Planning Process, potential trail alignments will be examined and evaluated in terms of their potential for accessibility to people with disabilities. Not every trail, particularly natural surface trails, will be able to accommodate persons with disabilities. The intent of the Department’s accessibility policy is to assure that all residents of all different personal mobility skill levels have the opportunity to enjoy nature. This means providing a variety of accessible trails in different locations of the county.

Implementing Trail Plans

As shown in *Figure 18*, once a Trail Corridor Plan, Park Master Plan or Park Management is approved, the next step is to evaluate actual trail alignments. This process involves completing a Facility Plan for hard-surface trails and a Trail Assessment Study for natural-surface trails.

A Facility Plan is the basis for deciding whether or not a hard surface trail project should be implemented. A Facility Plan includes a rigorous analysis of environmental impacts and cultural resource impacts, recommends the type of hard surface trail surface (boardwalk, asphalt, etc.), analyzes community connection opportunities, analyzes engineering feasibility, and estimates future maintenance and policing needs.

After reviewing the Facility Plan, the Board determines if the project achieves a reasonable balance of environmental, cultural, and recreational and fiscal objectives. If it does, the trail project is considered along with other park projects for funding in the Capital Improvement Program. If the Planning Board determines that the trail is not feasible, not worth the negative impacts, or too costly, then the project is abandoned at the end of the facility planning stage.

A Trail Assessment Study precedes any decision to go forward with a natural surface trail. When a Trail Corridor Plan identifies a preliminary alignment and recommends a shared use trail use category for a natural surface trail, further work is done by staff to designate a final alignment. Trail Assessment studies rely heavily on environmental analysis, field walks with park region staff, Park Development and Design staff, staff horticulturists and forest ecologists, natural resource specialists and park managers to assure a proposed trail is sustainable from both an environmental and recreational perspective.

Trail Planning and Implementation Priorities

The *Countywide Park Trails Plan* is a long-range, visionary guide and will take many decades to implement.

The Trails Work Program, described in this chapter will allow the Planning Board to evaluate and adjust priorities on a bi-annual basis. The Trails Implementation Work Program will also establish priorities for trail planning and identify special projects and programs to improve the trail system.

A summary of implementation strategies is included in [Table 07](#).

Implementing the Countywide Trail Network

As shown in [Table 2.4](#), approximately 12.75 miles of hard surface trails and 31.2 miles of natural surface trails are needed to implement this Plan.

Priorities for more detailed planning and completion of trail projects will be established by the Planning Board in the context of the Trails Work Program.

In terms of hard surface trails, key projects are the Matthew Henson Greenway trail, Black Hill trail in Black Hill Regional Park, the extension of the Magruder Branch trail to Damascus town center and Muddy Branch hard surface trail.

Natural surface trail projects are proposed in five of the eight Countywide Park Trail Corridors. A continued level of effort in new trail construction could complete the system in approximately 25 years. The timing of completion of many of the trails will depend on when additional parkland is received through the subdivision process.

Trails Work Program

As shown in [Figure 19](#) every other year, the Planning Board will approve a Trails Work Program to:

- a. **Establish trail planning priorities.** As discussed in the chapter on Trail Corridor Plans, the schedule for Trail Corridor Plans would be established in the Trails Work Program.
- b. **Establish trail implementation priorities.** The Trails Work Program will provide the opportunity for the Board to establish priorities for trail completions. [Table 2.3](#) includes criteria that will help guide identification of priorities. Six criteria relate to hard surface trails, and one additional criterion relates to natural surface trails. The criteria echo the basic concepts of the Plan, including connectivity and geographic balance. In addition, the criteria reflect other important factors that the Board has emphasized in work sessions: public support, finishing what has been started, and fiscal responsibility.
- c. **Identify special projects and programs to enhance the trail system.** Trail signage, trail amenities and interpretive displays would come under this topic. There is a need in the county trail system for improved signage and for enhancing interpretive opportunities. Incorporating these features in the trails work program will help assure funds are available to meet these needs.

Table 2.2: Miles of Trails Needed to Implement the Countywide Park Trails Plan

HARD SURFACE TRAIL COMPLETIONS		NATURAL SURFACE COMPLETIONS		
PLAN CORRIDOR		New Trail Miles		New Trail Miles
Patuxent Corridor	NA		Jurisdiction of WSSC and State	
Seneca Greenway	NA		Seneca Trail	7.40
Rachel Carson Greenway Corridor	None		Kemp Mill Road to Ednor Road	4.80
C&O Canal Corridor			Muddy Branch Watts Branch	5.50 5.30
Rock Creek Corridor	Rock Creek Trail Extensions Gude Connector Lake Needwood- Lake Frank Connector	1.25 1.10 0.20	Ag History Farm Park/Airpark Drive Underpass/ Pope Farm Rachel Carson Park Lake Needwood to Ag History Farm	2.00 3.20 2.20 2.00
Capital Crescent Corridor	Capital Crescent Trail (interim) Metropolitan Branch (interim)	2.20 1.20		
Eastern County Corridor	Matthew Henson Wheaton Regional to Randolph Paint Branch Extension	4.80 0.70 0.40	Fairland Recreation Park	1 to 2
Upcounty Corridor	Magruder Branch Extension	0.90		
TOTAL MILES		12.75		31.20

Priorities for Improving High Volume Trail-Road Intersections

As part of this Plan process, potentially dangerous hard surface trail-road intersections have been identified based on the following criteria.

- **Traffic volumes for all hard surface trail-road intersections were reviewed, then the analysis was narrowed to include only roads with an average daily traffic of 20,000 or more.**
- **The analysis focused on trail-road intersections that may warrant special treatments including a grade separated crossing, such as an overpass or underpass, because these are the types of crossings that are the safest for trail users. However, they are the most expensive and most difficult to implement, and therefore require the most advance planning.**

The results of the traffic analysis are summarized in [Table 2.4](#). These are presented in priority order based on factors such as traffic volume speed, distance from a pedestrian crossing signal, existence of a median, and sight distances. These are the highest priority intersections, which should be considered for safety improvements, including possible grade separated crossings such as a trail overpass or underpass. More thorough analysis of each intersection will be required to determine the appropriate design treatment.

Recommendations

- **Consider the trail-road intersections listed in [Table 2.4](#) for safety improvements, including grade-separated crossings.**
- **Forward the tables to the State Highway Administration and the County (Department of Public Works and Transportation) as recommended projects for their work programs for safety improvements or grade separated crossings.**
- **Identify trail overpasses/underpasses as ISTEAs Enhancements projects (now called Transportation Equity Act for the 21st Century, popularly known as TEA21).**
- **Assess trail road intersections during the trail planning and development process to assure safe road crossings.**

Figure 19 - Trails Work Program



Table 2.3: Trail Priority Criteria

Issue Area	Criteria
Land Availability/ Development Approvals	<p>Is the land for the trail in M-NCPPC ownership now?</p> <p>Is land acquisition or dedication needed before trail development can proceed?</p> <p>When is land acquisition/dedication anticipated? Short term or long term?</p> <p>Are there approvals or coordination with other public or private agencies expected (besides normal permitting) that may cause delays in trail development? (i.e. trail is proposed within a sewer easement, on County landfill property being converted to park land, partially on road or railroad right-of-way, etc.)</p>
Constraints	<p>What is the environmental sensitivity of the trail corridor?</p> <p>Are there known areas that will pose difficult engineering constraints for designing the trail?</p>
Stage of Project	<p>Has the trail planning begun for the project? Has some of the field work been done? Has a general alignment been selected?</p> <p>Have any formal studies or plans been completed? (i.e. Park Concept or Master Plans, Trail Feasibility Studies or Trail Concept Plans)</p> <p>Has the facility design and/or permitting been started or completed?</p>
Need/Demand/ Public Support	<p>Does the demand for the trail, based on population density, commercial intensity and proximity to public facilities, exist now, or is the trail needed primarily to serve future growth of the vicinity?</p> <p>When is the area in the vicinity of the trail expected to experience its growth? In the near future? Long term?</p>
Cost	<p>Is the cost per mile for this project anticipated to be high, medium or low, compared to other hard surface trails?</p>
Similar Trails in Vicinity	<p>Geographically, how close is the project site to existing hard surface trails that can meet a portion of the demand for the new trail?</p> <p>How close is the project site to similar trails that are expected to be built in the near future?</p> <p>Does the project serve as a connector to existing hard surface trails, thereby optimizing the use of the existing trails?</p>
Additional Criterion for Natural Surface Trails	<p>Is there an existing informal trail in the corridor? (Informal trails are those that are on park land and have built up over time with public use, but that were not built and are not maintained by M-NCPPC.)</p> <p>How much use does the informal trail(s) receive?</p> <p>What is the condition of the informal trail? Are there problems that need to be fixed soon due to safety, erosion, or environmental concerns?</p>

Table 2.4: Priorities for Safety Improvements at High Traffic Volume Trail-Road Intersections

Existing Hard Surface Trails	
Name of Trail/Park	Road Intersection
Sligo Creek Trail	Colesville Road
Capital Crescent Trail	Connecticut Avenue
Rock Creek Trail	Randolph Road
Sligo Creek Trail	University Boulevard
Rock Creek Trail	East-West Highway
Sligo Creek Trail	Piney Branch Road
Rock Creek Trail	Viers Mill Road
Sligo Creek Trail	New Hampshire Avenue
Little Falls Trail	River Road
Little Falls Trail	Massachusetts Avenue
Capital Crescent Trail	Bethesda Avenue
Capital Crescent Trail	Woodmont Avenue

Proposed Hard Surface Trails	
Name of Trail/Park	Road Intersection
Paint Branch Trail	Route 29/Columbia Pike
Matthew Henson Trail	Viers Mill Road
Mill Creek Trail	Shady Grove Road
Matthew Henson Trail	Georgia Avenue
Muddy Branch Trail	Darnestown Road
Matthew Henson Trail	Connecticut Avenue
North Branch SVP Trail	Muncaster Mill Road
Northwest Branch Trail	Randolph Road
Mill Creek Trail	Redland Road
Mill Creek Trail	Muncaster Mill Road
Metropolitan Branch Trail	Georgia Avenue
Metropolitan Branch Trail	Burlington Avenue
Capital Crescent Trail	CSX / Metrorail Corridor
Capital Crescent Trail	16th Street
Capital Crescent Trail	Colesville Road

Source: M-NCPPC, Office of Park Development Division

Table 2.5: Plan Implementation Recommendation

Implementation Mechanism	Plan Recommendation	Comments
<p>Funding</p>	<p>Ensure trail planning, design and construction programs are included in the Capital Improvements Program (CIP).</p>	<p>Trail facility planning, design and construction is primarily funded through the six-year Capital Improvements Program (CIP), which is revised every other year. For hard surface trails, new projects are first included as facility planning projects to specifically provide a Natural Resource Inventory/Forest Stand Delineation, to evaluate trail surfacing, study storm water management issues, identify environmental mitigation and improvements, and specific cost estimates. If the facility planning process results in a decision to go forward to provide with the trail proposal, then the project would be proposed for design and construction in the CIP.</p> <p>Natural surface trails require less complicated construction and thus the Capital Improvements Program for this type of recreational trail combines planning, design, construction and renovation into one project.</p>
	<p>Provide funding for renovations, upgrades and amenities for existing trails.</p>	<p>While the construction of major new trails such as those depicted on the <i>Countywide Park Trails Master Plan</i> map is important for meeting present and future demand for trails, there are other components of the trail program that are also vital to the functioning of a complete trails program. Major renovations, upgrades and amenities for existing trails, as well as the construction of local community and neighborhood trails are all funded through the Capital Improvement Program (CIP). These types of projects are often given low priority compared to large, well-known projects, and are sometimes deferred.</p>
	<p>Provide adequate funding in the CIP for policing, management and maintenance of trails.</p>	<p>Funding and staffing for park operations has not kept pace in recent years with the construction of new facilities. Trails pose particular difficulties for operations due to their linear nature and location often in otherwise undeveloped areas of parks. As with all other park facilities, for the safety and comfort of trail users, operating costs must be considered in the planning and scheduling of new trail construction.</p>
	<p>Utilize ISTEPA Enhancement Program and other grant programs whenever possible.</p>	<p>A conscious effort should be made to identify grant windows of opportunities and utilize them to maximum advantage. Joint projects for transportation connections to trails should be explored with the Department of Public Works and Transportation and the Maryland Department of Transportation. The new Rural Legacy Grant Program has the potential to provide for trails in rural areas.</p>
<p>Trails and Regulatory Review</p>	<p>Review subdivision plans for needed trail and bikeway connections to the countywide corridor proposals.</p>	<p>This is an extremely critical component of trail implementation as opportunities will be forever lost if they are not captured at the subdivision stage. Modifications to the subdivision and Recreational Guidelines are needed to update Trail Implementation Guide design standards and requirements. This is necessary to keep up with changing user requirements and improved technology. These recommendations will be included in the Trail Implementation Guide.</p>
<p>Mandatory Referrals</p>	<p>Review mandatory referrals for road improvements and new bridges to assure adequate accommodation of</p>	<p>Utility line construction plans should also be reviewed to determine areas where the utility easement corridor could provide needed trail connections. Utility construction (particularly sewer and water lines) often create a disturbed</p>

Implementation Mechanism	Plan Recommendation	Comments
	trails and bike paths.	corridor that provide opportunities for hard surface trails with little additional environmental disturbance, and also can often be easily converted to a natural trail.
Trail Design and Management Standards	Prepare Trail Implementation Guide to provide trail development standards and trail management guidelines.	This Plan will be followed by preparation of a Trail Implementation Guide. The Trail Implementation Guide will be a technical, working document that is a companion document to the Countywide Park Trails Plan. The Plan provides the conceptual framework for the continued development of the Countywide trail network and designates the existing and proposed trails of regional significance. The Trail Implementation Guide will provide the technical details to guide the trail development and management process.
Volunteer Programs	Utilize trail volunteers to help construct and maintain natural surface trails.	A Park Trail Volunteer program was established in 2002.
Community and Park Master Plans	Connect bikeways and trails whenever possible	Incorporate trail corridors and trail locations into all ongoing and future park master plans. Park master plans will recommend appropriate uses for trails during the planning process. Input to this decision will be sought from trail user groups as well as M-NCPPC staff including the following: Park Management, Park Police, Natural Resources, Park Planning and Development, and Community-Based Planning. Use designations will be reviewed periodically and adjusted if conditions change.
Park Trail Maintenance Policies	Ensure trails are enjoyable, safe and environmentally friendly.	Assure signs are posted on all formal, maintained trails to identify permitted uses and assure trail maps are readily available so people can easily find formal trails. Consider establishing a Trail Work crew in each of the park regions (north and south) to foster trail building and maintenance expertise and to allow a more systematic approach to trail monitoring and maintenance. Utilize volunteers to monitor the condition of trails and clearly identify the role of volunteers in relation to park maintenance staff

Appendices

Appendix A

Balancing Recreational, Transportation, and Environmental Concerns

Trails are one of Montgomery County’s most popular recreational facilities and can be enjoyed by all age groups as well as persons with disabilities. Trails are used for transportation to jobs and community destinations as well as recreation and can form an important network to connect parks with nearby residential communities. Trails also provide access to natural areas and conservation areas, thereby fostering public appreciation for the beauty, serenity, and intrinsic value of undeveloped parkland.

To protect and preserve sensitive natural and cultural resources while concurrently making available to the public a variety of high-quality trail experiences, the trail planning process includes the following elements:

Understanding the Types and Quality Of Environmental Resources In The Park System.

All trail planning efforts will be preceded by a sensitive areas analysis. With the aid of a computer-based mapping system, the following natural and cultural resources will be identified and evaluated:

- Streams and their buffers
- Steep slopes
- Hydric soils
- Archaeological sites
- Historical resources
- 100-year floodplains
- Highly erodible soils
- Wetlands and their buffers
- Habitats of rare, threatened, endangered, and watchlist species

Anticipating the Need for Recreation

To better understand recreational demand, M-NCPPC prepares the *Park Recreation and Open Space Master Plan* (i.e., the PROS Plan), which is updated every 5 years. This important functional plan provides broad policy guidance for the acquisition, planning, development and management of the County park system. The basic purpose of the PROS Plan is to answer two questions:

- **What is the demand for recreation facilities and programs? and ...**
- **What important natural and cultural resources need to be preserved?**

As reported in the *1997 Park, Recreation and Open Space Survey for Montgomery County*, slightly over 75% of the survey respondents reported visiting a County park within the last year (i.e., 1996) to enjoy nature or the outdoors. However, nearly 60% of the respondents also visited a part to use a playground, 55% used parks for picnicking, and 41% used parks for playing field sports such as baseball and soccer. The 1996 survey also showed that the activities most often participated in by adults for recreation in Montgomery County were walking and bicycle riding, respectively. The survey clearly reveals the importance of County parks for both stewardship of natural and cultural resources and recreation, especially recreational activities associated with trails.

Several questions in the 1996 survey were specifically designed to learn more about trail use in County parks. The responses were as follows (*see Figure A.1*):

Well over half of those surveyed (67%) had used paved park trails in the last year: 74% for observing nature, 52% for walking, 41% for bicycling and 33% for running or jogging.

Fifty-eight percent of the respondents indicated that they had used unpaved trails in the last year: 90% for walking, 85% for observing nature, 28% for running or jogging, 17% for mountain biking and 5% for horse-back riding.

Across the County, responses were evenly divided between those persons who preferred paved trails (35.1%) and those who preferred unpaved trails (34.2%). Potomac area residents showed a higher use and preference for unpaved trails, while I-270 corridor and Silver Spring residents indicated a somewhat higher preference for paved trails. From these specific survey results, staff inferred that in general, areas of higher population density are better served by paved rather than unpaved trails.

Evaluating the Potential Impacts of Trails on the Resource.

There are many concerns regarding the negative impacts of trails on natural and cultural resources. Forest fragmentation; edge-effect; the spread of exotic, invasive plant species; cow-bird parasitism of song-bird nests; heightened mammalian predation rates; soil compaction; trampling of vegetation; plant collection; localized increases in stormwater runoff; and artifact hunting are some of the common shared concerns.

Trail related impacts, such as those listed above must be identified and mapped as “constraints”.

Balancing stewardship and recreation goals and objectives.

The General Plan Refinements Goals and Objectives, the PROS Plan and this Plan’s Guiding Principles underscore the need for both stewardship and recreation in County parks. The sensitive areas analysis and subsequent field work provides the basis for setting stewardship goals as well as evaluating potential impacts of future recreation on the resource.

Planning and implementing projects in a manner that avoids minimizes, and mitigates for negative impacts to high quality resources.

Appendix A includes examples of environmentally sensitive trail design techniques and outlines the trail planning approach used in parks with sensitive environmental features.

Monitoring the long-term success of our efforts to balance stewardship and recreation.

Once the trail is opened, regular and routing monitoring must occur to ensure that any negative environmental effects are addressed in a timely manner. A monitoring program is essential to understanding what design techniques are most effective in making a trail “sustainable” both from a recreation and stewardship perspective.

Interpreting the results of the trail program to the public.

The concept of stewardship is one of balance. Educating the public as to how the trail program achieves balance at the countywide level in terms of protecting sensitive features and providing recreation opportunities is essential to this Plan’s success.

Figure A.1: Park Trail Use Survey

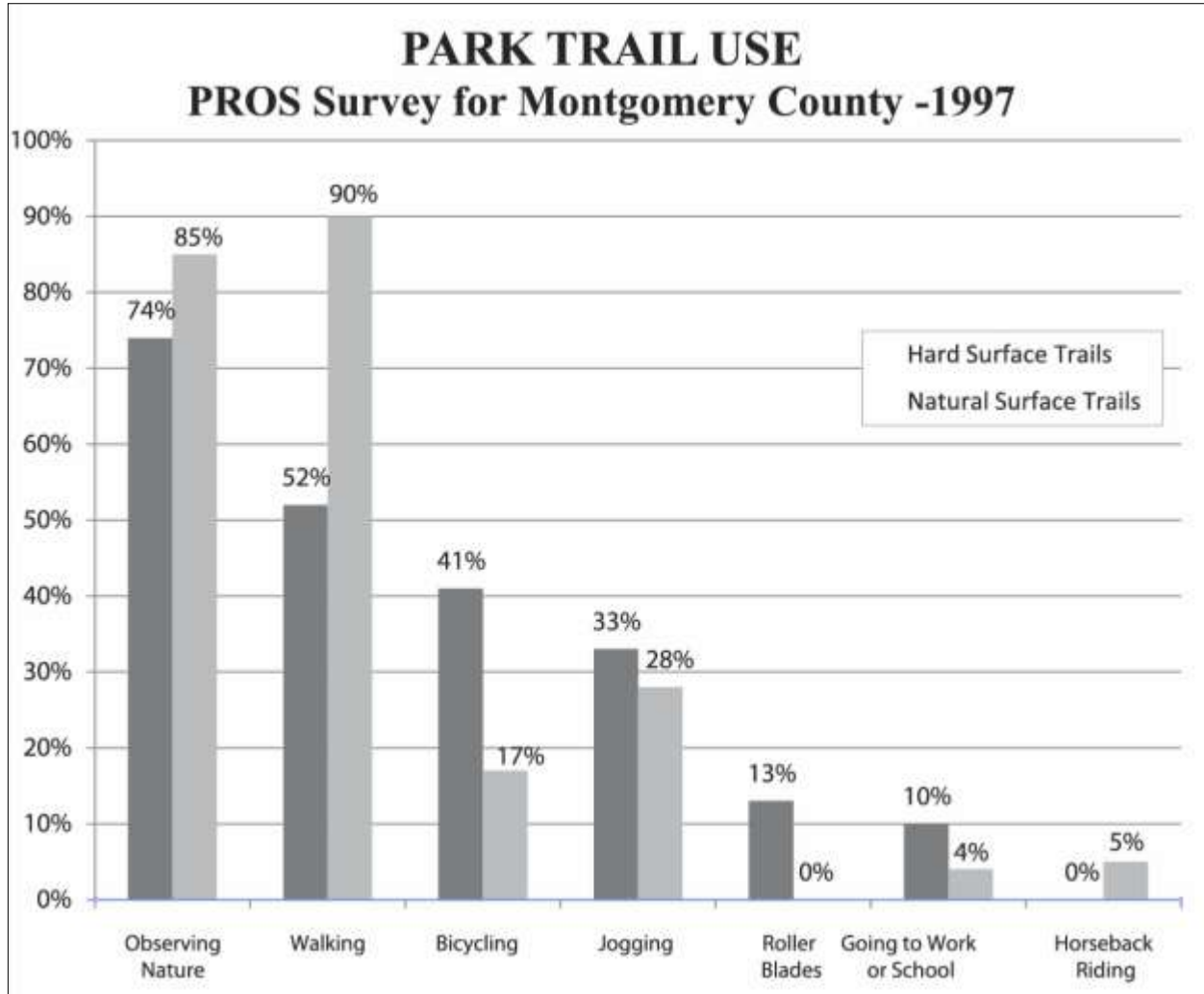
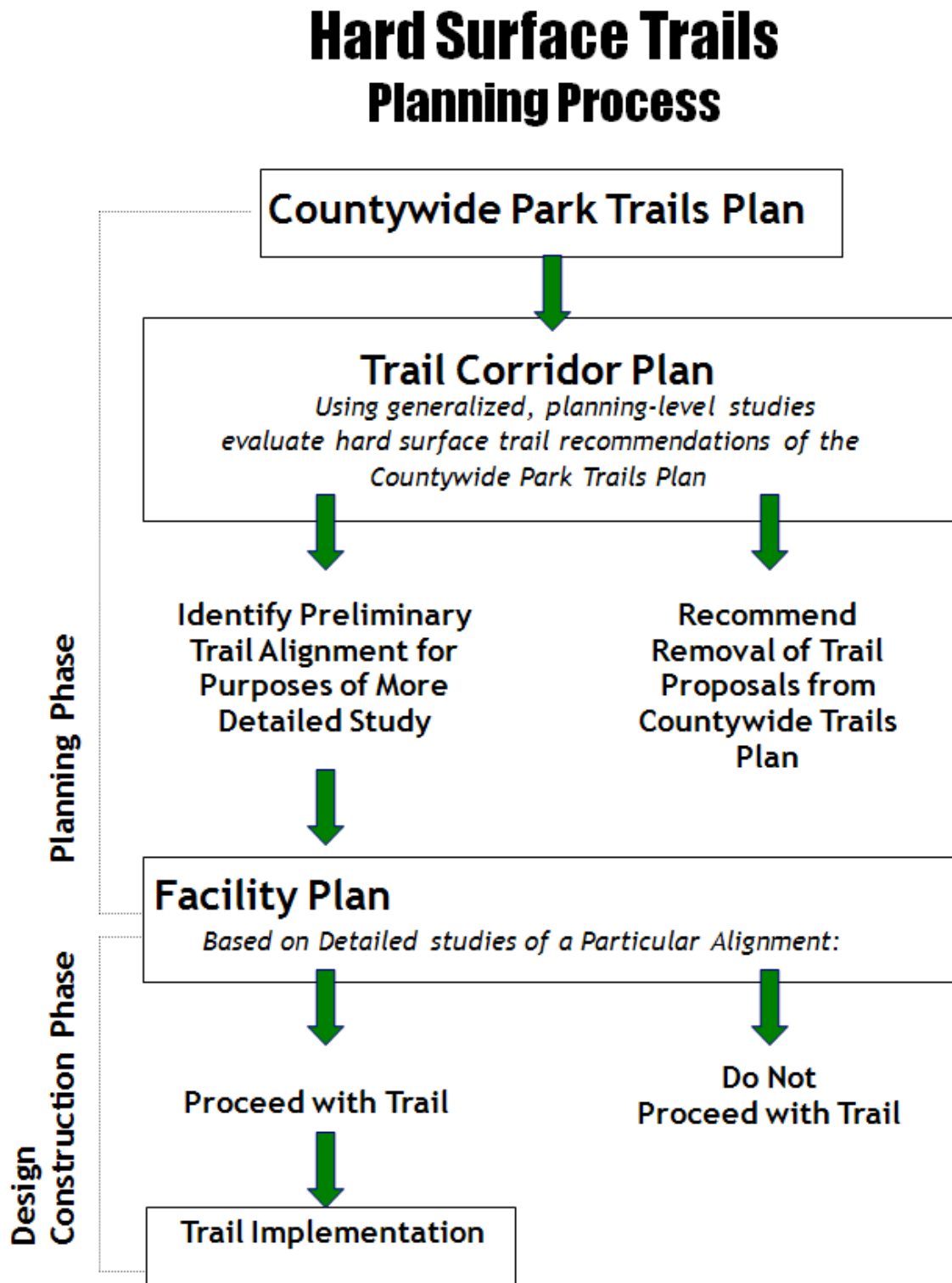


Figure B.1: Hard Surface Trails Planning Process



Appendix B

Hard Surface Trail Planning Guidelines

The Countywide Park Trails Plan proposes an interconnected system of hard surface and natural surface trails. This concept establishes the framework for trail planning at the corridor level.

Of the eight corridors identified in the Countywide Park Trails Plan, four include hard surface trails. Hard surface trails provide the greatest recreational and mobility opportunities but they also pose the greatest environmental concerns. For this reason, hard surface trail proposals within a corridor must be carefully studied.

The following approach will be used in the Trail Corridor Plan process to achieve a balance among environmental, recreation and mobility objectives

- **Identify character and quality of environmental resources in the corridor.**

Mapping and evaluation of the following natural features is the first step in the Trail Corridor Planning process:

- **Streams and stream buffer**
- **100-year floodplain limits**
- **Wetlands & wetland buffers**
- **Highly erodible soils**
- **Steep slopes**
- **Habitats of rare, threatened, endangered, and watchlist species**
- **Archaeological and historic sites**

When the trail corridor involves a stream valley park, this step includes determining if a trail can be located outside the stream valley buffer and associated areas of significant environmental features. This process is outlined in Appendix C.

- **Identify how a hard surface trail would contribute to the mobility and recreational opportunities in the corridor.**

Answering this question requires an understanding of land use patterns, population densities, and community destinations and proximity to other hard surface trails in the community and county.

- **Identify the potential impacts of a hard surface trail on sensitive features**

As noted in the Plan Introduction, negative effects such as forest fragmentation, soil compaction and the spread of exotic, invasive plant species need to be identified.

- **Identify opportunities to avoid, minimize and mitigate negative impacts to high quality resources**

Included in Appendix B are M-NCPPC policies relating to planning hard surface trails in areas with sensitive and significant environmental features. Although these policies relate primarily to stream valley parks, the commitment to avoid, minimize and mitigate negative environmental effects applies to all trail planning efforts. Opportunities to minimize and/or mitigate effects of stormwater run-off, habitat fragmentation, edge effects, spread of exotic invasive plant species are identified.

Appendix C

Sensitivity to Significant Environmental Features: Planning, Designing and Constructing Hard Surface Trails in M-NCPPC Parks

M-NCPPC follows the tiered approach described below during the trail planning, design and construction processes to avoid, minimize and mitigate potential negative environmental effects of a trail proposed in a certain corridor. This approach follows M-NCPPC and county policies, and local, state and federal regulations. In fact, trail development in Montgomery County Parks often goes above and beyond what is required by regulations. M-NCPPC takes its role of steward for the natural resources on parkland on behalf of the citizens of Montgomery County seriously.

Therefore, M-NCPPC tries to make every reasonable effort to use best management practices and state-of-the-art techniques and technologies in trail design and construction in order to balance the need for environmental sensitivity and protection and the recreation and transportation needs of County residents.

The tiered approach starts with the following question:

Can a trail be located within a stream valley associated areas of significant environmental features?

If **YES**, proceed with trail planning and identify preliminary trail alignments outside stream valley buffer;

If **NO**, explore the following alternatives within the corridor.

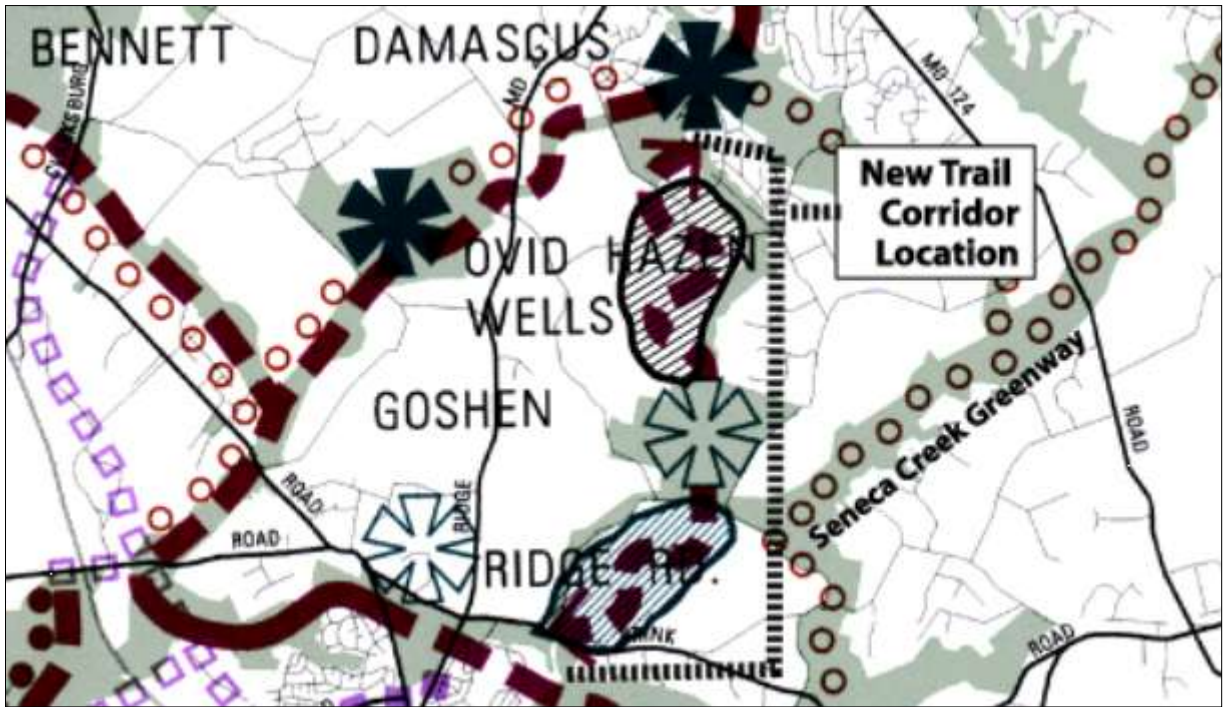
a. Is it possible to marginally expand existing park boundaries to include less sensitive areas for trail location?

EXAMPLE: The Countywide Park Trails Plan proposes this approach in the Rachel Carson Greenway Corridor where the Plan recommends expanding *“the Northwest Branch stream valley park boundaries to accommodate the trail while minimizing environmental impacts.”* *(See Figure 09)* The Plan states: *This approach means construction of a hard surface trail would await redevelopment of a [nearby] golf course. However, this is an appropriate trade-off given the opportunity to protect a highly sensitive environmental area, which deserves a high level of protection.*

b. Is it feasible to acquire a significant amount of new parkland to accommodate a trail?

EXAMPLE: The Countywide Park Trails Plan proposes a trail connection from the Magruder Branch stream valley system to the North Germantown Greenbelt. Although there is already parkland in the area (the Seneca Greenway) the Plan states *“opportunities for a hard surface trail in this portion of the Seneca Greenway may be limited due to topography, and the relatively narrow width of the Great Seneca Extension at this location.”* The Plan continues: *For this reason, the Plan suggests an alternative hard surface trail connection be studied which avoids the Great Seneca stream valley.* *(See Figure 08)*

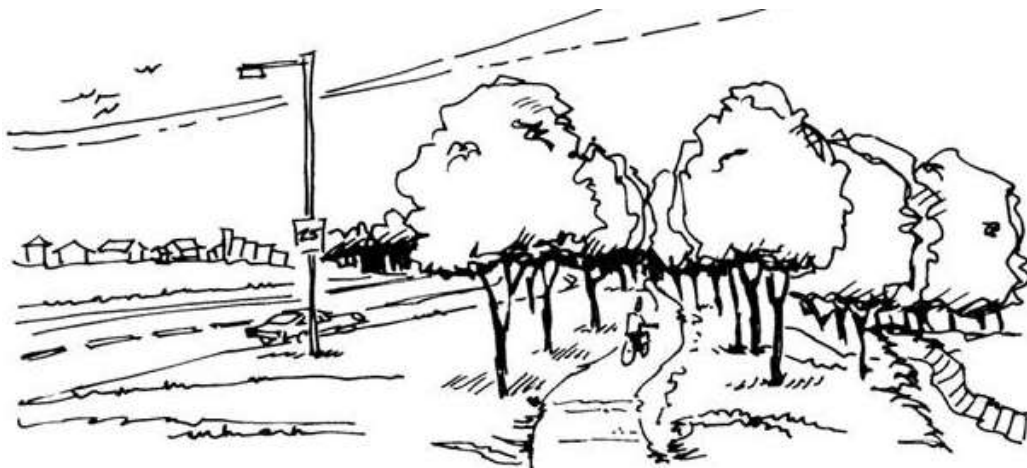
Figure C.1: Example of New Trail Corridor to Avoid Sensitive Features



c. Could a non-park bikeway system eliminate the need for a hard surface trail within the park?

The Clarksburg Greenway Study, which refines the hard surface trail system for the upcounty, notes that in portions of the Little Seneca Greenway, “it is recommended that part of the hard surface trail be located along a roadway rather than impact steep slopes and wetlands.” The Study notes that when portions of the hard surface greenway trail network relies on bike paths, “a special cross-section is needed to assure the bike path has a park-like character...,” shown in the Clarksburg Greenway Study, illustrates how a bike path along a road can be located in a park-like setting through the use of plantings and by making the path horizontally and vertically separate from the road.

Figure C.2: How a Bike path Along a Road Can Be Located in a Park Setting



If alternatives A-C are found to be infeasible, use these other alternatives:

- a. Minimize total environmental impact within the portions of the buffers that cannot be avoided.**

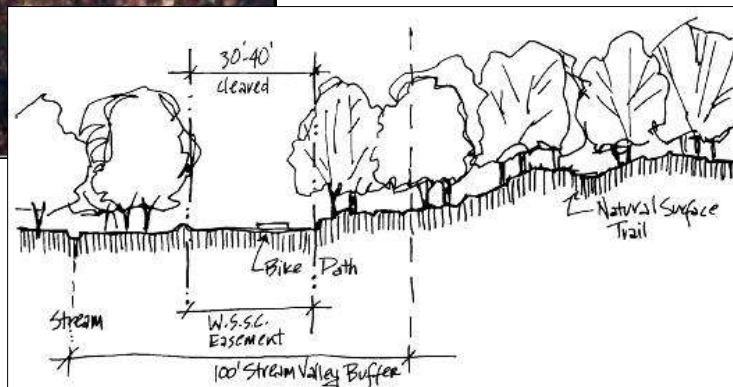
EXAMPLE: In some cases, trails may take advantage of already disturbed areas—such as cleared rights-of-way for sewer lines. These rights-of-way are often placed within the stream buffer to accommodate gravity flow for the sewer line. Although priority would be given to reforesting these, a trail might be allowed if especially sensitive areas are avoided. The Magruder Branch Stream Valley Park boardwalk trail is an example of coordinating trail construction with sewer line construction. A similar approach will be used for a portion of the Clarksburg Greenway Trail where WSSC has already cleared a swath of land in the stream valley (See Figure Ap-4). There are several other examples of trails within utility corridors. Parts of Sligo Creek Trail follow a WSSC sewer line. In addition, portions of the Northwest Branch Trail and trails within Black Hill Regional Park fall within previously cleared utility corridors.

- b. Use environmentally sensitive design and construction techniques.**

During trail facility planning, design, and construction, M-NCPPC staff and consultants look for ways to provide a safe and high quality trail user experience while minimizing negative environmental impacts. Avoid, minimize, and mitigate environmental damage is always the order of addressing sensitive areas. As trail design and construction has become a more specialized field over the last decade or so, new technologies and techniques have been and continue to be developed for more “environmentally friendly” trails. Staff will be developing a Trail Implementation Guide that will be a technical supplement to the Countywide Park Trails Plan. The Guide will recommend and may require some of these types of techniques and technologies.



Figure C.3: Using Disturbed Area in a Stream Valley for a Hard Surface Trail



Examples of Environmentally Sensitive Design Techniques Include:

1. Design of trail alignments:

Alignments should follow natural topographic contours to minimize erosion, and design around or minimize crossings of the most environmentally sensitive areas. These guidelines have been utilized in planning the Rachel Carson Conservation Park Trail System and new Black Hill and Ridge Road Park Trails.

2. Use alternative surfaces to asphalt:

Several materials have been developed to provide a firm and stable surface with a more natural look. A soil stabilizer made of natural tree resin has been mixed with soil and installed in a test section of the Northwest Branch Trail.

3. Use helical piers for boardwalks and bridges:

These piers cause less environmental disturbance than concrete or wooden piers, and can be installed with a portable generator causing less construction impact. They have been used on a boardwalk on a Sligo Creek Trail connector, and as the foundation for a bridge of the new Percheron Trail in the Agricultural History Farm Park.

4. Trail Safety:

Widen trail at steep slopes and curves to increase safety without widening the entire trail. This is being done on the rock Creek Trail Extension.

5. Use tree protection techniques to limit disturbance to trees near trail:

These include air-blasting technology to expose and analyze the root structure, clean-cutting tree roots by hand during construction, aeration of roots, and maintaining tight limits of disturbance for construction equipment.

6. Use new, lighter weight materials where possible:

Bridge components made of an advanced composite material with fiberglass reinforcement will be used for small bridges on the Northwest Branch Trail. Lighter but strong materials can be brought on site by smaller vehicles, or hand carried.

7. Use smaller construction machinery:

Smaller construction vehicles to exist; the California-based SWECO Company makes a 4" wide paver. However, smaller machinery, and contractors experienced with them, may not be as readily available, and may increase costs due to the increased time and effort involved.

8. Use small modular construction or end-on construction:

Especially applicable to boardwalk-type facilities, trail sections can be built piece by piece, limiting the area of construction disturbance to the section already constructed. More research is necessary for the application of this technique.

Mitigate for negative environmental impacts caused by the trail.

Trail projects can include a wide array of mitigation techniques for trail impacts, as required by permitting agencies. They will serve to improve the general conditions of the corridor's environment. These can be done within the trail corridor or elsewhere

EXAMPLES:

1. Storm water management facility improvements or construction:

The Rock Creek Extension will improve an existing storm water management pond to help control the quantity of storm water runoff from the trail and other nearby facilities.

2. Stream restoration:

Some of the riprap and other stream restoration in Sligo Creek were constructed in part as mitigation for the Sligo Creek Trail Extension. The riprap helps control erosion, thereby improving the water quality.

3. Vernal pool construction:

These were constructed as part of the Magruder Branch Trail project. These pools provide habitat for creatures such as salamanders.

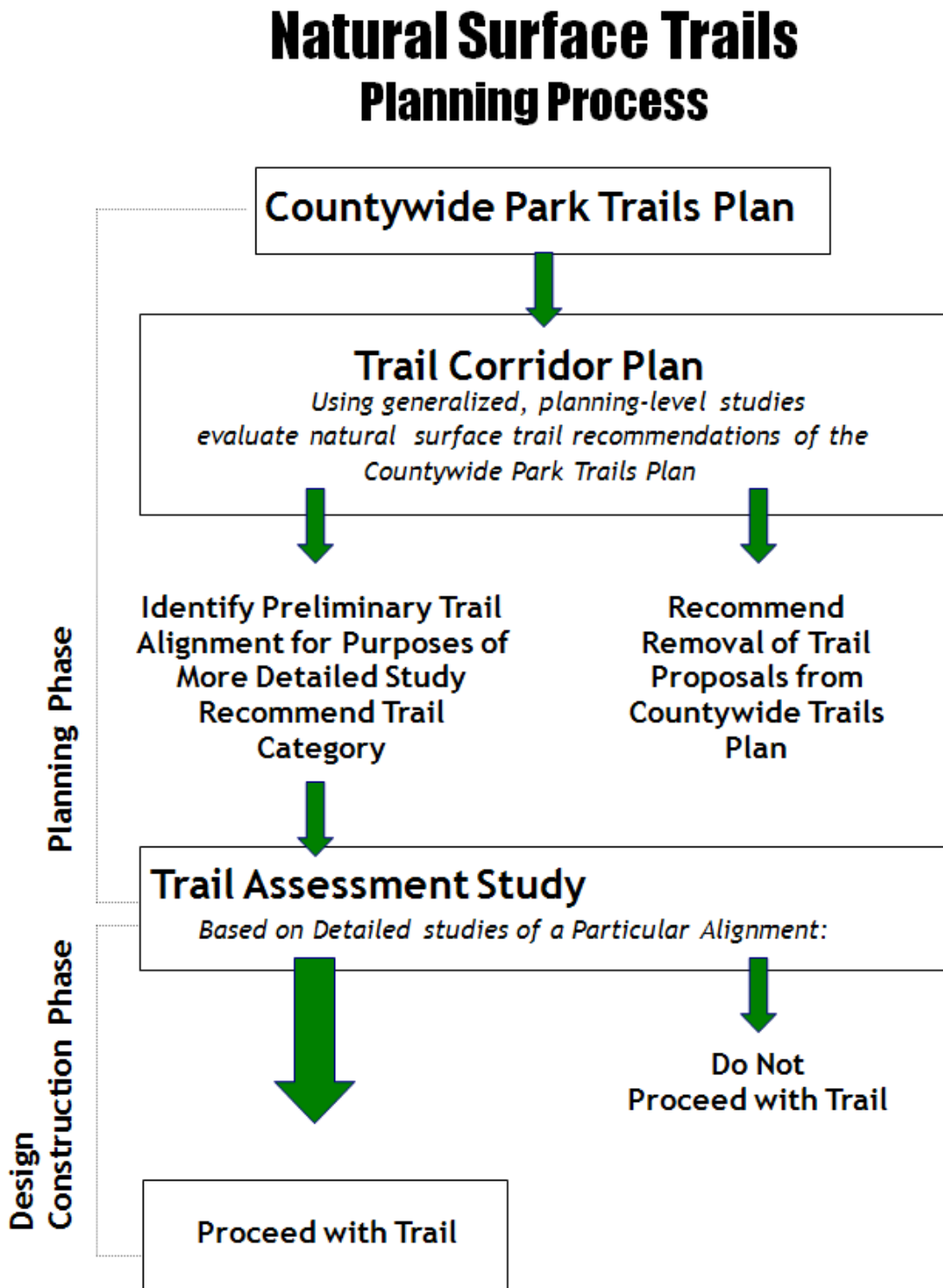
Environmental Improvements for Conditions Not Caused By Trail:

Trail projects can and do include tasks that improve some environmental damage that had been caused by sources other than the trail. In addition, trails provide some long-term positive impacts to the environment by providing access to natural areas so that citizens can develop a public appreciation of nature, and by educating the public regarding environmental issues through interpretive signage, brochures and programs.

EXAMPLES:

- 1. Clean up of accumulated trash and old dumps within a trail corridor. Old cars and large appliances litter the undeveloped areas of the park system.**
- 2. Stream restoration along tributaries in the trail corridor, which have been incised by storm water runoff from development outside of parklands.**
- 3. Wetland creation or enhancement.**
- 4. Reforestation / forest enhancement.**
- 5. Removal of invasive exotic plants.**
- 6. Creation of wildflower gardens using plants to attract native birds or butterflies.**
- 7. Provision of wildlife corridors, such as underpasses under major roads, wide enough to serve trail users and wildlife.**

Figure D.1: Natural Surface Trail Planning Process



Appendix D

Natural Surface Trail Planning Guidelines

Process and Design

The natural surface trail planning process is shown in *Figure 08*.

The following objectives and principles help guide the natural surface trail planning process:

- a. **To seek trail alignments that avoid environmentally sensitive areas and sensitive archaeological and historical features. Evaluating environmental conditions during the trail planning process is essential to address park and open-space protection and the stewardship of natural, archaeological and historical resources.**
- b. **To recognize that hiking is a legitimate form of recreation and transportation on natural surface trails when and where it is practiced in an environmentally sound and socially responsible manner.**
- c. **To recognize that horseback riding is a legitimate form of recreation and transportation on natural surface trails when and where it is practiced in an environmentally sound and socially responsible manner.**
- d. **To recognize that bicycling is a legitimate form of recreation and transportation on natural surface trails when and where it is practiced in an environmentally sound and socially responsible manner.**
- e. **To recognize that not all natural surface trails should be open to equestrian and/or bicycle use.**
- f. **To provide geographic parity in natural surface trail use opportunities for hikers, equestrians and bicyclists across the park system.**
- g. **To seek trail alignments that are compatible with adjacent land-use and connecting trails.**
- h. **To incorporate features for user enjoyment, e.g., loop trails, scenic destinations and picnic areas**
- i. **To create joint projects to educate all trail users.**
- j. **To encourage communication between park staff, natural surface trail user groups and the environmental community.**

Categories of Natural Surface Trails

Natural surface trails are enjoyed by people on foot, people on horseback and people on hybrid bicycles. An important planning issue relating to natural surface trails is what user groups should be accommodated on any given trail. The trail use categories for natural surface trails are:

- **Single Use, Hiking Only.**
Hiking trails may be located in environmentally sensitive areas that are considered too fragile for bicycle or equestrian use or traverse terrain that is very rugged.
- **Shared Use by All**
These trails are open to hikers, equestrians and cyclists.
- **Shared Use by Some.**
These trails are open to hikers and equestrians or hikers and cyclists.

In special situations, trails may have a Special Focus. These are trails designed with a specific user group in mind. Equestrian trails intended to accommodate trail riding groups or to allow jumping or faster gaits, for example, should be designed and built to a higher trail standard. Trails for mountain bikers seeking a high degree of challenge and obstacles require careful planning. Interpretive trails for groups would involve higher standards in terms of trail width and access.

Determining Whether a Natural Surface Trail Should Be Shared Use

Shared use trails are beneficial as they direct users to one trail alignment and eliminate the need to provide multiple parallel trails for each user group.

However, when the Department of Park and Planning reviews suitability of a natural surface trail for equestrian or bicycle use, equestrian or bicycle use should not be allowed where it would cause the following measurable effects. This list is not all-inclusive.

- a. **Significant soil erosion or significant damage to streams or palustrine wetlands.**
- b. **Rutting, impairment of trail drainage, breakdown of trail shoulders, and other forms of damage not correctable using the Department of Park and Planning Trail maintenance standards and techniques.**
- c. **Significant disturbance of plants or animals or their habitat.**
- d. **Damage to archaeological, historical, or other significant resources, including rare natural features of interest for nature interpretation or scientific study.**
- e. **Danger to the safety of equestrians, bicyclists or other trail users because of a horse's gait, bicycle's speed, steep grades, steep terrain, sharp curves, slippery or unstable trail surfaces or limited visibility.**
- f. **Significant displacement of other natural surface trail users. If significant user conflicts arise, the issue of how best to accommodate different trail user groups will have to be explored.**

There are many approaches to signing, maintaining and managing trails that help promote successful shared use trails. The approaches listed below are some examples:

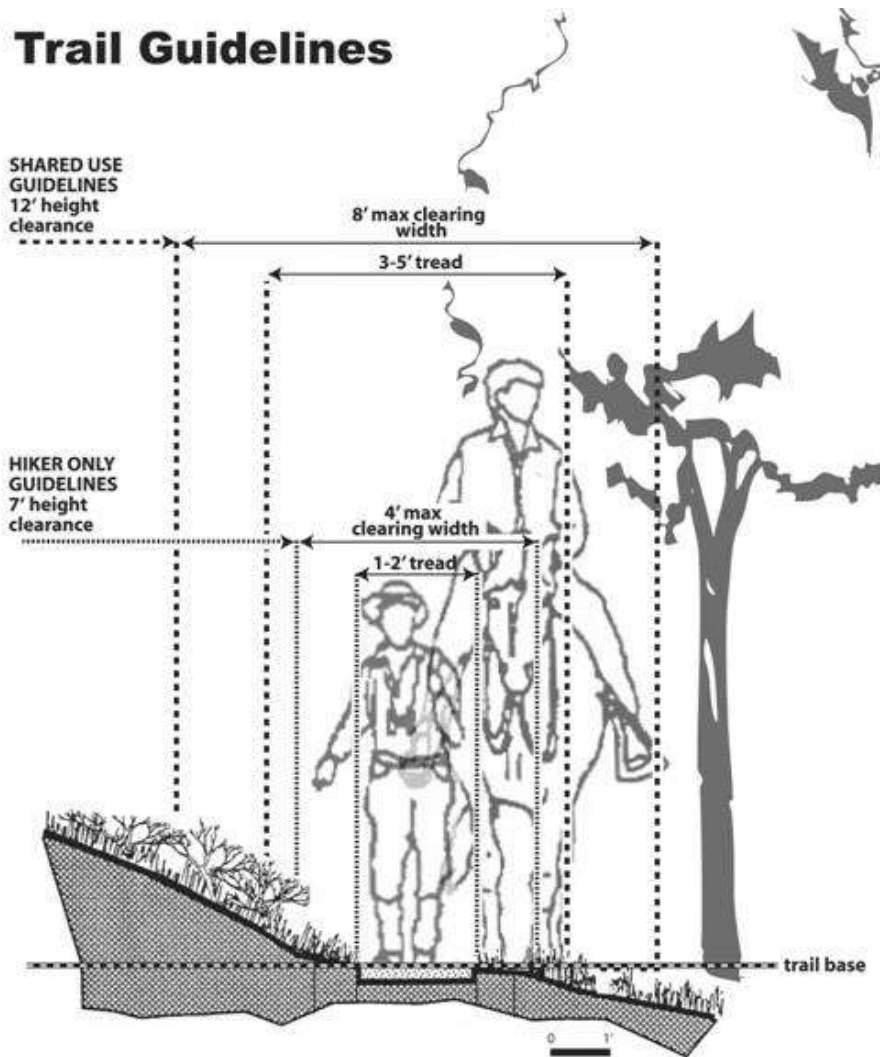
- a. **Employ natural and/or artificial design features that restrict the speed of equestrians and bicyclists without posing an undue impediment to hikers.**
- b. **Employ design features that enhance sight distance.**
- c. **Employ design features that minimize trail erosion, e.g., proper grades, turn radii, tread hardening, and drainage control.**
- d. **Use wide or pull-off sections to facilitate slowdowns or safe passing.**
- e. **Walk horses and bicycles in certain areas.**
- f. **Establish and maintain "one-way-only" trail sections.**
- g. **Recommend speed limits.**
- h. **Restrict use by time of day, day of week, week of month or month of year.**
- i. **Restrict use by season (e.g., to protect soils or breeding birds).**
- j. **Separate different types of trail users at trail heads and congested areas.**
- k. **Establish and enforce party size limits.**
- l. **Allow use by permit only**
- m. **Install barriers to prevent leaving trails. Block and obliterate (through site restoration) unauthorized trails**
- n. **Monitor and maintain trails on a regular and routine basis.**
- o. **Establish and maintain informational kiosks at trail heads.**
- p. **Produce and disseminate accurate, up-to-date trail maps.**

q. Establish and maintain an effective system of signs on natural surface trails.

Description of Trail Assessment Study

When a Trail Corridor Plan identifies a preliminary alignment and recommends a shared use trail use category for a natural surface trail, further work is done by staff to designate a final alignment. Trail Assessment studies rely heavily on environmental analysis, field walks with park region staff, Park Development and Design staff, staff horticulturists and forest ecologists, natural resource specialists and park managers to assure a proposed trail is sustainable from both an environmental and recreational perspective.

Illustration of natural surface trail clearance guidelines.



Appendix E

(From the 1998 Parks, Recreation and Open Space Plan (PROS Plan))

Park Accessibility Goals and Objectives for Disabled Individuals

In the planning, construction, and renovation of buildings and facilities, as well as the provision of programs and services to the public, it is the policy of the Montgomery County Department of Parks to provide accessibility for all park visitors, consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone.

Recognizing the diversity of disabling conditions and that citizens with disabilities desire opportunities for recreational and leisure activities, the Department of Parks has developed a park accessibility program. This program is designed to assist in:

- **Obtaining input on recreational needs from people with disabilities**
- **Ensuring that all future park development will be designed with the needs of people with disabilities in mind**
- **Analyzing existing barriers within the parks**
- **Funding of future accessibility projects**
- **Dissemination of this information to the public**

Accessibility Goals and Objectives

1. **To comply with the provisions of the Americans with Disabilities Act.**
2. **To increase utilization of Montgomery County Parks by persons with disabilities.**
3. **To ensure that all employees are adequately trained with substantive content to be more aware and sensitive to the variety of disabilities and the differing needs, and abilities and limitations of these conditions.**
4. **To ensure that the Department of Parks utilizes Accessibility Standards and Guidelines which comply with federal standards and obtain technical assistance from county, state and federal offices.**
5. **To ensure the review of appropriate site plans for existing parks proposed for modification and proposed new park development to determine if goals are met.**
6. **To assist the Community Relations office to outreach to people with disabilities through an effective publicity campaign.**

Implementation of Accessibility Goals

To implement the park accessibility goals it is recommended that:

7. **All park facilities are surveyed in order to comply with the requirements of the ADA. The focus should be on parking, sitting areas, level access paths, signage and restrooms.**

- 8. Accessible facilities are provided in each region of the county to ensure convenient access to persons with disabilities.**
- 9. New playgrounds are sited and designed for accessibility, distributed throughout the county and located in parks where they are likely to receive the most use.**
- 10. All Department of Parks programs are modified to provide programmatic access.**
- 11. Information is made available to the public on the location of accessible park facilities and programs.**
- 12. Park publications are reviewed to assure the inclusion of appropriate material on accessibility, and that press releases and public announcements include pertinent accessibility information.**

Appendix F

List of Master Plans providing guidance to the Countywide Park Trails Plan

Originally amended and adopted in July 1998, the Countywide Park Trails Plan was amended in March 2004 and again in September 2008 to reflect guidance directed from the following Master Plans:

Community Master Plans

- **2001 Kemp Mill Park Analysis**
http://mcparkandplanning.org/community/plan_areas/eastern_county/master_plans/kempmill_aa/kempmill_toc.shtml)
- **1982/1985/2006 - Damascus Master Plan Park and Trail Recommendations**
<http://mcparkandplanning.org/damascus/index.shtml>
- **2005 Olney Master Plan Park and Trail Recommendations**
http://mcparkandplanning.org/community/plan_areas/georgia_avenue/master_plans/olney/april_2005_approved_adopted/index.shtml
- **1999 - Greenways: Clarksburg Master Plan**
http://www.mcparkandplanning.org/community/plan_areas/rural_area/master_plans/clarksburg/toc_clark.shtml

Park and Trail Master Plans

The Plans listed are available online at: www.ParkPlanning.org

- **2000 - Lois Y. Green Conservation Park Master Plan**
- **2002 - Muddy Branch Trail Corridor Plan**
- **2005 - Rachel Carson Trail Corridor Plan**
- **2007 - Little Bennett Regional Park Master Plan**
- **2008 - Upper Rock Creek Trail Corridor Plan**
- **2002/2004 – Woodstock Equestrian Park Master Plan**
- **2003 - Blockhouse Point Conservation Park Master Plan**





**COUNTYWIDE PARK TRAILS PLAN
as amended and updated through 2008**

The Maryland-National Capital Park & Planning Commission
Montgomery County Department of Parks



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