PROPOSED COMPREHENSIVE PLAN AMENDMENT

ITEM: 2013-CW-T2
September 17, 2014

GENERAL LOCATION: Countywide

SUPERVISOR DISTRICT: All

PLANNING AREA: All

PLANNING DISTRICT: All

SUB-DISTRICT DESIGNATION: All

PARCEL LOCATION: All

Bicycle Master Plan Amendment
For additional information about this amendment call (703) 324-1100.

PLANNING COMMISSION PUBLIC HEARING:
Wednesday, October 1, 2014 @ 8:15 P.M.

BOARD OF SUPERVISORS PUBLIC HEARING:
Tuesday, October 28, 2014 @ 4:00 P.M.

PLANNING STAFF DOES RECOMMEND THIS ITEM FOR PLAN AMENDMENT

Reasonable accommodation is available upon 7 days advance notice. For additional information about accommodation call (703) 324-1100.

MAP NOT APPLICABLE

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STAFF REPORT FOR COUNTYWIDE PLAN AMENDMENT
BICYCLE MASTER PLAN
2013-CW-T2

I. BACKGROUND

The Fairfax County Comprehensive Plan consists of the Policy Plan, Area Plans, the Comprehensive Land Use Plan Map, the Transportation Plan Map, and the Countywide Trails Plan Map. The purpose of the Policy Plan is to provide a concise statement of objectives, policies, and guidelines for implementing the County's goals as they related to the future development pattern of the built and natural environment in Fairfax County. The Policy Plan covers eleven functional elements, one of which is Transportation.

The 2013 edition of the Fairfax County Comprehensive Plan includes a Transportation element that identifies 13 objectives and supporting policies that provide the framework for the continued development of the County's transportation system in the face of continued population and employment growth as well as changing characteristics of the population. The Transportation element presents a Board of Supervisors' goal which states in part:

> *"A keystone policy for future planning and facilities includes achievement of a multi-modal transportation system to reduce excessive reliance upon the automobile. Regional and local efforts will focus on planning and developing a variety of transportation options. Sidewalks, trails and on-road bicycle routes should be developed as alternate transportation facilities leading to mass transit, high density areas, public facilities and employment areas."*

This Comprehensive Plan amendment consists of recommended Policy and Area Plan revisions and a new Bicycle Network map. The amendment will serve as a guide for the Board of Supervisors, the Planning Commission, the Board of Zoning Appeals, County staff, developers and the citizens of Fairfax County with respect to the planning and design of on and off-road bikeways in the County. Additional guidance related to bicycle facility design, maintenance, implementation and outreach provided in chapters 4, 5, and 6 of the Bicycle Master Plan document. These chapters are separate from the plan amendment and are included for reference only. It is proposed that these three chapters will be endorsed in concept by the board.

Specific guidance on how this Comprehensive Plan amendment is proposed to be interpreted and used by Fairfax County on an ongoing basis follows:

- The Virginia Department of Transportation (VDOT), Fairfax County Department of Transportation (FCDOT), the Department of Public Works and Environmental Services (DPW&ES), developers and others undertaking actions that have an impact upon, present an opportunity for, or have potential nexus with the facilities, policies,

and programs referenced in this Plan should accommodate the recommendations of this Plan in their own planning, maintenance, and capital improvement projects.

- It is expected that private developers, VDOT, and Fairfax County will construct or fund construction of various physical improvements and programmatic elements of this Plan.

- This Plan does not apply to roadways in jurisdictions near or within Fairfax County, such as the Cities of Fairfax and Falls Church, and the Towns of Clifton, Herndon, and Vienna. Facility recommendations appearing within these jurisdictions should be considered advisory. Recommendations for these jurisdictions are provided to facilitate coordination in the planning of a network of bikeways that function seamlessly across jurisdictional boundaries.

Bicycling conditions in Fairfax County today vary greatly depending on location. Bicyclists have access to excellent regional trail networks including the Washington & Old Dominion Trail, a 45-mile multi-use rail-trail that is owned and operated by the Northern Virginia Regional Park Authority (NVRPA). There is an extensive network of shared use paths throughout portions of the county including the Cross County Trail (CCT). As part of the county's bicycle program initiative, on-road bike lanes, wide curb lanes, and new pavement markings and signage are being installed countywide. Many existing neighborhood streets are relatively bicycle-friendly; however, in most neighborhoods, connectivity from these streets to nearby destinations is inadequate, limiting their ability to serve as an alternative to busy arterials. Areas of the county such as Tysons, Transit Station Areas, Suburban Centers and various Community Business Centers are slated to become more urban through zoning changes consonant with the Comprehensive Plan guidance and the introduction of high frequency bus and rail transit. If planned and designed well, the new mixed-use communities that emerge will be walkable, transit-oriented and bicycle-friendly hubs that will stimulate and facilitate increases in bicycling for transportation.

Nevertheless, there are serious and significant constraints to bicycling in Fairfax County today. Unfortunately, many of the existing shared use paths are in poor condition or lack connectivity. Many stream valley park trails have limited use for transportation due to the prevalence of fair-weather stream crossings, lack of access points, lack of wayfinding signs, limited width and/or lack of all-weather surfaces. Linear barriers such as I-495, I-66, the Dulles Toll Road and their large interchanges divide neighborhoods from each other and make it very difficult to travel by bike. Many commercial employment and retail centers lack adequate bike parking and are accessible only by roads that experience large volumes of traffic and high speeds. These characteristics, combined with large intersections and aggressive driver behavior, limit bicycling as a transportation choice for many short trips. Many of the county's rural areas can also be difficult to traverse on a bicycle. Many of these more rural roads were constructed prior to the 1930's and consist of narrow lanes with little or no shoulders and geometric conditions (e.g. sharp horizontal and vertical curvature, limited sight distances) that do not meet today's standards. These physical

limitations are further exacerbated by motorists not accustomed to sharing the road. Efforts by local residents to preserve the character of these roadways have resulted in several being listed on the National Trust for Historic Places or designated as historic by-ways. These designations, in some instances, place limitations on certain roadway improvements hindering efforts to improve both the walking and biking environment.

The Fairfax County Bicycle Master Plan builds on the Fairfax County Bicycle Route Map, released on May 16, 2008, and the Tysons Corner Bicycle Master Plan, segments of which were adopted as part of the Tysons Comprehensive Plan in 2010. The Fairfax County Bicycle Route Map was a top priority of the Board of Supervisors, and shows a network of existing preferred and less preferred bicycle routes connecting all of Fairfax County. The Tysons Corner Bicycle Master Plan was developed as the first phase of the Countywide Bicycle Master Plan enabling coordination with the introduction of Metro's Silver Line and the land use changes ongoing and anticipated in Tysons. The new countywide plan builds on the recommended network, policies and programs identified in the Tysons Corner Bicycle Master Plan, while more broadly addressing bicycle access throughout Fairfax County. Policy and program recommendations in the Tysons Corner Bicycle Master Plan specific to Tysons are incorporated within the Fairfax County Bicycle Master Plan. The recently adopted Innovation Center South and the Reston Transit Station Areas Comprehensive Plans are examples of how those goals of the Fairfax County Bicycle Master Plan have been incorporated to increase bicycle access in transit oriented areas.

Extensive public outreach was conducted as part of this plan development including:

- A Bicycle Advisory Committee (BAC) was specifically formed for this project and met throughout the duration of the process.
- Eight sub-area public meetings were held from Fall 2011 through Spring 2012.
- Four Countywide public meetings were held, two in Spring 2012 and two in Spring 2014.
- A series of focus group meetings were conducted covering the following topics: Economic Impacts, Biking and Health, Bike Safety Education, Schools, Transportation, and Law Enforcement Issues.
- Technical outreach meetings were held to engage stakeholders such as VDOT and the Fairfax County Park Authority.
- Extensive field inventories were conducted and existing plans and studies were reviewed and incorporated.

The bicycle facility and policy recommendations included in this Comprehensive Plan amendment represent a shift in how bicycle planning and design will be approached in Fairfax County. Moving forward, it is assumed and expected that bicycles will be treated as valid users of the roadway and accommodated as a necessary element of all roadway improvement projects. Private and public development along roads included within the Countywide Bicycle Network will be expected to contribute to the vision of a place that meets the needs of bicyclists today while encouraging more people to ride in the future.

This expectation is fully consistent with direction established in the county's adopted Transportation element of the Policy Plan, VDOT's Statewide Bicycle Policy Plan, and other local, regional, state, and national documents. The information in the Fairfax County Bicycle Master Plan provides direction and guidance on how to implement policies already established and adopted at the highest levels of Fairfax County and VDOT.

II. Summary of Changes

The following is a summary of the proposed amendments to Volumes I-IV of the Area Plans of the Fairfax County Comprehensive Plan, 2013 Edition and the Transportation element of the Policy Plan.

Comprehensive Plan, 2013 Edition, Volumes I-IV

Terminology and plan discrepancies have been resolved and/or clarified. All figures titled, "Planned Trail System" have been deleted. Bicycle maps for Baileys, Franconia-Springfield, Reston, and Dulles Suburban Center have been updated.

Policy Plan

The **INTRODUCTION** will be expanded to include the history of the Fairfax County bicycle program and expand on the need to improve infrastructure and connectivity and to encourage bicycling as a safe and realistic mode of transportation.

The **COUNTYWIDE OBJECTIVES AND POLICIES** will be updated and clarified with references to the Bicycle Master Plan. Only those Objectives that require modifications or deletions have been included in this staff report.

FIGURE 2, THE COUNTYWIDE TRAILS MAP, ADOPTED JUNE 17, 2002 (Attached) will have a notation added instructing users to refer to the 2014 Recommended Bicycle Network Map (Attached) for all bicycle elements. All on-road bike routes as shown will be removed from the Countywide Trails Plan Map including the map key referencing "On Road Bike Route." The 2002 Countywide Trails Plan Map will continue to be used for trails used primarily for recreational purposes including stream valley trails, park trails, and equestrian trails. Some recreational trails with transportation benefit are additionally included in the 2014 Recommended Bicycle Network Map. FIGURE 3, 2014 Recommended Bicycle Network Map will be added to the Transportation element of the Policy Plan

A new **Appendix 5, Fairfax County Bicycle Master Plan (Attached)** will be introduced. Chapters 1, 2, 3 and 4 of the Bicycle Master Plan will be incorporated into the Policy Plan. Chapters 5, and 6, are oriented to technical and programmatic approaches that, while outside the purview of the Comprehensive Plan, will be useful in implementing bikeway network recommendations. Chapters 5 and 6 will not be incorporated into the Policy Plan but are included in this package for information.

III. Recommended Modifications to the Fairfax County Comprehensive Plan, 2013 edition, Area Plans I, II, III, and IV

Staff recommends the following modification/deletions to the Area Plans. Text proposed to be added is shown as underlined and text proposed to be deleted is shown with a ~~strikethrough.~~

Many of the Planning Sectors include a figure titled, "Planned Trail System." In most cases, this figure is blank and states, "Trails Plan Map for this Sector Under Construction". Staff determined that these figures are no longer necessary and can be deleted. In addition to deleting these figures, accompanying trails recommendations referring to these figures will be modified. Staff recommends that the narrative be modified by deleting the reference to the figure and, instead, referencing both the Countywide Trails Plan Map and Bicycle Network Maps. The following modified narrative is applicable to all Planning Sectors;

Trails and Bicycle Facilities

Trails planned for this sector are delineated ~~on Figure 35 and~~ on the 1":4,000' Countywide Trails Plan Map which is referenced as Figure 2 in the Transportation element of the Policy Plan and is available from the Department of Transportation. Trails in this sector are an integral part of the overall county system. While some of the segments have already been constructed, the Countywide Trails Plan Map portrays the ultimate system for the sector and the county at large. In addition, the map specifies a classification for each segment, which represents the desired ultimate function and surface type of the trail. Specific construction requirements are detailed in the Public Facilities Manual.

Bicycle Facilities for this sector are delineated on the 1":4000' Countywide Bicycle Network Map which is referenced as Figure 3 in the Transportation element of the policy Plan and is available from the Department of Transportation.

The following matrix identifies the figures to be deleted, the page where they are located, and the page number where the accompanying recommendation can be found.

Area	Planning District	Page #	Figure #	Trails Recommd. Page #
I	Annandale	98	35	97
	(as amended through 4-29-2014)	105	39	102
		113	43	111
		121	48	120
		128	52	126
		135	56	133
		143	60	141
		149	64	146

Area	Planning District	Page #	Figure #	Trails Recommd. Page #

		155	68	151
		163	72	162
I	Baileys	133	32	129
	(as amended through 4-29-2014)	140	36	139
		147	41	143
		157	47	152
		168	53	167
I	Jefferson	23	12	22
	(as amended through 4-29-2014)	30	16	27
		37	20	36
		44	24	43
		57	31	56
		64	35	62
		72	39	71
		82	44	80
I	Lincolnia	22	12	21
	(as amended through 4-29-2014)	31	16	30
		40	21	38
II	Fairfax	34	14	33
	(as amended through 4-29-2014)	42	18	40
		52	24	51
		63	29	61
		78	37	74
II	Vienna	54	20	53
	(as amended through 4-29-2014)	65	25	64
		77	31	75
		84	35	82
		91	39	90
II	McLean	99	21	97
	(as amended through 4-29-2014)	109	26	107
		116	30	114
		123	34	121
		130	38	128
		138	43	137
III	Bull Run	48	16	47
	(as amended through 4-29-2014)	55	20	53
		64	26	62
		72	31	70
		82	36	81
		92	42	90
		100	46	98

Area	Planning District	Page #	Figure #	Trails Recommd. Page #
III	Pohick	29	13	28
	(as amended through 6-3-2014)	45	21	42
		52	25	50
		70	33	69
		81	39	80
		89	43	88
III	Upper Potomac	144	50	142
	(as amended through 4-29-2014)	154	55	153
		164	60	162
		199	69	197
		237	84	235
		250	88	248
		264	94	259
III	Fairfax Center	43	13	41
	(as amended through 4-29-2014)			
IV	Lower Potomac	107	36	106
	(as amended through 6-3-2014)	118	41	116
		133	48	131
IV	Mount Vernon	132	35	130
	(as amended through 4-29-2014)	142	41	140
		152	48	150
		159	52	158
		167	56	166
		176	60	174
		184	64	182
		192	68	190
IV	Rose Hill	38	16	37
	(as amended through 4-29-2014)	57	27	55
		78	33	77
		86	37	84
		94	41	92
		103	45	101
IV	Springfield	37	14	36
	(as amended through 4-29-2014)	44	18	42
		51	22	47
		61	27	59
		68	31	67
		81	37	79
		88	41	86
		95	45	92
		109	50	108

Throughout the Area Plans, there are numerous references to bicycle facilities. Recent plan amendments have been coordinated with the bicycle master plan recommendations; however, some planning district narratives contain information and/or terminology that

are in conflict with the bicycle master plan. Staff recommends that these sections of the Area Plan be amended as shown below. Text proposed to be added is shown as underlined and text proposed to be deleted is shown with a ~~strikethrough~~.

MODIFY: Fairfax County Comprehensive Plan, Area I, Baileys Planning District, as amended through 4-29-2014; Baileys Crossroads Community Business Center, page 37:

"1. *Principal Arterials (Boulevards)* - Leesburg Pike and Columbia Pike are principal arterials in the CBC primarily carrying the longer-distance through traffic from adjacent areas such as Arlington County to the east and Seven Corners to the west.
Curb to Curb Area:
- Median width of 14 to 22 feet (may be wider for areas with frequent pedestrian crossings).
- 3 travel lanes per direction:
- 2 travel lanes per direction (11 feet for each lane).
- 1 extra wide travel lane per direction, adjacent to the curb, to accommodate bikes (15 feet minimum, 16 feet desirable). These two roadways are classified on the bicycle master plan as Policy Roads and will require further study in order to determine what type facility best addresses bicycle travel."

MODIFY: Fairfax County Comprehensive Plan, Area I, Baileys Planning District, as amended through 4-29-2014; Baileys Crossroads Community Business Center, page 38:

"5. *Local Streets (Local)* - Local streets in this area include the internal circulation roads and the new planned streets which connect the land uses to collector roads and allow internal circulation.
Curb to Curb Area:
- Medians should only be required when they are part of the urban design concept and the landscape or open space plan.
- 1 travel lane per direction (11 feet for each lane; however, 10 feet travel lane widths may be considered for residential streets.)
- 8 feet for on-street parking per direction
- Local streets are low speed facilities that may not require marked bike lanes but can be defined using bicycle signage and shared lane markings."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, page 31:

" 2. The block bounded by Chain Bridge Road, Ingleside, Buena Vista and Meadowbrook Avenues, (Subarea 4) should remain in private recreation uses. If redevelopment occurs, infill of low intensity commercial or medium intensity mixed-use to include office and residential with no retail would be appropriate, provided building heights do not exceed

three stories; all offices access to Ingleside Avenue; and extensive landscaped buffering to residential uses is provided; an on-street ~~bikeway~~ bicycle facility is provided along Ingleside Avenue; and a primary pedestrian connection to West McLean is enhanced along Meadowbrook Avenue. If developed with office uses, an urban park should be provided."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, Subarea Guidelines, Subarea #2, page 39:

"**Special Considerations**

Provide landscaped buffer when adjoining single-family housing. ~~Bikeway~~ Bicycle facility on ~~eastern side along~~ Tennyson Drive. Add landscaping and street trees along Chain Bridge Road and Tennyson Drive."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, Subarea Guidelines, Subarea #4, page 41:

"**Special Considerations**

Provide landscaped buffer where adjoining recreation facility or redevelopment. ~~Bikeway~~ Bicycle facilities on ~~eastern side, along~~ Ingleside Avenue. Enhance primary pedestrian connection to West McLean along Meadowbrook Avenue. Provide neighborhood park if developed with office uses."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, Subarea Guidelines, Subarea #7, page 47:

"**Special Considerations**

All surface parking to be landscaped and sustain trees. Realign Laughlin Avenue with new street north of Chain Bridge Road. Consider parking lot for transit facility at Tennyson Drive and Chain Bridge Road. On-street ~~bikeway~~ bicycle facility along Tennyson Drive and Whittier Avenue. Provide bus shelter at existing bus stop on Chain Bridge Road. Pedestrian connection through block to line up with Lowell Avenue and proposed Civic Place in Subarea 11. Pedestrian plaza either at northeast corner or along Chain Bridge Road."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, Subarea Guidelines, Subarea #8, page 48:

"**Special Considerations** Provide landscaped buffer where adjoining single-family housing. On-street ~~bikeway~~ bicycle facility along Whittier Avenue and Tennyson Drive."

MODIFY: Fairfax County Comprehensive Plan, Area II, McLean Planning District, as amended through 4-29-2014; McLean Community Business Center, Subarea Guidelines, Subarea #9, page 49:

"**Special Considerations** Provide landscaped buffer where adjoining single-family housing. On-street ~~bikeway~~ bicycle facilities along Whittier Avenue."

MODIFY: Fairfax County Comprehensive Plan, Area IV, Franconia-Springfield Area and Fort Belvoir North Area, as amended through 4-29-2014; Area-Wide Recommendations, Transportation, Streets and Circulation Improvements, page 24:

" • *Create a system of bicycle lanes and facilities* – In conjunction with the "complete streets" guidance, an integrated system of bicycle lanes should be provided on the minor arterial streets of the Franconia-Springfield Area, allowing the major destinations in the area to be accessed and interconnected with the county and regional bikeway system, as shown in Figure 4. Minor arterial roadways serving the area such as Commerce Street, Loisdale Road, Backlick Road, Amherst Avenue, and Frontier Drive should be retrofitted to provide on-road bike lanes as these road sections are rebuilt. These bicycle facilities would interconnect with facilities planned or already operating outside the activity center. Supporting features such as storage lockers, racks, and bicycle sharing facilities should be provided at key destinations in the area such as the Joe Alexander Transportation Center and Springfield commuter parking facility and multi-modal center at Old Keene Mill Road. The Bicycle Master Plan identifies both Backlick Road and Amherst Avenue as policy roads requiring further study. Because of the existing width of the one-way segments of both Backlick Road and Amherst Avenue, a cycletrack option should be evaluated on either one or both roadways."

MODIFY: Fairfax County Comprehensive Plan, Area IV, Franconia-Springfield Area and Fort Belvoir North Area, as amended through 4-29-2014; Fort Belvoir North Area, Trails, page 94:

"TRAILS

Trails planned for the Fort Belvoir North Area are delineated ~~on Figure 30 in the Belvoir Community Planning Sector (S5) Figure as part of the Countywide Trails Plan~~ on the 1":4,000' Countywide Trails Plan Map which is referenced as Figure 2 in the Transportation element of the Policy Plan, and is available from the Department of Transportation. It is anticipated that pedestrian and bicycle travel will be important modes of transportation at the FBNA. A comprehensive network of trails and sidewalks is essential to providing access to employment at FBNA. An extensive network of trails and pathways for non-motorized transportation should be developed to connect all public features. The network should also connect to adjacent parkland at the FBNA perimeter including such as the Accotink Stream Valley and Hooes Road parks. The trail system should also provide connections to planned or existing trails serving area neighborhoods, the Joseph Alexander Transportation Center, the Springfield Community Business Center on Backlick Road and the Springfield Mall (future town center). These connections will be extension provide connections to existing and planned regional trails such as the Franconia- Springfield Parkway trail, the Fairfax County Parkway trail, the Cross County Trail via the Accotink Stream Valley, the Lorton/Laurel Hill trails, the Potomac Heritage National Scenic Trail and the Route #1 National Bicycle Trail."

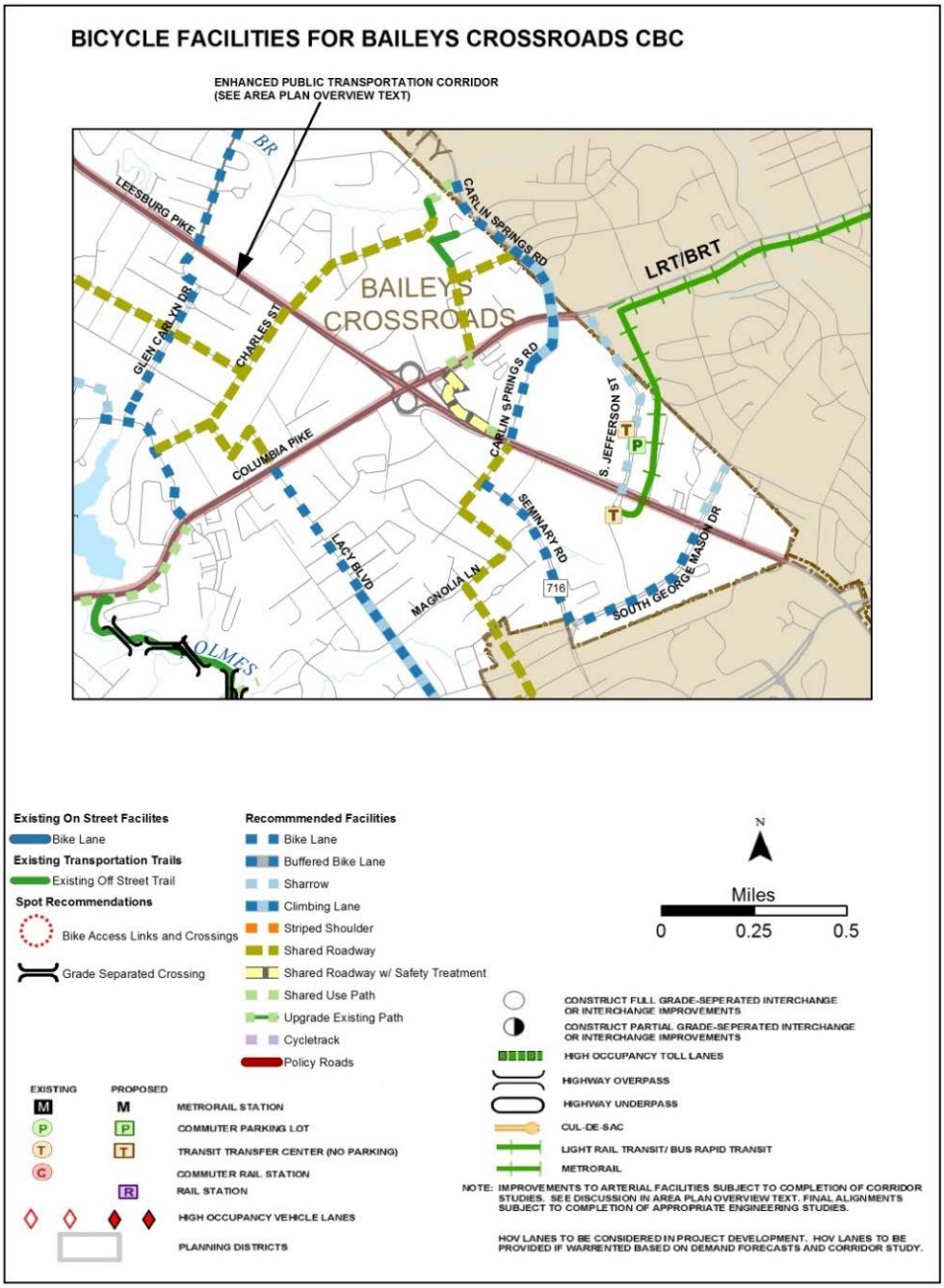
UPDATED COMPREHENSIVE PLAN MAPS

The following maps will be modified to reflect bicycle network recommendations from the Bicycle Master Plan.

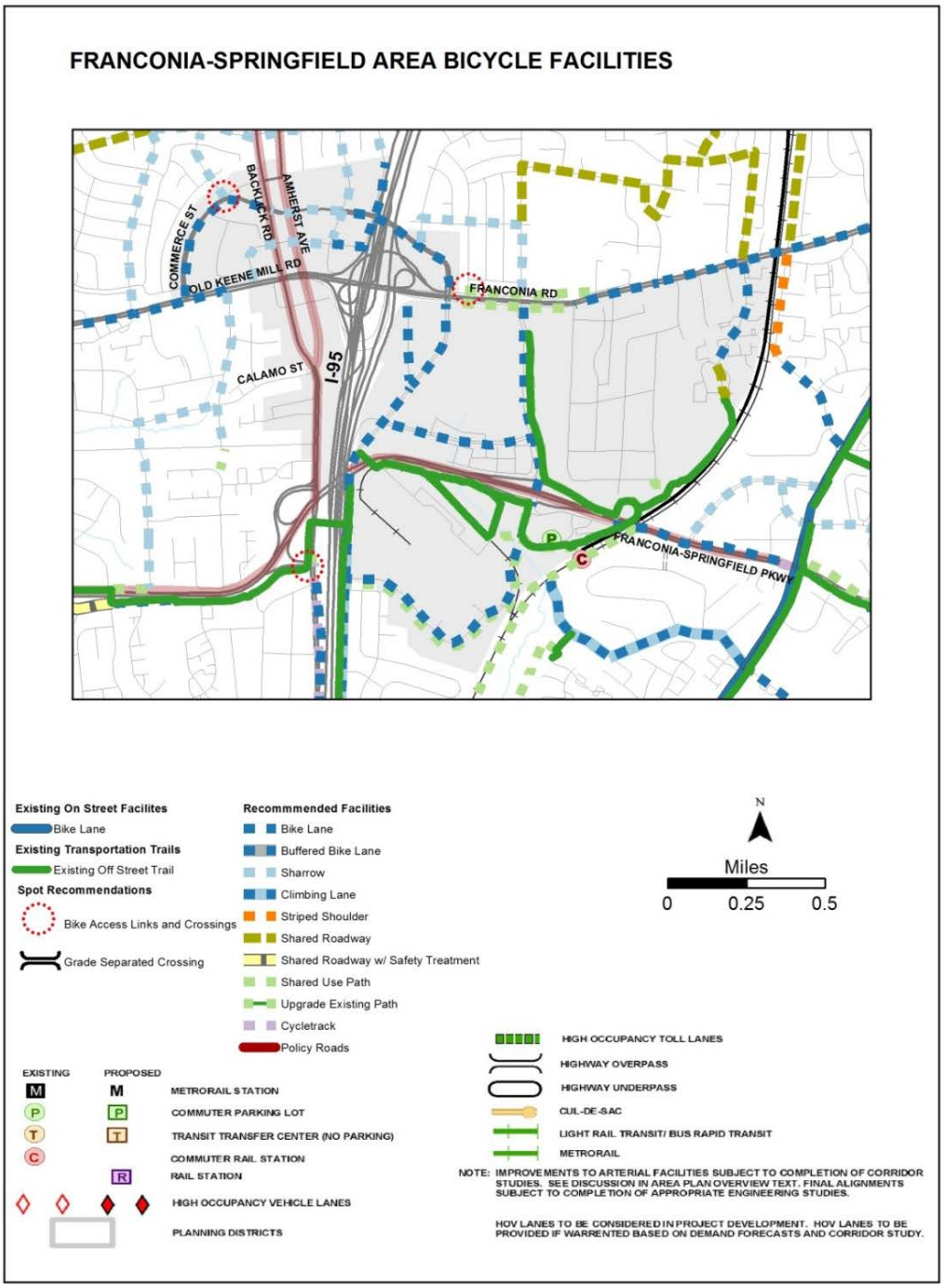
Updated Comprehensive Plan Figures

MODIFY FIGURE: Fairfax County Comprehensive Plan, Area I, Baileys Planning District as amended through 4-29-2014; Baileys Crossroads Community Business

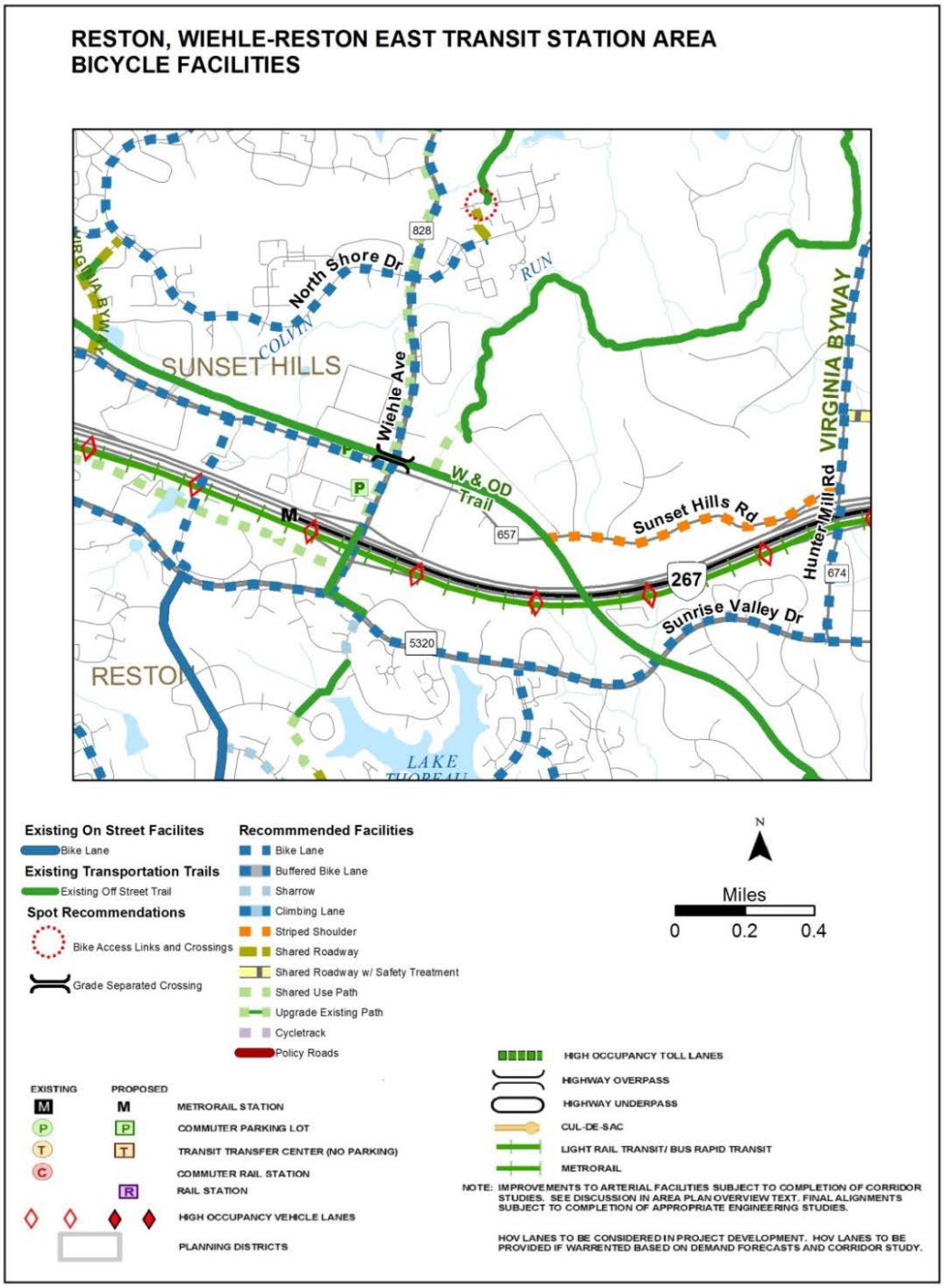
Center, Map 4, "Transportation Recommendations-Bicycle Network," page 39:



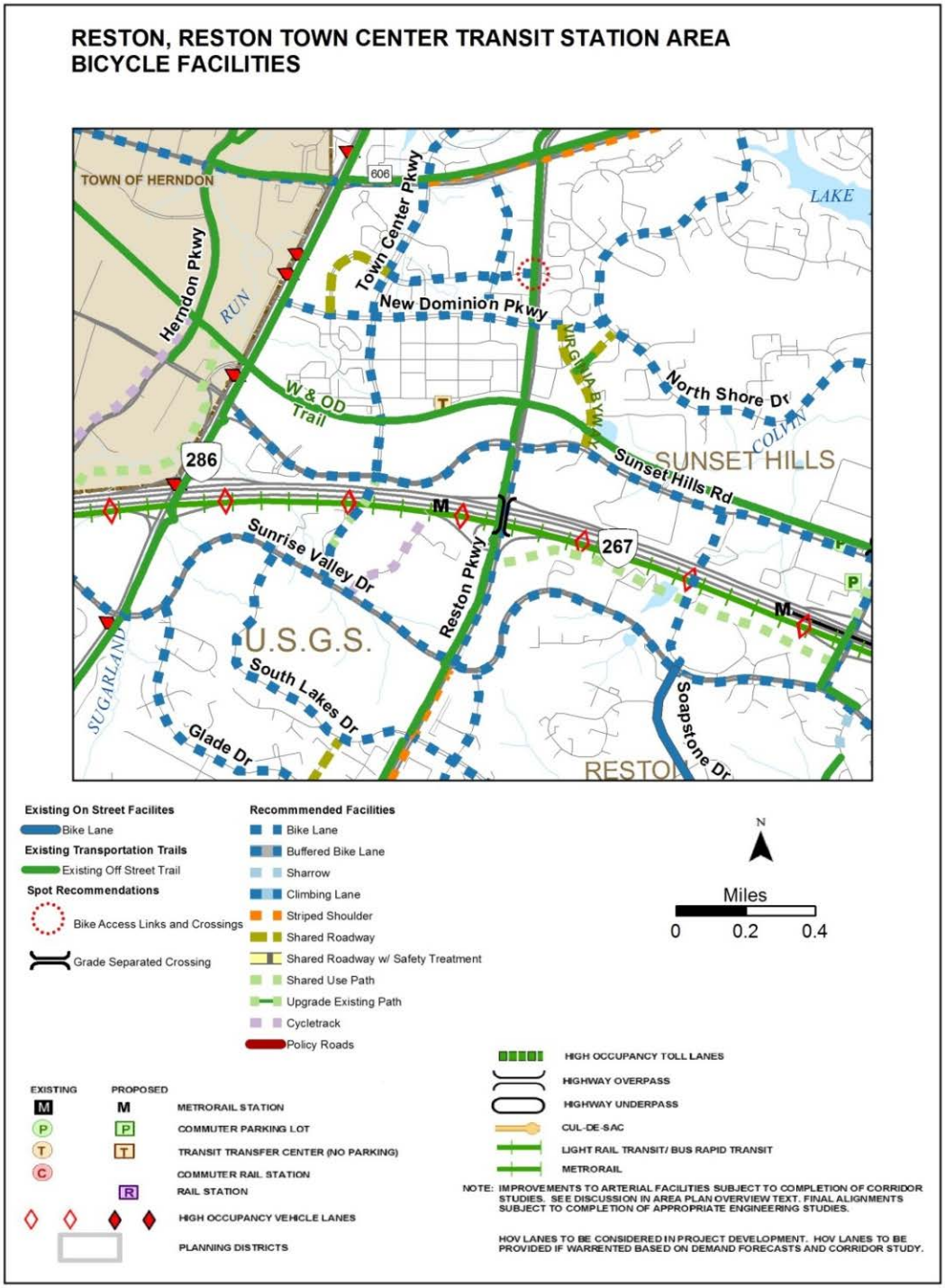
MODIFY FIGURE: Fairfax County Comprehensive Plan, Area IV, Franconia-Springfield Area and Fort Belvoir North Area, as amended through 4-29-2014; Figure 4, "Recommended Bicycle Network," page 25:



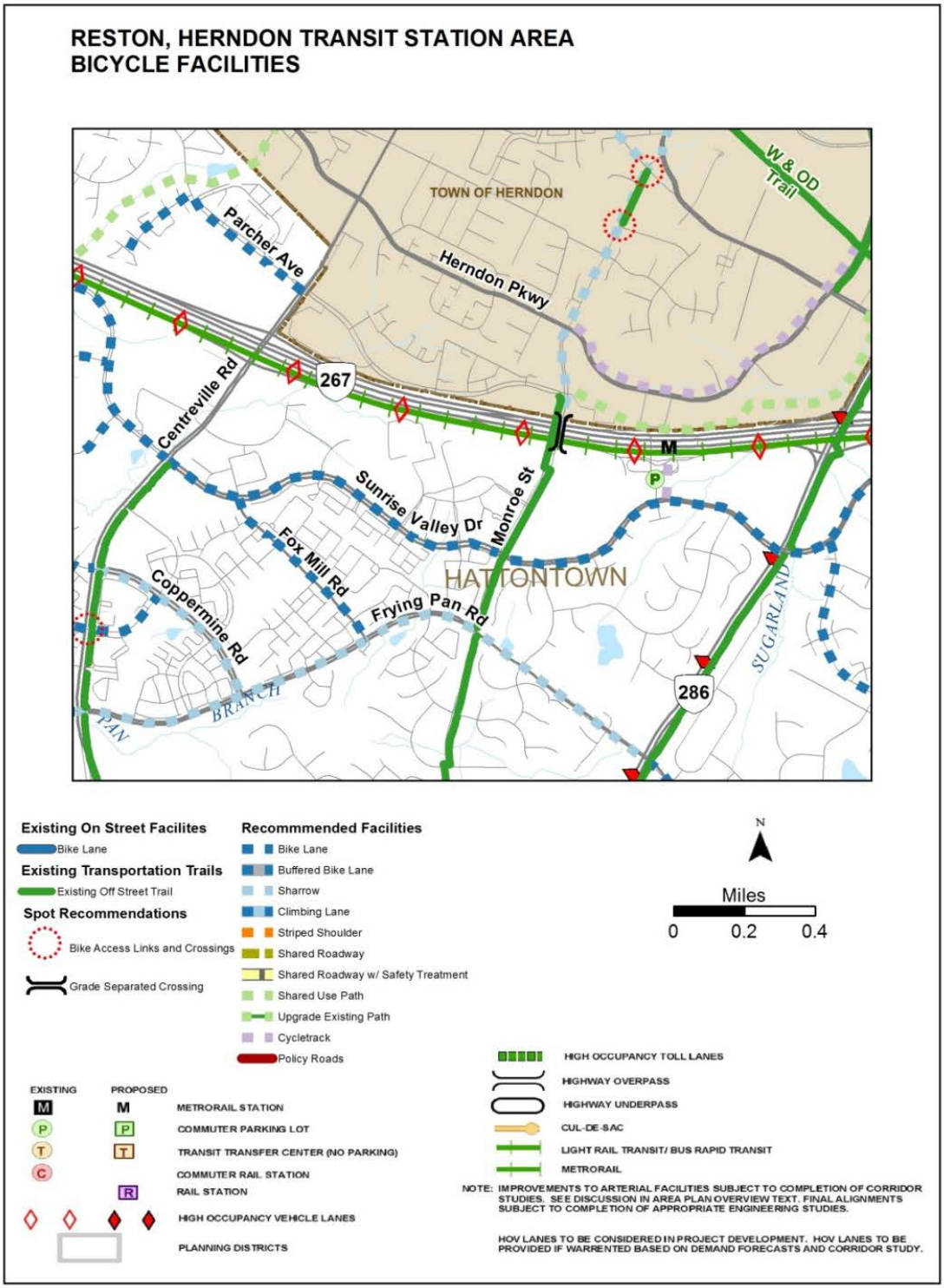
MODIFY FIGURE: Fairfax County Comprehensive Plan, Area III, Upper Potomac Planning District, as amended through 4-29-2014; Reston Transit Station Areas, Figure 23, "Recommended Bicycle Network," page 78:



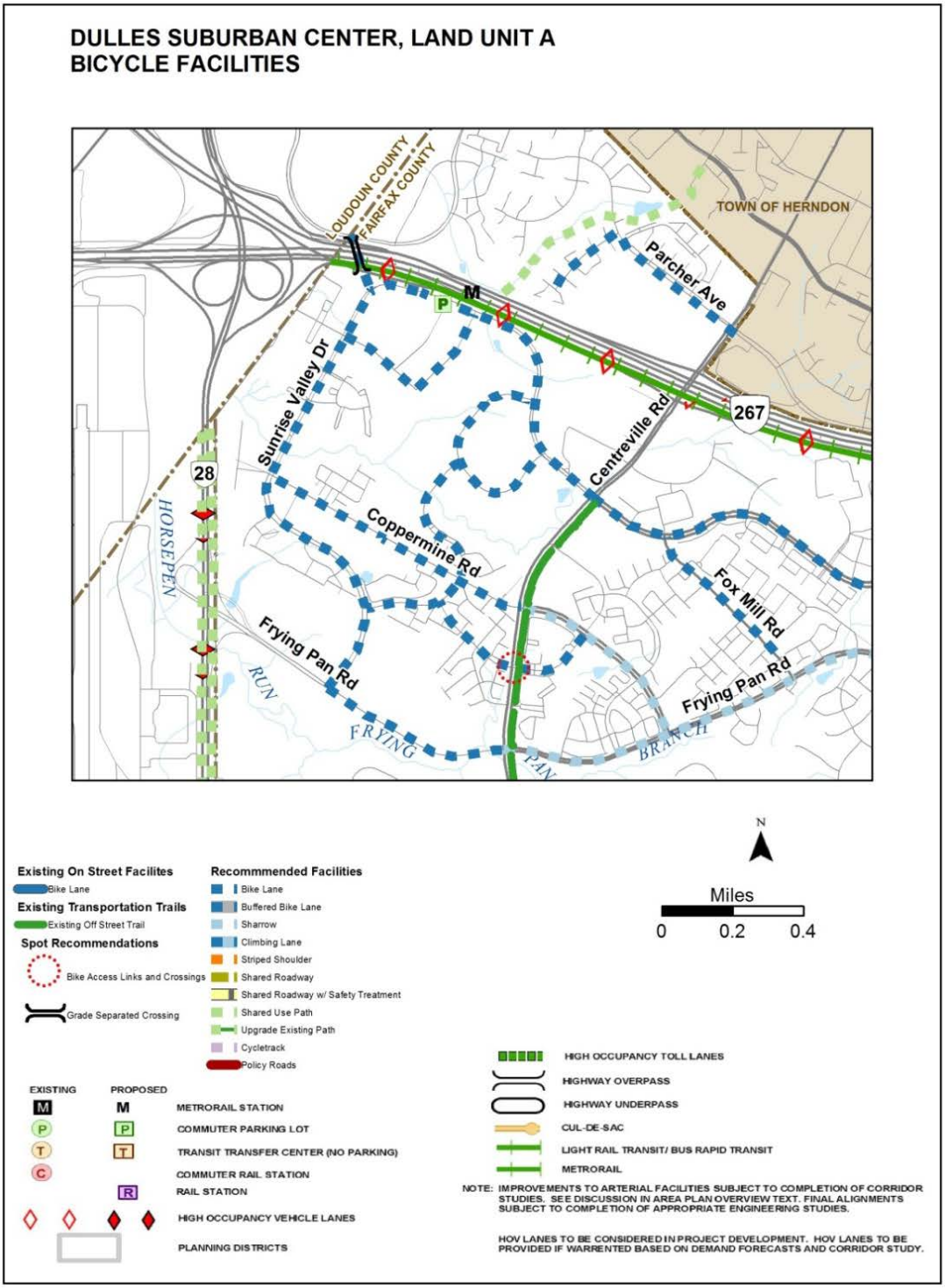
MODIFY FIGURE: Fairfax County Comprehensive Plan, Area III, Upper Potomac Planning District, as amended through 4-29-2014; Reston Transit Station Areas, Figure 24, "Reston Town Center, Transit Station Area" page 79:



MODIFY FIGURE: Fairfax County Comprehensive Plan, Area III, Upper Potomac Planning District, as amended through 4-29-2014; Reston Transit Station Areas, Figure 25, "Bicycle Plan: Herndon Transit Station Area," page 80:



MODIFY FIGURE: Fairfax County Comprehensive Plan, Area III, Dulles Suburban Center, as amended through 4-29-2014; Figure 18, "Dulles Suburban Center, Land Unit A, Bicycle Facilities," page 69:



IV. Recommended Policy Plan Amendments

Staff recommends that the Transportation section of the Policy Plan be revised as shown below. Text proposed to be added is shown as underlined and text proposed to be deleted is shown with a ~~strikethrough.~~

"INTRODUCTION

Fairfax County is served by an extensive transportation system comprised of roadways, bus and rail rapid transit, paratransit services and an international airport. In addition, an extensive sidewalk and trail system serves pedestrian and bicycle travel. The roadway and public transit system accommodates hundreds of thousands of trips every day. However, the provision of transportation facilities and services has not kept pace with the increasing travel demand in the County. This increased travel demand is fueled both by the growth within Fairfax County and by the growth in surrounding jurisdictions.

Over the past three decades, Fairfax County has been one of the most rapidly growing jurisdictions in the United States in terms of population growth – more than doubling the size of its population since 1970. Aided by the strong regional economy, growth in Fairfax County is projected to be significant in the future as well. While the rate of population growth is expected to decrease, overall population will continue to grow, with a 28% increase projected from 2005 to 2030. The number of households in Fairfax County is projected to grow from 378,000 in 2005 to 482,000 in 2030, an increase of 104,000 or 28%. Even more dramatic is the projected increase in jobs in Fairfax County from 600,500 in 2005 to 845,000 in 2030, an increase of 244,500 or 41%. That will make Fairfax County the second largest employment center in the Washington, DC metropolitan area, only slightly behind the District of Columbia.

In addition to experiencing growth, the demographic and socioeconomic characteristics of the population in Fairfax County have changed significantly and will continue to change in the future. Two examples are the cultural and ethnic diversification and the aging of the population. These demographic changes contain challenges for the provision of transportation facilities and services. For example, as the County's population ages, it becomes more important to provide transportation options and services geared to their needs.

One of the primary implications of the trends and forecasts for Fairfax County is that traffic conditions are likely to deteriorate further, even with extraordinary expenditures to improve the transportation infrastructure (including both roadways and transit). In addition, many forces outside the county, which generate increasing levels of traffic demand, are out of the county's direct control. Thus, it becomes imperative to explore possible options for reducing current and future demands on the transportation system.

The objectives and policies presented in this Transportation section of the Comprehensive Plan provide the framework for the continued development of the county's

transportation system, in the face of the continued growth in population and employment as well as the changing characteristics of the population. One of the options for bringing about long-term improvements to the transportation system is to exercise its ability to influence the pattern of land use in the county; specifically, to establish more efficient land use patterns with respect to transportation. Since it is apparent that roadway improvements cannot be relied upon to provide unlimited transportation capacity for the future, measures to bring about less demand for roadway capacity should be a focus of the county's Comprehensive Plan. It will be impossible to meet travel demand solely by roadways. The objectives and policies presented in this section thus emphasize the need to maximize the efficient use of the existing and future Fairfax County transportation system by reducing reliance on automobile travel, increasing transit and improving walking and bicycling, and by coordinating land use decisions and transportation planning within Fairfax County and the region as a whole.

Fairfax County's bicycle program was approved unanimously by the Board of Supervisors and launched in September 2006. The program's primary goal is to make bicycling a viable transportation mode and to make Fairfax County bicycle friendly and safe. Program management and implementation was assigned to the Fairfax County Department of Transportation. The Board established four program priorities: establish a staff position with substantial responsibilities devoted to bicycle facility planning, implementation, and coordination; create a county bicycle route map; examine roadways that may accommodate on-road bike lanes without substantial reconstruction; and create a pilot program in a specific area of the county for the establishment of an interconnected bike route. It was soon determined that a comprehensive bicycle master plan was needed to address bicycling as a transportation mode and to outline a long range plan defining both infrastructure improvements as well as policy objectives specific to bicycling.

COUNTYWIDE OBJECTIVES AND POLICIES

(**Note that only those Objectives and Policies that require policy modifications and or deletions have been included in this staff report.)**

Objective 1: Provide for both through and local movement of people and goods via a multi-modal transportation system that provides transportation choices reduces single-occupancy-vehicle (SOV) use and improves air quality.

Policy a. Integrate motorized and non-motorized transportation facilities and services in accordance with transportation elements in ~~both~~ the Transportation Plan Map (Figure 1), the Countywide Trails Plan Map (Figure 2), Bicycle Network Map (Figure 3) and the Bicycle Master Plan, chapters 1-4 (Appendix 5),

. . .

Policy e. Design and construct trails, sidewalks, overpasses, bike facilities ~~lanes~~, transit amenities, and other non-motorized facilities leading to and accessing public transportation facilities and commuter collection points.

Objective 2: Increase use of public transportation and non-motorized transportation.

Policies on Facilities

. . .

Policy e. Incorporate adequate, safe, and secure bicycle parking at all public buildings, park and ride lots, transit facilities, libraries, and schools. Adopt bicycle parking guidelines and policy defining the number of required bicycle parking spaces, approved equipment, and the proper placement/installation of the equipment.

Policy ~~e~~ f. Establish a network of multi-modal centers as necessary to facilitate both inter-county and intra-county travel.

Policy ~~f~~ g. Provide supporting facilities for the transit system, and provide resources to maintain County-owned equipment and facilities effectively.

Policy ~~g~~ h. Provide safe and convenient non-motorized access (e.g., sidewalks, pedestrian crosswalk signals and markings, trails, on-road bicycle routes and secure bicycle parking) and user amenities (e.g. paved waiting areas, bus shelters and route/schedule information) for transit services and facilities.

Policies on Services

Policy ~~h~~ i. Improve the speed, quality, reliability, convenience and productivity of transit service.

Policy ~~i~~ j. Provide mass transit service in major commuter corridors, including those designated as Enhanced Public Transportation Corridors on the Transportation Plan Map. These services, including intra-county express bus service, should connect designated public transit transfer points and park-and-ride lots to mixed-use centers, the Metrorail system, and the metropolitan core.

Policy ~~j~~ k. Provide feeder and local bus service to connect to mass transit facilities, mixed-use centers, educational facilities and employment centers.

Policy ~~k~~ l. Provide local circulation service within mixed-use centers and employment centers.

Policy ~~l~~ m. Make appropriate use of advanced transit technologies to provide service information and improve system operations. Evaluate and implement innovative services and methods to increase transit ridership.

Policy ~~m~~ n. Facilitate transfer between modes at transit centers through coordination of services, schedules, fares, communication systems and information.

Policy ~~n~~ o. Coordinate with neighboring jurisdictions to promote public transportation usage, bicycle route connectivity, and reduce SOV travel.

Policy ~~o~~ p. Coordinate the planning and provision of public, human service agency, and non-profit transportation services targeted to the senior population, people with disabilities and low-income residents.

Policy ~~p~~ q. Work with Fairfax County Public Schools and human service agencies to travel train the senior population and people with disabilities in the use of public transportation.

. . .

Objective 4: Provide a comprehensive network of sidewalks, trails and on/off-road bicycle routes as an integral element of the overall transportation network.

Policy a. Plan for pedestrian, bicycle, and trail system components in conjunction with the Bicycle Master Plan, the Countywide Trails Plan (Figure 2) and Countywide Bicycle Network Map (Figure 3)

Policy b. Incorporate pedestrian, bicycle, and other non-motorized components and supporting facilities that meet VDOT, American Association of State Highway and Transportation Officials (AASHTO), the Manual of Uniform Traffic Control Devices (MUTCD), the National Association of City Transportation Officials (NACTO) Guidelines, and/or County Standards.

Policy c. Provide for clearly-marked bicycle and pedestrian features, such as sidewalks, on-road bicycle routes, trails, crosswalks, curb cuts, refuge areas and pedestrian/bicycle signals, in the construction and reconstruction of roads and bridges. Evaluate road dieting and/or lane dieting concepts where roadway volume to capacity ratios allow in order to establish on-road bike lanes

. . .

Objective 10: Maximize the operational efficiency of transportation facilities for all modes.

. . .

Objective 13: Review and update the Fairfax County Transportation Plan and Bicycle Master Plan once every five years."

"APPENDIX 3

BICYCLE AND TRAIL CLASSIFICATION AND DEFINITIONS

COUNTYWIDE TRAILS PLAN MAP

Major Regional Trail: Includes the Interstate Route One Bikeway, Cross County Trail, and trails along I-495, I-66, Dulles Airport Access Road, Fairfax County Parkway, Franconia-Springfield Parkway, Norfolk Southern Railway, George Washington Memorial Parkway, Washington and Old Dominion Regional Park, Bull Run, Occoquan River and Potomac River. Most of the trails designated in this category are paved trails, 8 feet or more in width. However, surface materials vary from paved, natural surfaces and stonedust for the Interstate Route One Bikeway, South County East-West trail, Cross County Trail and those trails along the Bull Run, Occoquan River, and Potomac River.

~~**On-road Bike Routes:** Designated bike lanes or signed routes to accommodate bicycle users. Design features are determined on a case by case basis.~~

Major Paved Trail: Concrete or asphalt trail, 8 feet or more in width.

Minor Paved Trail: Concrete or asphalt trail, 4 feet to 7 feet 11 inches in width.

Minor Paved Trail with Parallel Natural Surface or Stone Dust Trail: Concrete or asphalt trail, 4 feet to 7 feet 11 inches in width adjacent to, and in the same easement with a stone dust or natural surface trail typically 6-8 feet in width.

Natural Surface or Stone Dust Trail: Stone Dust or natural surface trail typically 6-8 feet in width.

Stream Valley Trail: Trails along stream ways as determined by Fairfax County Park Authority Staff.

Trails in Other Jurisdiction: Trails to be reviewed by and located in the Towns of Herndon, Vienna and Clifton and the Cities of Fairfax and Falls Church.

COUNTYWIDE BICYCLE NETWORK MAP(S)

The Bicycle Master Plan recommends a network of various types of on and off-road bikeways. As noted, bikeway design may include pavement markings, signage, signals, improved surfaces, and geometric features. The recommendations reflect the desire to provide a high level of bicyclist comfort and mobility, while also balancing each travel mode's need for a share of the public right-of-way. The recommendations are intended to be cost-effective, and on-street recommendations generally involve retrofitting the existing roadway using pavement markings, signs and modest amounts of additional pavement. The following define the types of facilities incorporated in the Plan:

- **Shared Roadway:** consists of a low volume, low speed street that is compatible with bicycling without any striping, marking or geometric change to the roadway. Bike route signs may or may not be needed depending on the street's role in the larger Bikeway Network.

- **Shared Roadways with Safety Treatment:** is a recommendation for generally narrow, hilly, and winding two-lane roads. Improvements can include: signs such as "BIKES MAY USE FULL LANE" additional shoulder pavement, and/or pavement markings.

- **Shared Lane Markings:** (sharrows) are used on roadways where bicyclists and motor vehicles must share the same travel lane. The shared lane marking helps position bicyclists in the most appropriate location to ride, while also providing a visual cue to motorists that bicyclists have a right to use the street. Refer to the the Virginia Department of Transportation (VDOT) policy for guidance on the proper use of Shared Lane Markings .

- **Striped Shoulder:** provides space for bicycle travel to the right of the travel lanes. Paved shoulders serve a variety of transportation purposes in addition to providing a benefit for cyclists, including serving as a breakdown lane, contributing to overall pavement integrity, and providing a place for pedestrian travel where there are no sidewalks. A shoulder designated for bicycles should be no less than four feet in width.

- **Bike Lane:** is an area of roadway pavement designated for the preferential or exclusive use by bicycles. The lane is normally 4 – 6 feet in width and marked with a longitudinal white line and bicycle symbols Refer to the VDOT Bicycle Design Standards for guidance on bike lanes and bicycle pavement markings.

- **Climbing Lane:** when insufficient width exists to accommodate bike lanes in both directions and the roadway features a vertical grade, a climbing lane is considered. A bike lane (climbing lane) is provided in the uphill direction to accommodate slow moving bicyclists and a shared lane marking is provided in the downhill direction, where bicyclists can typically travel at speeds closer to motor vehicle speeds.

- **Buffered Bike Lanes:** created by striping a buffer zone (three feet in width or greater) between a bike lane and the adjacent travel lane.

- **Cycletrack:** is a bicycle facility for cyclists only that is physically separated from both the roadway and the sidewalk. A cycletrack may be constructed at the roadway level using roadway space, or at the sidewalk level using space adjacent to the road. Cycletracks can be provided in either one way or two way configurations.

- **Shared-Use Path (trail):** is an off-street multi-use facility that is physically separated from motor vehicle traffic. Trails are often located in independent right-

of-way (e.g. a park, stream valley greenway, a utility corridor, or an abandoned railroad corridor) or located adjacent to the roadway within roadway rights of way. It is intended for use by bicyclists and pedestrians and normally is designed to accommodate two-way traffic

- **Policy Roads:** are multi-lane highways (functionally classified as principal arterials) that carry large volumes of traffic and/or have relatively high posted speeds (40mph or greater). These roads traverse a wide variety of land uses. Specific bicycle facility recommendations must be made in conjunction with other transportation and land use planning efforts.

The bicycle network maps also define recommended spot improvements:

- **Bicycle Access Links and Crossings** indicate locations where there are opportunities to improve neighborhood connectivity, for example by connecting cul de sacs, enhancing mid-block and trail/shared-use path crossings and by improving access to existing trails.

- **Interchange Improvements** represent locations where free flowing entrance and exit ramps create difficult conditions for bicyclists traveling along the road.

- **Transit Station Improvements** signify locations where existing and planned transit stations (Metro and VRE) create especially high demand for bicycle travel and need for bicycle accommodations. Appropriate accommodations may include bicycle racks, covered bicycle parking, high security parking, facilities on station access roads, curb ramps, crossing improvements or paths that provide safe and convenient station access.

- **Stream Crossings** are recommended in locations where linear barriers to bicycle travel exist at the crossings of streams. These bridge crossings will be designed for bicycle and pedestrian transportation.

- **Road Crossings** are recommended in locations where linear barriers to bicycle travel exist at the crossings of major highways. These crossings can be standalone bicycle and pedestrian bridges or bike lanes and shared use paths as part of a bridge that also serves motor vehicles."

"APPENDIX 5

FAIRFAX COUNTY BICYCLE MASTER PLAN"

The Bicycle Master Plan is an inclusive stand-alone document. Chapters 1, 2, 3, and 4 are proposed to be incorporated into the Transportation element of the Policy Plan. Chapters 5 and 6 are oriented to technical and programmatic approaches that, while outside the purview of the Comprehensive Plan, will be useful in implementing bikeway network recommendations. While chapters 5 and 6 are not included in this plan amendment, they are included in the bicycle master plan document for continuity. The complete plan can also be accessed at: **www.fairfaxcounty.gov/fcdot/bike/bike_master_plan**