
I. INTRODUCTION

The Fairfax County Comprehensive Plan consists of the Policy Plan, Area Plans, the Plan map, and the Transportation 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 environment in Fairfax County. The Policy Plan covers eight functional elements, one of which is Transportation. The guidance and recommendations within this Amendment are specific to the bicycle mode of travel and are intended to be included within the Transportation element of the Comprehensive Plan.

I.1. Major Elements

- The **Proposed Comprehensive Plan Update** (this document) includes the text that will be considered for adoption as a part of the Fairfax County Comprehensive Plan. It will guide the County's bicycle-related policy and programmatic decisions moving forward.
- The **Recommended Bicycle Network "Quadrant Maps"** will also be considered for adoption as a part of the Fairfax County Comprehensive Plan. They provide the long term vision for a connected bicycle network and will guide the selection of bicycle facilities as a part of ongoing road improvement projects and private developments.
- A series of **Policy Briefs** provide context and additional detail for the policy and programmatic recommendations included in the Comprehensive Plan Update. References to these policy briefs are included throughout this report and are indicated by the following code: "(PB-_)".
- Other **Appendices** were developed as a part of this planning process and include a detailed bicycle facility toolbox, records of all public outreach and engagement activities, recommended priority project lists, and supplementary maps.

I.2. Investments in Bicycle Transportation Benefit Everyone

Bicycle transportation will be a cornerstone of Fairfax County's future mobility, economic development, public health, and environmental sustainability. Walkability and bikeability are important in attracting employers, employees, and new residents. Walking, biking and other active modes of transportation provide many people with an affordable way of incorporating physical exercise into their daily routine, helping to fight obesity and related chronic diseases. Walkable and bikeable communities also make it more convenient for people to know their neighbors, adding more "eyes on the street" to make neighborhoods safer. Additionally, when people walk or bike instead of driving, the result is less air pollution, and everyone can breathe more easily.

An investment in bicycling is an investment in safety, public health, a clean environment, quality of life, and economic development that positively impacts all residents, bicyclists and non-bicyclists alike. The following discussion elaborates upon each of these benefits:

- **Enhancing safety for all County residents:** Safe, clear and consistent accommodations for cyclists enhance safety for all road users, for example by reducing speeding, delineating roadway space, and encouraging safe interactions between modes. Many motorists like bicycle lanes because they make dealing with bicyclists less confusing – they know where bicyclists are expected to be and it is easier to pass them. Bicycle lanes establish the correct riding location for bicyclists and tend to reduce sudden swerving by both motorists and bicyclists. Bike lanes also provide for better sight distance for motorists entering the street

from side streets or driveways. Research undertaken by the Alliance for Biking and Walking shows that areas with more bicycling trips per capita overall have a lower frequency of bicycle/motor vehicle crashes.¹ As bicycles become a more common occurrence on roadways, drivers become more accustomed to sharing the road with them.

- **Improving air quality and reducing energy consumption:** Increased levels of walking and bicycling can play an important role in reducing air pollution and fuel consumption. In Fairfax County, approximately one-third of all daily trips are less than three miles in length. By substituting a bicycling trip for some of these short auto trips, for example to the nearby grocery store or workplace, residents can reduce the amount of pollutants generated by automobiles. Based upon research conducted by the U.S. Environmental Protection Agency, it is estimated that sixty percent (60%) of the pollution created by automobile emissions is emitted in the first few minutes of operation, before pollution control devices begin to work effectively.

Over the last two summers, Fairfax County has experienced a total of 24 days where the health-based Clean Air Act standard for ozone has been exceeded.² Drivers in densely developed areas tend to experience more congestion and thus operate at low speeds or have significant periods of idling, which is the most inefficient operating condition for motor vehicles. In summary, the short vehicle trips that bicycle trips could replace, are on-average more inefficient and polluting than all other vehicle trips on a per-mile basis – thus the opportunity for reducing harmful emissions and energy consumption by bicycling is real.

- **Reducing traffic congestion:** As noted previously, in Fairfax County, around one-third of all daily trips are less than three miles in length, a distance covered by bicycle in fifteen to twenty minutes. Most of these trips are made by automobile, in part due to a lack of safe walking and bicycling facilities. In Fairfax, improved bicycling conditions can play a role in mitigating automobile traffic congestion by providing residents with the option to travel by bicycle. There is little difference in the time it takes to make a short trip by bicycle or by car and indeed, some short trips may even take less time by bicycle, when parking and traffic delays are considered.
- **Providing transportation options:** Many people in Fairfax County are dependent on alternative modes of travel, including children, students, low-income households, and people who cannot drive for health reasons. As older residents reach an age where driving is no longer an option, they still need to be able to get to the grocery store, to doctor's appointments, and to access recreational opportunities. Improvements to the bicycle network will make it easier for County residents to age in place, while also lowering transportation costs as noted below.
- **Reducing transportation costs:** In a period of high-variability in the cost of fuel, bicycling offers a lower cost transportation option across all cost components of transportation. Compared with vehicle ownership and use, bicycling has an annual operating cost less than 4% of the average car.³ A quick calculation based on the following assumptions can result in significant cost savings, as highlighted on the following page.

¹ Bicycling and Walking in the United States: 2012 Benchmarking Report, Alliance for Biking and Walking, 2012.

² <http://www.deq.virginia.gov/Programs/Air/AirQualityForecasting/Eighthourozoneexceedances.aspx>

³ <http://www.bikesbelong.org/resources/stats-and-research/statistics/economic-statistics/>

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- A good bicycle with accessories typically costs \$500-1,000, or \$50-100 annually over a ten-year operating life, plus \$50-200 annually for maintenance if ridden 2,000 annual miles, therefore averaging around 5-15¢ per mile.⁴
 - Many households already own bicycles for recreational purposes so the incremental costs for using them for utilitarian trips is minimal. Assume a 7.5 cents per mile cost to reflect lower total annual mileage and sharing of maintenance/ownership costs with recreational purposes.
 - Per the American Automobile Association 2012 Your Driving Costs study⁵, the average per mile cost (operating and ownership) for a composite passenger vehicle, averaging 15,000 miles annually, is 59.6 cents per mile.
 - Therefore, every vehicle mile traveled shifted to a bicycle mile results in a savings of 52 cents (not including parking or transit fare costs).
- **Providing opportunities for routine exercise:** People who live and work in Fairfax County need opportunities for routine exercise in order to maintain and improve their health. The Centers for Disease Control and Prevention recommend 30 minutes of moderate physical activity on almost every day.⁶ Adults who are physically active are healthier and less likely to develop many chronic diseases than adults who are inactive. Today, there are nearly twice as many overweight children and almost three times as many overweight adolescents in the U.S. as there were in 1980. County residents suffer from a host of chronic health problems that are associated with obesity, including heart disease and diabetes. County residents are concerned about health issues and need close-to-home opportunities to get daily exercise. Expanded and improved bicycle facilities and support programs will encourage travelers to more frequently choose cycling for utilitarian trips.
 - **Expanding recreational opportunities for residents, employees and visitors:** Improved on and off-road bicycle facilities can provide recreational opportunities for a family or a way to relieve stress after work. They can also serve to enhance access to the County's many parks, trails, and recreational venues.
 - **Improving quality of life:** As discussed, bicycle facilities will enhance the quality of life in Fairfax County for all residents by enhancing traffic and community safety, contributing to traffic calming and reducing traffic congestion. These outcomes will improve neighborhood livability and can also contribute to increased socialization and civic interaction, fostering a greater sense of community throughout the County.
 - **Improving economic competitiveness:** The outcomes of a robust bicycle network and support programs will also contribute to the area's economic competitiveness. For example, Virginia recently dropped out of first place in a nationwide assessment of Business Friendly States, in part because of its "perpetually clogged highways."⁷ Bicycling improvements can increase transportation system efficiency by reducing economic costs such as traffic congestion, and can reduce road and parking facility costs, and costs associated with accident damages.

⁴ Victoria Transportation Policy Institute, Transportation Cost and Benefit Analysis II – Vehicle Costs. March, 2011.

<http://www.vtpi.org/tca/tca0501.pdf>

⁵ <http://newsroom.aaa.com/wp-content/uploads/2012/04/YourDrivingCosts2012.pdf>

⁶ Physical Activity Guidelines Advisory Committee. *Physical activity guidelines advisory committee report 2008*. Washington, DC: US Department of Health and Human Services; 2008.

⁷ <http://www.cnn.com/id/47818860>

Bicycle and pedestrian networks also support more accessible and compact land use patterns, which can provide various accessibility benefits, resource cost savings (reduced consumption of natural lands), and positive impacts on local land values. Impacts on consumer spending, particularly less spending on vehicles and fuel expenditures, allow frequent bicyclists to spend more on local goods and services. Bicycling improvements (along with pedestrian and public transit improvements) help improve access to education and employment opportunities, particularly by non-drivers, which can reduce business costs and increase productivity and competitiveness. Active transportation has been shown to increase labor productivity by increasing worker fitness and reducing employer health care costs.⁸ At the same time, increased bicycling may result in reduced employer spending on subsidizing employee parking costs. All of these benefits will help increase the economic competitiveness of Fairfax County for existing residents and employers, as well as potential residents and employers.

Many high technology, research and development, and similar firms that provide knowledge or information-based services are located in Fairfax County. These firms compete globally for highly educated and skilled workers, who include quality of life considerations when deciding where to locate.⁹ As a result, firms are increasingly including location attractiveness and amenities as a consideration when deciding where to locate or expand. The transportation and recreational options that a robust bicycle network provides can enhance the attractiveness of Fairfax County, and subsequently increase competitiveness, for these highly mobile firms and their employees.

II. OVERVIEW

II.1. Plan Vision and Goals

The vision for the Countywide Bicycle Master Plan is:

Meeting the needs of bicyclists today, while encouraging more people to bicycle in the future.

In order to attain this vision, the following goals are established:

- Develop a connected physical network of existing and proposed on-street and off-street (shared use paths and trails) bicycling accommodations that will serve all bicyclists from 8 to 80+ years of age when cycling for recreation or transportation purposes.
- Provide guidance for the development of new facilities and accommodations and the upgrading of existing facilities such that shared-use paths, selected sidewalks, neighborhood streets, collector, arterial and primary roads will provide safe and comfortable bicycling route options that serve all communities and destinations.

⁸ Additionally, studies have shown that the exercise and fresh air gained by students biking or walking to school improves academic performance in the classroom.

⁹ *The Role of Quality of Life in Business (Re)Location Decisions*, Journal of Business Research Vol. 44, (1999), http://agriflife.org/cromptonrpts/files/2011/06/quality_of_life_10.pdf.

- Increase bicycle use for transportation, especially for non-commute trips, which are about 75 percent of all trips. Establish and track annual progress towards bicycle travel demand and bicycle network supply goals identified in the Countywide Bicycle Master Plan.
- Increase actual bicycling safety and the perception of safety for bicycling on roads and trails in Fairfax County. Establish and track annual progress towards safety goals identified in the Countywide Bicycle Master Plan.

These goals are supported by the following objectives:

- Encourage healthy lifestyles and physical activity through regular bicycle use for transportation and recreation.
- Enhance recreational opportunities.
- Increase conservation of energy resources.
- Support congestion mitigation and emission reductions.
- Improve mobility and access for all transportation system users.
- Convert short (less than three miles) single-occupancy vehicle trips to bicycle trips.
- More fully integrate bicycle improvements into the planning and project development process.
- Improve overall bicycle safety, access and connectivity throughout the County and to adjacent counties.
- Foster the development of bike culture in Fairfax County.
- Make bicycle travel a viable transportation choice and thus expand the numbers and variety of people bicycling for transportation.

II.2. Supporting and Reinforcing Comprehensive Plan Goals

The 2011 Transportation Policy Plan 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 2011 Transportation Policy Plan 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.

II.3. History

The Countywide Bicycle Master Plan builds on the Fairfax County Bicycle Map, released on May 16, 2008 and the Tysons Corner Bike Plan, which was presented to the public in spring of 2011 and is currently under review by the Board of Supervisors. The Bicycle Map was a top priority of the Board of Supervisors, and shows bike friendly routes connecting all of Fairfax County. The Tysons Corner Bike Plan was developed as the first phase of the Countywide Bicycle Master Plan, to coordinate with the introduction of Metro's Silver Line and the land use changes ongoing and anticipated in Tysons Corner. This Plan incorporates and builds upon the recommended network, policies and programs identified in the Tysons Corner Bike Plan, while more broadly addressing bicycle access throughout Fairfax County.

The planning process that led to the recommendations in this Plan included the following:

- A Bicycle Advisory Committee (BAC) met throughout the duration of the project.
- Eight sub-area public meetings were held from Fall 2011 through Spring 2012.
- Two Countywide public meetings were held in Spring 2012.
- A series of focus group meetings were conducted covering the following topics: Economic Impacts; Biking and Health; Bike Safety Education; School Transportation; and Law Enforcement Issues.
- Technical outreach meetings were held to engage stakeholders such as the Virginia Department of Transportation (VDOT) and the Fairfax County Park Authority.
- Field inventories were conducted and existing plans and studies were reviewed and incorporated.

II.4. What it means to be in the Countywide Bicycle Master Plan section of the Comprehensive Plan

This Comprehensive Plan Update, as well as the Recommended Bicycle Network Maps, Policy Briefs, and other material, will serve as a general 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 bicycle facilities in the County. This information is a part of a regular update to the Plan, which is required at least once every five years. Specific guidance on how this Comprehensive Plan Update and the Recommended Bicycle Network Maps should be interpreted and used by Fairfax County on an ongoing basis follows:

- VDOT, Fairfax County Department of Transportation (FCDOT), 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 shall accommodate the recommendations of this Plan in their own planning, maintenance, and capital improvement projects.
- FCDOT, Bikeway and Bicycling Advisory Committee, Trails and Sidewalks Committee, VDOT, and other appropriate agencies and citizen associations should be consulted to assist in making decisions about interpreting this Plan and approving deviations from it.
- It is expected that private developers using the proffer system will construct or fund construction of various physical improvements and programmatic elements of this Plan. Because it is ineffective to construct bikeways one property frontage at a time, a bikeway escrow account should be used to collect incremental capital contributions until such time that a usable segment of the planned bikeway(s) can be built.
- This Plan has no legal authority over streets and VDOT roadways in municipal jurisdictions within Fairfax County, such as Fairfax City, Herndon, Falls Church and Vienna. Facility recommendations appearing within these jurisdictions shall be considered advisory to assist in the coordinated planning of a bicycle network that functions seamlessly across municipal boundaries.
- Regarding the relationship between this Plan and the 2002 Adopted Fairfax County Trails Plan:
 - For existing and new roads the on-road bikeway facilities in this Plan (either by map or by policy) supersede all on-road facilities in the Trails Plan.
 - Where located in the same corridor and serving the same purpose, the new and upgraded Trail facilities recommended in this Plan supersede the facilities appearing in the Trails Plan.

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- The Trails Plan shall remain in-force for sidepaths located on the side of the road where this Plan made no recommendations, and for trails located in other areas where this Plan made no recommendations.
 - It should be noted that for minor collectors and other low volume streets, the County preference should be to provide 6' sidewalks on each side and on-street bicycle facilities, rather than an 8' trail one side and a 4' sidewalk on the other.

III. RECOMMENDED BICYCLE NETWORK

An important element of this Plan is the identification of a recommended network of bicycle facilities throughout Fairfax County. This network includes on and off-road facilities that will make bicycling more convenient and safer. It will help raise the profile of bicycling in Fairfax County as a realistic travel option for all users. The bicycle facilities recommended for specific locations are a direct response to existing conditions and user needs along various roads in the area. They are based on national standards and guidelines, proven best practices, use of emerging designs and technologies, and the experiences of other jurisdictions in the Washington D.C. metropolitan region. The analytical process used to identify the recommended network integrates local knowledge, engineering judgment, and input received through the Bicycle Advisory Committee (BAC), stakeholders, the public, and others.

The recommended bicycle network is designed to meet the needs of people already riding bicycles as well as the needs of potential and future bicyclists. A high value was placed on developing a network that, over the long run, will allow children and senior bicyclists, novice and experienced bicyclists, regular and occasional commuters; students, visitors, tourists, and recreational riders to all feel comfortable and welcome to bicycle in Fairfax County. To address the goal of comfort for all bicyclists, this Plan recommends both improving arterial and collector roadways to accommodate bicycles, and providing trails, sidepaths, and parallel routes along local streets.

Streets and trails were selected for inclusion in the recommended bicycle transportation network to create direct, convenient, and logical connections. The network includes streets and trails that bicyclists currently use as well as roads that are little used now but are highly desirable for future use. The network is intended to encourage maximum use and comfort, while fostering safe and responsible riding. It should be noted that bicycling is legal and should be facilitated on all public streets and roads (other than limited access highways) whether or not they are included on the bicycle network map.

III.1. Recommended Bicycle Facilities

The Plan recommends a network of different types of "bikeways," a term that refers to on-road or off-road facilities designed and designated for travel by bicycle. 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 small amounts of additional pavement.

Recommended Bicycle Facilities

- A **bike lane** is a pavement marking that designates a portion of a roadway for the preferential or exclusive use of bicycles.

- **Buffered bike lanes** are created by striping a buffer zone between a bike lane and the adjacent travel lane.
- **Shared lane markings** (sharrows) are used on roadways where bicyclists and motor vehicles must share the same travel lane. The sharrow 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.
- A **climbing lane** is a bikeway design for a two-way street that has a steep slope and insufficient width to permit bike lanes in both directions. 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 speed.
- A **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 bicycle network.
- **Shared roadways with safety treatment** are generally narrow, hilly, and windy two-lane roads. Signs such as the BIKES MAY USE FULL LANE will be utilized, in addition to other improvements such as short segments of shoulder that will allow a cyclist to pull to the side and let a line of cars following them pass safely.
- A **sidepath** is a shared-use path located adjacent to the roadway. It is designed for use by bicyclists and pedestrians and each may travel in either direction.
- A **cycle track** is a bicycle facility for cyclists only that is physically separated from both the roadway and the sidewalk. A cycle track may be constructed at the roadway level using roadway space, or at the sidewalk level using space adjacent to the road. Cycle tracks can be provided in either one way or two way configurations.
- A **trail or shared-use path** is an off-street bicycle and pedestrian facility that is physically separated from motor vehicle traffic. Typically trails are located in an independent right-of-way such as in a park, stream valley greenway, along a utility corridor, or an abandoned railroad corridor.

For more detailed information about bicycle facility types, design options, and implementation actions see the Bicycle Facility Toolbox in the Appendix.

III.2. Recommended Bicycle Network Quadrant Maps

The Recommended Bicycle Network encompasses the entire County. For legibility, the network is shown on four separate maps, one for each quadrant of the County (i.e. Northwest, Northeast, Southwest, and Southeast). Where possible the map includes inset graphics to show selected areas in greater detail. The maps include a list of policy statements, which will guide and inform the interpretation of the maps and decisions made on a day-to-day basis. Each map also includes a table and related text to be used in the evaluation of "policy roads," which are discussed in more detail in Section IV.5. The bicycle facility recommendations shown on the Recommended Bicycle Network maps generally represent the facility type that should be installed if action to improve bicycling conditions is to be taken in the near term (within 10 years of Plan adoption). However, it is important to note that many of these recommendations may remain applicable well beyond that timeframe. The maps also indicate Transportation Trail recommendations, which are discussed in detail in Section IV.3. Additional data including the action required to implement the recommended facility and the level of effort were generated as a part of the planning process and are available

within the supporting geographic information systems (GIS) data; however, they are not shown on the map.

III.3. Principles (PB-A)¹⁰

The following principles provide a foundation upon which a Bicycle Network can be developed:

1. The facility recommendations shown on the Bicycle Network maps generally represent the bicycle facility that should be installed if action to improve bicycling conditions is to be taken in the near term (within 10 years of Plan adoption). Many of these recommendations may remain applicable beyond that timeframe.
2. Fairfax County will build upon and take full advantage of VDOT's recently adopted *Bicycle Policy Plan*.
3. To provide overall guidance regarding Network development, Fairfax County will follow the most current editions of the AASHTO *Guide to the Planning and Design of Bicycle Facilities*, and the *Manual on Uniform Traffic Control Devices*. Other important references include the National Association of City Transportation Officials (NACTO) *Urban Bikeway Design Guide*, VDOT's *2011 MUTCD Supplement*, and VDOT's *Road Design Manual, Volume 1 Appendix A, Section A-5*.
4. Given County law that permits bicycling on all sidewalks and paths, it is understood that whether or not a sidewalk or path is considered part of the Bicycle Network, it likely will be used by children/youth bicyclists to get to and from school, and/or by other bicyclists as a link to the Network. As such, the owning agency or entity should be attentive to basic maintenance and its general condition.
5. Every roadway development project and land development proffer should be evaluated for its contribution toward, or lack of contribution to, achieving the goal of creating a connected network that is safe and functional for bicyclists from ages 8 to 80+.
6. New bicycle facility designs and treatments should be routinely considered and used where appropriate; where roadway conditions and travel patterns warrant, formal experimentation should be undertaken when implementing new designs.
7. While flexibility is needed in bikeway design, flexibility shall not be used by developers or transportation agencies for the purposes of providing "lowest cost" facilities at the expense of bicyclist safety and comfort and/or network continuity and connectivity.
8. A FCDOT bikeway design exception policy should be established; the intent of which is to help the County provide safe and appropriate quality bicycle facilities at reasonable costs, while preserving opportunities to upgrade facilities in the future at the lowest additional cost.

In total, these principles help govern the decision making process with regard to implementing bicycle network improvements and help ensure that each incremental project is viewed as a contributor to the overall goal of improving bicycling conditions for bicycle travel in Fairfax County.

¹⁰ Refers to Policy Brief A (PB-A)

IV. BICYCLE FACILITY SELECTION AND DESIGN POLICY

IV.1. On-Road Bicycle Facilities (PB-B)

For on-road bikeways, facility selection and design are key decisions that will determine the overall character of the Fairfax County Bicycle Network. In most cases, this Plan has made specific facility recommendations. These recommendations are based on a planning level assessment of what facility is generally feasible, and what facility is optimal based upon road and traffic conditions and likely levels of bicycle usage. Other factors such as maintaining continuity of a single facility type through connecting road segments, whether or not the road segment is part of a longer route, and the types of destinations served also factored into the recommendation.

Reevaluation and reconsideration of the facility recommendations in this Plan may be necessary due to any number of factors that could not be taken into consideration during the master plan process. This is to be expected. If facility selections need to be modified, the following principles should guide any changes made to the initial recommendations:

1. In general, bicycle accommodation with some type of striping or markings (i.e. bike lanes, striped/paved shoulders, or shared lane markings in wide outside lanes) are preferred over unmarked wide outside lanes.
2. At a minimum, buffered bike lanes or wide (6-10') shoulders should be provided on Bicycle Network roads with heavy volumes and/or speed limits at or above 40 mph.
3. On-street parking will not be over-supplied at the expense of an opportunity to provide appropriate/planned bicycle facilities. Facilities that require modification to on-street parking in residential areas should be vetted with the affected property owners. In almost all cases the bikeway recommendation requires only a reduction in capacity, not elimination of all on-street parking. Alternating the side with parking block-by-block can both calm traffic and ensure that inconvenience is not born solely by residents of one side of the street.
4. VDOT and FCDOT **should** experiment with at least two bicycle facility design options for four lane divided roadways with 26-27' cartways¹¹:
 - 10-11' inside lane and 13-14' outside lane with a shared lane marking
 - A 10' inside lane, 10' outside lane and a 5-6' bike lane with 3-4' of asphalt and a 2' gutter pan
5. When sections of primary arterial roads are resurfaced or reconstructed in Fairfax County Revitalization Districts, and other areas seeking a traditional main street or urban downtown setting, they **should** be retrofitted as follows:
 - Where short-term on-street parking is provided – Standard bike lanes or shared lane markings.
 - Speed limit of 25 mph – Standard bike lanes or shared lane markings.
 - Speed limit of 30 or 35 mph – Standard Bike lanes.

¹¹ Curb face to curb face is 26-27 feet wide. Assumes 1-foot offset from center median curb and 2-foot gutter pan.

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- Speed limit > 35 mph – Cycle tracks or buffered bike lanes.
 - Continuous service roads with Standard bike lanes or shared lane markings.

New, resurfaced, and reconstructed streets (collector and local) in revitalizing or urbanizing areas **should** have a speed limit of 20-30 mph and accommodate bicycles using shared roadways (without markings), shared lane markings, or standard bicycle lanes as is appropriate given their overall function in the Bicycle Network and roadway system.

6. The County will continue to develop a system of signed bicycle routes; Phase 1 and 2 routes in the Tysons Corner area (see Tysons Bicycle Plan) and routes in McLean being of the highest priority. Future routes should be developed as conditions on roads and trails along the route are determined to be consistent enough to support a signed route.

IV.2. Intersections (PB-C)

Many intersections and interchanges in Fairfax County have become barriers to bicycle travel for those who bicycle today, as well as those who might choose to bicycle in the future. Improving bicyclists' safety and providing accommodations at intersections and interchanges is critical for the County to reach its goals for increased levels of bicycling.

The following recommendations for addressing the significant bicycle safety issues associated with crossing intersections and interchanges were developed as an outcome of extensive dialogue with VDOT during the development of the Plan.

1. Over time, VDOT **shall** implement bicycle detection (or bicyclist accessible actuation) at all signalized intersections in the designated Bike Network, unless they provide a green for each approach leg on a routine cycle.
2. Unless it is clearly demonstrated that it is not needed at present, and will not be needed in the future as a result of future development, VDOT **should** upgrade pedestrian signals and crosswalks to include all legs of the intersections on Bike Network routes designated by the Plan.
3. Bicycle facilities and regulatory/warning signs to improve bicyclist safety through intersections **shall** be provided as a part of all intersection improvement projects at Bicycle Network intersections or as a part of linear roadway improvement projects including or approaching a Bicycle Network intersection.
4. VDOT **should** coordinate with the Northern Virginia Regional Parks Authority (NVRPA) and Fairfax Park Authority to ensure clear, consistent and effective safety treatments at signalized and unsignalized mid-block trail/roadway crossings along the W&OD and other major trails.
5. As a minimum standard, VDOT **shall** provide appropriate at-grade crossing accommodations for all Transportation Trails that cross free-flow highway entrance and exit ramps. Additional information on Transportation Trails is provided in Section IV.3.
6. VDOT **should** experiment with colored bike lanes to address safety and accommodation at locations where on-road bicyclists must cross free flow exit and entrance ramps.

IV.3. Transportation Trails (PB-D)

This Plan identifies a select set of trails, both existing and proposed, for inclusion in the Bicycle Network as Transportation Trails. Transportation Trails are generally understood to be trails that serve a transportation purpose, as opposed to solely a recreation purpose. This designation will enable the County to begin prioritizing existing trails for maintenance and capital improvements, as well as new trail investments that will serve both transportation and recreation needs. A process should be established for adding and/or subtracting from the Transportation Trail network on an annual basis. To begin to address these issues, the following policies provide a framework for creation and management of the Transportation Trail network.

1. Shared Use Paths and “Sidewalks w/ Bikes Permitted” included in the Plan are designated Transportation Trails. By definition Transportation Trails are eligible for Federal, state and local transportation funding.
2. Where sidepaths (a shared use path adjacent to a roadway) are provided along roads where there are no on-street facilities, they **shall** be provided on both sides of the street. In most cases, where sidepaths are provided in addition to on-street facilities they **should** be provided on both sides of the street. Moreover, where a single sidepath is provided, it **shall** be provided consistently on the same side of the street and not alternate in contiguous roadway segments.
3. Shared Use Paths in the Transportation Trail network should be designed and constructed to meet the following standards:
 - Standard width – 10 feet (wider where user volumes and mix warrant; as narrow as 8 feet where user volumes and mix warrant).
 - Standard buffer from curb face – 5 feet
 - All curb ramps at crossings are full width of the trail.
 - All Transportation Trail crossings at signalized intersections will have countdown pedestrian signal heads.
4. In conjunction with NVRPA and the Fairfax County Park Authority, VDOT and FCDOT should develop and implement trail/roadway intersection design standards and guidelines that facilitate safe use of intersections, encourage road and trail user compliance with the law, are clear and equitable for trail users and motorists, and enforceable by Fairfax County Police.
5. “*Sidewalks w/ Bikes Permitted*”—typically, sidewalks are not considered bicycle facilities; however, because bicyclists in Fairfax County are permitted to use sidewalks, a select set of sidewalks have been identified for inclusion in the Bicycle Network to ensure connectivity and continuity. They may already be sufficiently wide to accommodate expected bicycle usage or recommended for upgrade to meet minimum standards for usage by the full range of bicyclists.
6. Trail access and “*cut through*” improvements are identified in the Plan, most of which are low cost improvements and less than 0.1 tenth of a mile in length. They will address safety and connectivity needs and often require coordination with more than one of the agencies or entities listed above.

7. As funding is made available, Transportation Trails should be considered a priority for upgrades, treatments, and management policies that will increase their safety and functionality for transportation use.
8. Implementation of specific upgrades to Transportation Trails shall be considered on a case by case basis.

IV.4. Maintenance of Transportation Trails and On-Road Facilities (PB-E)

Trails and on-road bicycle facilities represent a tremendous investment of resources over the years. Many of the county's trails that were built to accommodate bicycle travel along roadways have not been well maintained and consequently are being used less and less by bicyclists. Implementing the following recommendations will ensure that bike facilities are maintained adequately so that the County may fully capitalize on past and future investments:

1. The GIS database of all trails in the county should be updated annually to include the trail owner and the agency responsible for maintenance for all trail segments. This database should include information about privately-owned trails that are open for public access, and the trail surface type, surface width and other information relevant to effective maintenance and management of a trail system.
2. Using GIS and interactive internet mapping capabilities, the County should establish a method of effective coordination between key agencies that own, manage and maintain components of the Transportation Trail Network. This will include the VDOT, FCDOT, NVRPA, Fairfax County Park Authority, the National Park Service, the Fairfax County Department of Public Works and Services, the Fairfax County Public Schools, private property owners, Home Owner Associations, and potentially others.
3. Fairfax County, VDOT and other key agencies/entities that own and manage Transportation Trails should establish dedicated funding for annual maintenance of Transportation Trails in the Bicycle Network; VDOT and FCDOT should establish dedicated funding for maintenance of on-road bicycle facilities.
4. By 2015, periodic bicycle lane and shoulder sweeping should be a routine VDOT maintenance activity.
5. Clean up activities after car crashes must leave the road safe for cyclists.

IV.5. Policy Roads (PB-F)

This plan identifies a set of primary arterial roadways that are considered part of the Bicycle Network as "Policy Roads." Examples of designated policy roads include Lee Highway (Route 29), Arlington Boulevard (Route 50), Leesburg Pike (Route 7), and Richmond Highway (Route 1). The Policy Roads are an important part of the Recommended Bicycle Network. Bicycle accommodations should be provided as a part of all future roadway improvement projects along these roads. On the Plan maps, these roads do not have specific bicycle facility recommendations because the facilities selected for these roads are contingent on other roadway planning and land development factors. In general, these roads are multi-lane highways and/or have relatively high speeds (40-55 mph). Other than the limited access highways in the County, they carry the largest volumes of daily traffic

including buses and trucks. In most cases, these roads provide the most direct connection to and between major destinations in the County.

The safe accommodation of bicycle travel on these roads will depend on other choices that are made, such as what type and configuration of development happens, and what type of future roadway configurations are selected. At the time of developing the Bicycle Master Plan, these choices cannot be predicted. As a result, a table is included on the Recommended Bicycle Network Maps to provide guidance on how best to accommodate safe bicycle travel contingent upon the other choices that are made about roadway and land use development

IV.6. New Facilities (PB-G)

The network of bicycle facilities recommended in this Plan is composed primarily of standard accommodations and treatments, found in National and State standards and guidelines, including the Manual on Uniform Traffic Control Devices (MUTCD), American Association of State Highway Transportation Officials (AASHTO) Guide for the Design of Bicycle Facilities, and National Association of City Transportation Officials (NACTO) Bike Guide. However, there are two treatments recommended by the Plan for a variety of locations throughout the county that have not yet become standard options in the national “toolbox.” These include Shared Roadways with Safety Treatment and Cycle Tracks.

Shared Roadway with Safety Treatment

During the planning process, both regular and infrequent cyclists identified certain rural roads with consistent physical characteristics to be uncomfortable and potentially dangerous for cyclists. Because these roads are legally open to bicycling and the need for safe bicycle access will only increase, this Plan recommends that new approaches be developed to increase both safety and mutual respect for cyclists and motorists who must share these roads. During this planning process the following treatments were identified that can enable all road users to safely and more effectively share these roads:

1. VDOT **shall** develop a new approach for roads indicated in the Plan as Shared Roadways with Safety Treatments
 - Utilize existing signs, such as the BIKES MAY USE FULL LANE sign, and available flexibility in the MUTCD to develop a proactive approach to bicycle safety on 2-lane “rural” roads.
 - Ensure that sign messages are unambiguous and have separate messages directed to motorists and cyclists, explaining why and how all users must share the road.
 - On hills, in the uphill direction, add passing lanes, i.e. short segments of shoulder where a cyclist can pull to the side and let a line of cars following them to safely pass.
 - Implement other strategies to educate the motoring and bicycling public how to drive safely and respect all road users along road segments with “safety treatment” signage.

Cycle Tracks

Cycle tracks are dedicated bicycle facilities that physically separate bicyclists from motor vehicle traffic and pedestrian traffic. By design, they enable a road to efficiently move large volumes of people by each mode, bicycle, pedestrian, motor vehicle, including bus or rail transit. By providing faster moving bicyclists their own dedicated space, conflicts with pedestrians on sidewalks are

reduced, and by separating bicyclists from motor vehicles, a wider range of cyclists are attracted to this mode of travel. Special designs are used to address potential conflicts with transit vehicles and transit patrons waiting at stops, as well as locations where the modes must cross paths, such as at intersections and driveways.¹²

1. Cycle tracks will be included in the toolbox of facilities that are provided in Fairfax County. The Plan has identified a number of large arterial roadway segments in areas where existing or future zoning and other land use and transportation factors suggest that cycle tracks will be the safest, most attractive and most efficient bikeway accommodation possible.
 - Cycle tracks will be the most desirable bicycle facility type for use on roadways such as Leesburg Pike, VA 123, International Drive, and others in Tysons Corner. They will also be the most desirable facility along arterials in revitalization areas such as along Route 1 in Mount Vernon, in Annandale, Bailey's Crossroads, Seven Corners, Merrifield and potentially others.
 - Cycle tracks can be configured and designed in a variety of ways. Due to the need to address transit access, driveways, on street parking, intersections, street trees and adjacent land uses, great care should be exercised in the design and construction of all cycle tracks.

IV.7. Facility Implementation (PB-H)

During the planning process a series of meetings with VDOT staff was conducted to better understand existing policies and practices used in the Northern Virginia office of VDOT. Throughout the process VDOT staff attended every BAC meeting and every public workshop. As a result, a set of recommendations for modifications to current VDOT policy and practice was developed. Each of these modifications is consistent with the recommendations made in the new *Statewide Bicycle Policy Plan*. Therefore, Fairfax County requests that VDOT implement the following policies within Fairfax County:

1. As a part of every resurfacing project, VDOT and Fairfax County **shall** consult the Plan for potential upgrades to bicycling conditions.
2. In Fairfax County, resurfacing funds being accounted toward the 2% requirement for bikes and pedestrians, **must** result in a shoulder of at least 3 feet in width, and preferably 4 feet or greater.
3. Fairfax County will identify and prioritize stand-alone shoulder paving projects to be undertaken primarily for bikeway improvements; VDOT shall pave such shoulders independent of repaving the entire street.
4. For roadways with speed limits of 35 mph or less, in order to provide bicycle lanes (or a bicycle climbing lane) lane diets using 10-foot travel lanes will be considered.

¹² Design guidance for cycle tracks continues to evolve, however the NACTO Urban Bikeway Design Guide is a key reference. <http://nacto.org/cities-for-cycling/design-guide/cycle-tracks/>

5. At select locations identified in the Plan, to enable use of the Shared Lane Marking, VDOT will conduct studies necessary to consider speed limit reductions to 30 or 35 mph.
6. All bridge replacements and reconstructions **shall** provide the same level of bicycle accommodation called for on each approach, or a more comfortable level of accommodation as may be needed because of the speed and volume of motor vehicle traffic to be accommodated on the new bridge.
7. It is not acceptable for roadway design and construction decisions based upon the application of “value engineering” to degrade or remove bicycle facilities called for in the Plan, from a roadway improvement project.

V. PROGRAMS

V.1. Fairfax County Bike Program (PB-I)

To strengthen the FCDOT bicycle program key issues should be addressed. These issues relate to the following interrelated aspects of the program: staffing, funding, public participation and division of labor. It is anticipated that if the following actions are carried out, over a period of 5 years absent any other major initiatives, the Plan goals for improving bicycling conditions and increasing levels of bicycle use can be accomplished:

1. Provide a minimum staff of three full-time employees.
2. Provide a minimum \$500,000 annual budget for planning and programmatic and small scale capital projects such as: installation of bicycle parking racks and lockers, signs for signed bicycle routes, curb ramps, and small bicycle access and trail access projects.
3. Establish a permanent Countywide Bicycle Advisory Committee that reports to the Board of Supervisors through the Transportation Advisory Commission (TAC). Reform the Trails and Sidewalks Committee as a Pedestrian Advisory Committee under the TAC. If needed, create a Recreational Trails Committee under the Fairfax Park Authority to address issues and needs related to equestrian trails, mountain biking, hiking and other issues pertaining to Non-Transportation Trails.
4. Charge the Bicycle Program with bicycle transportation tasks related to the following: on-road and off-road bicycle facility engineering and design, bicycle parking, bicycle-related coordination with VDOT, bikeway capital project management, interagency and intergovernmental coordination, development review, bicycle counts, data management and program evaluation, and staff liaison with Bike Fairfax. *Bike Parking Guidelines* recently developed by the Fairfax County Bike Program are considered to be the standard by which to decide and judge the quantity and quality of bike parking to be provided.
5. Delegate primary leadership for encouragement and education programs to a new Bike Fairfax program (discussed below).

V.2. Bike Fairfax (PB-I)

Fairfax County will develop a Bike Fairfax program similar to the current Bike Arlington program, which serves as an effective mechanism for encouraging more bicycling as well as conducting

bicycle safety education, especially for cyclists. The Bike Fairfax program will be structured to address the goals of the Bicycle Master Plan and will undertake the following list of program tasks:

1. Provide bicycle commuting support and information to employers and employees.
2. Promote bicycling for non-commute trips.
3. Coordinate and host countywide bicycle encouragement events, such as those during Bike to Work Month, regional Bike to Work Day, etc.
4. Organize local bike promotion events with shopping centers, large employers, health care institutions and agencies, special events, festivals, the Fairfax County Park Authority.
5. Promote the bicycle parking installation program.
6. Coordinate with the Towns and Cities within Fairfax County, as well as other institutions such as the Department of Defense, National Park Service, and other Fairfax County government agencies to promote biking as a safe and reliable transportation choice in the County.
7. Organize and offer classes that teach hands-on bicycling skills and rules of the road to a wide variety of constituencies within the county.
8. Be a clearinghouse for skills and safety education training opportunities offered by other programs in the county.
9. Provide a website and serve as a source of bicycle-related news and events.

V.3. Enforcement (PB-K)

Law enforcement is an important cornerstone of an effective local bicycle program. To improve bicycle-related enforcement and outcomes, the following recommendations are included in this Plan:

1. Work with law enforcement, State and County elected officials and advocacy groups to enact changes in law or policy at the State and County levels that would clarify code language relating to right-of-way on public facilities.
2. To ensure a common understanding of laws related to bicycling and right of way on public facilities, and the consistent and fair enforcement of these laws, prepare clarifying communications for the law enforcement community, VDOT and FCDOT traffic engineers, cyclists, motorists, and judges.
3. Improve training of law enforcement officers to ensure equal and fair treatment of bicyclists with regard to traffic law enforcement, crash reporting and fault finding.
4. Coordinate road and trail design and enforcement practices to ensure consistency in the application of bicycle and trail safety treatments and infrastructure design.

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5. Always include education with enforcement to achieve the greatest impact with the intended audience.

V.4. Safety Education (PB-L)

To improve conditions and promote sharing of streets and roads, there is a clear need for increased understanding of safe bicycling behaviors and the rules of the road. This will be accomplished through two key strategies for effective bicycle safety education: 1) target outreach to the public school system because over time, the vast majority of the County population will be reached, and 2) using public awareness and enforcement campaigns that focus on motorists and bicyclists and issues regarding sharing and crossing roads.

1. Implement Fairfax County's bike safety education curriculum in all Elementary Schools, the State's curriculum, BikeSmart in Middle schools and bicycle safety education in P.E. in the High Schools. To assist with school based education, restore the budget for School Resource Officers (SROs) and School Education Officers (SEOs).
2. Work with the DMV to update the Virginia Driver Education curriculum to include bicycling. Driver's education programs in public schools are required to use VA DMV curriculum which does not effectively address sharing the road with cyclists.
3. Focus public education campaigns on the issues surrounding motorists and bicyclists sharing of the road and participate fully in the regional Street Smarts Campaign, which coordinates education and enforcement efforts relative to bicycle, pedestrian and motorist safety.
4. In conjunction with the Northern Virginia Regional Park Authority (NVRPA) and Fairfax Park Authority conduct a trail user and motorist education campaign related to safety at trail/roadway crossings, and other trail safety issues.
5. Track and report the annual number bicyclist injuries in Fairfax County, the annual number of bicyclist fatalities in Fairfax County, the annual number of programs or classes hosted in Fairfax County to address bicycle safety education, and the number of schools in Fairfax County teaching bicycle safety education.

V.5. School Transportation (PB-M)

In Fairfax County schools serve as community centers that generate short neighborhood-based trips. These trips include students, faculty, and staff traveling to and from schools, and also trips associated with after school activities, night meetings, and special events.

In order for bicycling to be a viable and safe transportation choice, coordinated infrastructure improvements will be needed. FCDOT, Fairfax County Public Schools, and VDOT will need to make improvements that are linked together to provide linear "door to door" networks of facilities including secure and convenient bicycle parking at the school. Bike-related infrastructure improvements will lead to improved safety for all modes, including pedestrian, school bus, and motor vehicles. Improvements to infrastructure must be supported by a range of education and encouragement activities. As schools are increasingly seen as a hub for bicycle activity, the desire to travel to and through school grounds as a part of neighborhood oriented trips will increase.

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1. Provide high quality bicycle parking at all school facilities.
 2. Make spot improvements on school properties to improve bike access to and through school grounds; prioritize other bicycle infrastructure improvements near middle and high schools as those schools develop interest in promoting biking to the school.
 3. Continue expansion and institutionalization of the bicycling component of safe routes to school activities for all schools in the system, K-12; address bike safety education, encouragement, enforcement, engineering and program evaluation.

VI. IMPLEMENTATION

VI.1. Coordination (PB-N)

VDOT is the majority owner and manager of public streets in Fairfax County. For development of the Bicycle Network and implementation of the Plan's policy and program recommendations, coordination is essential between Fairfax County agencies, VDOT, other State and regional agencies, neighboring governments and other public and private entities.

1. Within and between FCDOT and VDOT, improved coordination is needed between capital project managers, Right-Of-Way (ROW) staff, road designers, traffic engineers, pedestrian and bicycle facility planners, resurfacing program managers and roadway maintenance staff, to ensure that the safety and travel needs of bicyclists are met in all aspects of the project development and implementation process, as well as the ongoing maintenance of public transportation infrastructure.
2. To effectively maintain and manage the Bicycle Network and implement various program and policy initiatives recommended in this Plan the following Fairfax County agencies should share relevant information and coordinate activities on a regular basis:
 - Fairfax County Department of Transportation
 - Fairfax County Public Works & Services
 - Fairfax County Planning and Zoning
 - Fairfax County Park Authority
 - Fairfax County Department of Neighborhood and Community Services
 - Fairfax County Department of Public Health
3. To ensure network continuity, FCDOT should coordinate bicycle facilities, street design, signed bike routes and other bicycle transportation related activities with the other political jurisdictions within and surrounding Fairfax County. These include the following:
 - The Towns of Herndon, Vienna, and Clifton
 - The Cities of Falls Church and Fairfax City
 - The adjacent jurisdictions of Arlington County, Prince William County, Loudoun County, and City of Alexandria.
4. Regarding a variety of bicycle network development issues, as well as funding and program implementation activities, FCDOT should coordinate with the following regional transportation agencies:
 - The Washington Metropolitan Area Transit Authority
 - The Northern Virginia Transportation Commission (Virginia Railway Express, VRE)

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- The Metropolitan Washington Airports Authority
 - The Northern Virginia Regional Commission
 - The Northern Virginia Transportation Authority
 - Northern Virginia Regional Park Authority (NVRPA)
5. Periodically, FCDOT and others will need to coordinate with Federal agencies such as Eastern Federal Lands Division of Federal Highway Administration, the National Park Service & Department of Defense. Issues critical to this Plan include the following:
- Roadway improvement projects managed by Eastern Federal Lands for other federal agencies.
 - The Mount Vernon Trail, crossings of the George Washington Parkway, and bike access to Wolf Trap.
 - Access to Fort Belvoir
6. Through a Bicycle Advisory Committee the public will monitor coordination of issues related to implementation of the Bicycle Master Plan and provide annual evaluation based on Coordination Performance Criteria set forth in this Plan.

VI.2. Funding (PB-O)

In recent years, Fairfax County has used a variety of funding sources to support bikeway capital improvement projects. The County has allocated General Funds to support the development of the Countywide Bicycle Master Plan, development and printing of the Countywide Bike Map, provision of bicycle parking upgrades at public buildings, development of signed bike routes, and support for Bike to Work day events and other small scale encouragement efforts and physical improvements. Future funding strategies will likely include a combination of the following funding sources: County General Funds, County Transportation Bonds, County Park Bonds, the Allocation of Special Tax Revenue (such as the Commercial and Industrial Tax), and Federal transportation funds.

To accomplish the vision and goals outlined in the Bicycle Transportation Master Plan:

1. The County must establish dedicated funding for Bicycle Network development and program implementation.
2. Funding and programming for development of bicycle facilities should be simplified and made transparent in order for performance measures for spending and program utilization to be established and monitored through public oversight.
3. Funding for encouragement and safety education should be derived from employer contributions to TDM programs, partner organizations, and CMAQ funds.
4. Fairfax County will consider funding stand alone projects to address bicycle safety and facility discontinuity resulting from intermittent redevelopment of roadside property.

VI.3. Performance Measures (PB-P)

As part of the Plan, Fairfax County has set aggressive yet achievable targets for Plan implementation and overall performance over the next 10 years. These targets include:

- By 2020, triple the number of bicycle trips over current levels,
- By 2020 increase by five-fold the number of center line miles of on-street bicycle facilities, and minimize gaps in the bicycle network¹³, and
- By 2020, reduce bicycle crash and fatality rates by increasing the numbers of people bicycling and maintaining or reducing the total number of crashes and fatalities involving bicyclists.

To track the rate of Plan implementation, keep the public informed on Plan progress, and report the benefits of the overall Plan to Fairfax County, an annual Bicycle Master Plan performance tracking program is needed. The Bicycle Master Plan recommends the following count program to both establish a baseline assessment of bicycle activity in Fairfax County, and to track on an annual basis the implementation and performance of the Plan.

1. FCDOT shall establish an annual bicycle count program using a methodology focused on select locations throughout the County where significant bicycle trip activity is already present.
2. FCDOT should expand the bicycle count program annually to additional locations as the physical network is expanded and use automatic counters in high-volume locations.
3. Utilize WMATA's bicycles-at-rail station census and bicycle and pedestrian access needs assessment database to count bicycle activity and ensure adequate bicycle parking capacity and quality of service at Metrorail stations in Fairfax County, including the new Silver Line stations as they open.
4. FCDOT and VDOT should coordinate tracking of total miles of the on- and off-road Bicycle Network and provide an annual report to the Board of Supervisors and general public. The report should include the following:
 - Growth of miles of each facility type
 - Growth in bicycle parking capacity
 - Growth in use of new or experimental facility types
 - Change in levels of bicycling as measured by the bicycle count program
 - Change in levels of reported bicycle crashes and resulting deaths and injuries
5. Coordinate with the Transportation Planning Board to enhance future regional travel surveys to better account for bicycle travel.

VII. MOVING FORWARD

The bicycle facility design 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 sector development along roads included within the recommended bicycle network will be

¹³ Facilities to be counted include: Bike lanes of all types, climbing lanes, shared lane markings, paved shoulders 4 feet or greater, and cycle tracks.

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

In order to meet the vision identified in this Plan, the County will need to invest resources in bicycling as it does with all other transportation modes. An annual budget allocation will enable the County to build more bicycle facilities, create longer linear connections of on and off-road facilities, and better maintain those that already exist. Resources are also required to support encouragement and safety education programs that will capitalize on building momentum while increasing the safety of both bicyclists and drivers who will be interacting with greater frequency in the coming years. Without a consistent investment in bicycling, there should be no expectation of more than the slow progress that the County has seen over the last two decades. However, with greater investment and a commitment to getting the details right, the County will see faster and more visible progress. This will increase safety, enhance quality of life, and support economic competitiveness, which will benefit everyone in Fairfax County today and in future generations.