

# Master Transportation Plan

## *Bicycle Element*

*Adopted April 23, 2019*



An element of  
Arlington County's  
Comprehensive Plan



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## PART 1: BACKGROUND, GOALS AND POLICIES

# I. The Role of Bicycling in Arlington Transportation

*Arlington is a vibrant community, in the heart of the dynamic Washington, DC Metro region. Arlington's transportation network has contributed to a high quality of life in the County by providing various transportation options, making it possible to travel around and through Arlington at all times with relative safety, speed and ease. Bicycling has consistently been one of the transportation options integral to Arlington's successful transportation network.*

As continued growth of both the County and the DC region produces more travel demands on the transportation system, the need for a robust and versatile multimodal transportation system becomes greater. The value of that versatility becomes most evident during times of extreme stress, such as during natural disasters or major facility shutdowns. In Arlington, it is increasingly important to provide varied options to serve diverse resident and visitor travel needs while also finding ways to reduce the environmental footprint of local transportation systems. As identified in Arlington's [Community Energy Plan](#), achieving community and regional goals of improved air quality and reduced greenhouse gas emissions from fossil fuel

### Bicycling can connect many origins and destinations ... conveniently providing “the first mile, last mile” access

use, depend greatly on shifting more travel to energy-efficient travel modes such as bicycling and walking.

Bicycling plays a unique role in managing transportation demand for the growing population. When using bicycles, people can travel short- and medium-range distances quickly and efficiently while retaining freedom and flexibility in their routes and schedules.

Bicycling can connect many origins and destinations to transit services, conveniently providing “the first mile, last mile” access that allows a broader geographic reach for

fixed transit routes. Bicycles can provide students with quick, reliable transport to school and enable travel independence. Shifting trips from motor vehicles to bicycles can also improve motorists' travel by reducing congestion and demand for parking spaces. Therefore, when the capacity and quality of the bicycle network is enhanced, travel by transportation modes other than bicycles is often improved as well. Trips that are diverted from busy highway corridors onto adjacent bicycle facilities, such as the Custis Trail along Interstate-66, can help to reduce congestion on the roadways.

The public cost for building or maintaining bicycling infrastructure is typically many times lower than providing similar facilities for driving or transit. In addition, bicycles take up much less roadway and parking space than motor vehicles. Streets and multi-use trails can accommodate many bicycles, moving in two directions, within the same amount of asphalt used by a single motor vehicle travel lane. Similarly, significant amounts of bicycle parking can be placed within smaller spaces than parking lots at low fiscal expense and with minimal opportunity cost.

Due to its low cost and lack of licensing or other requirements, bicycling is a very accessible travel mode. Bicycling enhances equity in Arlington as it broadens travel opportunities for all persons.

Bicycling and other active transportation modes also enhance the health of our citizens by providing moderate exercise while commuting and undertaking other personal travel. In addition to being clean and quiet, bicycling and other active transportation help to build community. People walking and bicycling are more recognizable

and approachable to neighbors and fellow community members than people in cars or other vehicles and provide positive activity on local streets. Bicyclists can more easily converse with neighbors, observe happenings in their communities and spend more time traveling on local streets. Bicyclists also help the local economy, as they are more likely than motorists to shop at nearby businesses, to make more frequent visits, and to spend more dollars locally. Having an outstanding bicycling environment is often identified as an important economic asset that attracts both businesses and highly-skilled workers to a community. Many residents and visitors are attracted to Arlington in part for its high-quality trails and bicycling facilities and the relative ease in traveling by bike here. Bicycling fits well with Arlington's local values of encouraging all residents to get out and be part of the community.

Currently, the technological state of bicycling and personal mobility is changing. Small, quiet, battery-powered motors can be integrated into bicycles thereby making bicycling accessible for more people and purposes. Travelers who may not have the ability or interest in pedaling bicycles and those who may need some motor assistance





when going uphill or carrying large loads or extra passengers are gaining additional transport and route options. These devices provide opportunities for more people to travel in active ways and to access transit options, thereby reducing traffic demands on streets, promoting better public health, developing community and reducing the strain on the natural environment. Electric-assisted bicycles can help achieve more age and gender diversity in local bicycle use.

Several bike sharing operations, including Capital Bikeshare, are now offering electric-assisted and

conventional bicycles for short term rentals, allowing bicycle travel to be a more spontaneous and accessible travel mode and enabling more multi-modal trips. There are also other technologies, such as motorized scooters, unicycles and skateboards, that are now attracting significant public use which may replace some bicycle use while creating increased demand on the use of bicycle facilities. As use of these emerging technologies start to mature it will be necessary to adjust street, bikeway and multi-use trails facilities and regulations to adequately govern and accommodate them.



## II. Background

### *Current Conditions*

In 2009 Arlington began collecting data on bicycle use from a network of electronic counters installed at selected locations on area trails and some primary roadways. Utilizing the data collected by those counters, and from the Capital Bikeshare system, the County is gaining a clearer picture of bicycle use in Arlington. In addition, recent estimates from the 2015 Arlington Residential Travel Survey show that bicycling now accounts for about five percent of all commute trips by Arlington residents. This figure, when compared to estimates from past decades, indicates more than quadrupling in bicyclist commute mode share. Data collected through Arlington Public Schools' 2017-18 school year surveys, found that about three percent of Arlington's K-12 students bicycle to school on a regular basis.

The designated bikeways network is comprised of about 140 miles of: shared-use trails; marked, protected and buffered bike lanes; bicycle

boulevards; and signed bicycle routes. The network serves much of Arlington, provides links to bridges across the Potomac River, and includes trails that extend into neighboring Virginia jurisdictions. The designated bicycle facilities are supplemented by several hundred miles of low-volume residential streets which generally offer convenient and comfortable bicycling routes. In addition, nearly 100 Capital Bikeshare stations are now in operation within Arlington with many bikeshare stations located close to transit stations and stops enabling easier multimodal

travel. However, significant gaps remain in the bikeway network, resulting in barriers that leave bicyclists in portions of Arlington disconnected from the overall network.

Arlington has long had a reputation of being one of the best places for bicycling in the United States. In October 2018, Bicycling Magazine rated Arlington #17 in its' review of America's Best Bicycle Cities. The League of American Bicyclists (LAB) has awarded Arlington a Silver Level rating as a Bicycle Friendly City and Arlington has more LAB certified

### Arlington's Bicycle Commute Mode Share



Source: 2015 Arlington Residential Travel Survey

Bicycle Friendly Businesses than any other jurisdiction in the Eastern United States. These awards are likely the result of long-established County policies and programs to build bicycling facilities and to support bicycling education and encouragement.

### CHALLENGES

Not all Arlingtonians feel safe and comfortable bicycling on our local streets. Many residents have identified that they do not have suitable bicycle facilities within their neighborhoods or ones that connect to the local destinations that they want to travel to. Others bicyclists do not feel comfortable riding with or amongst motor vehicle traffic and they feel that some on-street bikeways do not provide sufficient separation from motor vehicles. While Arlington has developed many on-street bikeways in recent years, their distribution

and connectedness across the Arlington is currently uneven.

There is a great demand amongst the many travel modes for use of the existing streetspace in Arlington. At times other travel modes obstruct safe bicycle travel, such as when motor vehicles stop in bicycle lanes while making deliveries and picking up passengers. To address this problem, County staff are redesigning and reallocating street space to include physical measures that enable greater separation from intruding traffic. Sufficient street space is not always available to permit installation of such measures on many of our streets. Allocating roadway space equitably amongst the many different, and at times competing, uses requires skillful analysis and community involvement.

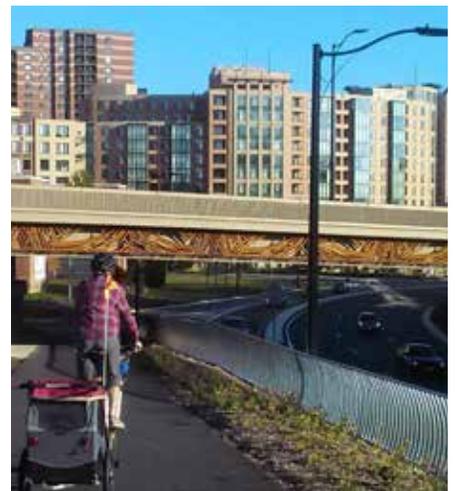
There is a great demand amongst the many travel modes for use of the existing streetspace in Arlington. Sufficient street space is not always available to permit installation of such measures on many of our streets.



Photo credit: Sam Kittner/Kittner.com



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## THE MASTER TRANSPORTATION PLAN AND BICYCLE ELEMENT

The Master Transportation Plan (MTP) Goals and Policies document specifies three general policies that form the foundation of the MTP and, therefore, transportation in Arlington in the years ahead: integrating transportation with land use, supporting the design and operation of complete streets, and managing travel demand and transportation systems. This element of the MTP focuses on bicycle travel, which is greatly affected by land use, street design, traffic volumes, public perception and transportation system management. Bicycling can also affect motor vehicle traffic volumes and congestion when substituting for motorized vehicle travel.

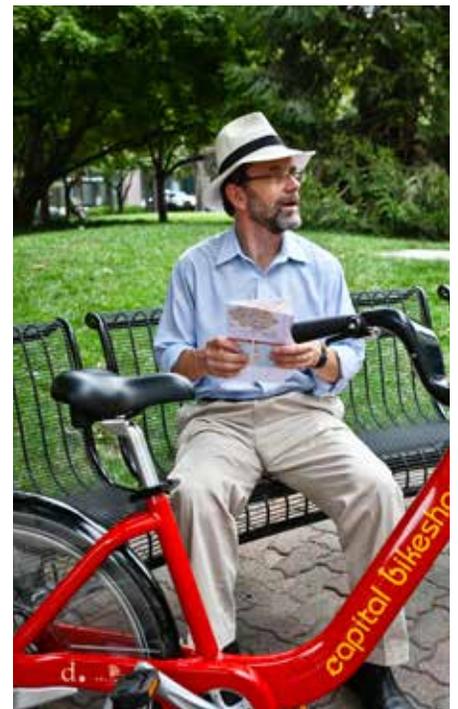
Arlington County developed its first bicycle master plan in the early 1970's. That document established the first network of bicycle and pedestrian trails as well as signed on-street routes. The 1986 comprehensive rewrite of Arlington's MTP brought bicycles firmly into the County's multi-modal transportation planning.



**250,000  
annual trips  
in Arlington**

Subsequent bicycle plans added elements related to secure bicycle parking and bicycle lanes. The Bicycle Element of the MTP that was adopted in 2008 incorporated an expanded bicycle network plus extensive attention on educational and informational activities to encourage more travel by bicycle.

Since adoption of the Bicycle Element (Plan) in July 2008, there have been substantial changes to the bicycle environment in Arlington, the Washington, DC region and nationally that have changed the landscape for bicycling in urban areas. One of the most significant changes has been the introduction of the Capital Bikeshare regional system with more than four million trips annually across the Washington DC region and over 250,000 trips in Arlington. In addition, several



types of enhanced on-street bicycle facilities, such as buffered and protected bicycle lanes, have been implemented. Changes to national engineering and design guidance have also enabled greater utilization of innovative bicycle facility treatments. Moreover, during the past decade there has been substantial growth in local bicycle usage and awareness which necessitate making further revisions to the County’s plans for how bicycling should be provided for and how to achieve more equity between travel modes and traveling populations. Sector and area plans adopted in recent years have identified opportunities to improve bicycle travel and access to the communities and have specified certain facility improvements for addition to the MTP.

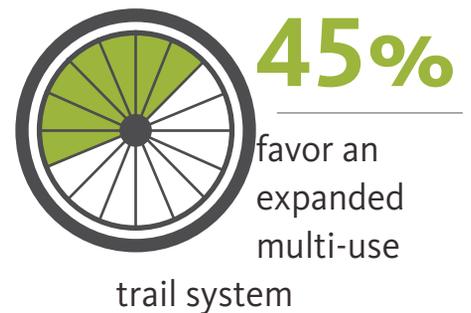
Sector, Area and Revitalization plans address the physical form and development of specific geographic areas within Arlington. Each of the plans include recommendations for the location and characters of streets and other transportation facilities and guide future design and investment decisions. The Master Transportation Plan along with other elements of the Arlington Comprehensive Plan, should be used to guide the development of future Sector, Area and Revitalization

plans. The design, maintenance and operations of multi-use trails is guided by both the Public Spaces Master Plan and this document.

**THE BICYCLE ELEMENT UPDATE PROCESS**

During the summer of 2017, Arlington County began a comprehensive public engagement effort to gain input from a broad cross-section of Arlington residents for an update to the MTP’s bicycle policies. That public engagement effort included: monthly meetings of a citizen advisory panel, on-line surveys, a visual preference survey, multiple presentations to advisory commissions and committees, public workshops, open house sessions and dialogues with interested residents provided robust guidance for the plan update. Additional guidance was gained from reviewing the draft Arlington Public Spaces Master Plan and other County planning documents. Bicycle master plans adopted by 12 peer communities and recent bicycle transportation research documents were also examined to provide useful points of reference for Arlington’s Bicycle Element update effort.

The community expressed great interest in bicycle travel and a strong desire for making Arlington a safer and more comfortable place to



*Source: Results of 2017 Public Survey for Bike Element Update*

bicycle. A large percentage (45%) of the respondents indicated that their concerns about the safety of bicycling on Arlington streets is the primary reason why they do not bicycle more often. Building more protected bicycles lanes (64% of respondents), along with expanding the multi-use trail system (45%) and enhancing the existing bikeway network (44%) with more low-stress routes, were identified as the best ways for Arlington to achieve greater bicycle safety and more bicycling for transportation. The community

responses also favored:

- making bicycle lanes more visible,
- addressing vehicles that obstruct bicycle lanes and
- enhancing bicycle priority on neighborhood streets through motor vehicle diversions, traffic calming and
- greater route connectivity and better access to local schools.

This guidance from Arlington's community outreach is reflected in updated plan's goals and policy statements.

Arlington. Enhancements in bicycle parking facilities at transit stations, shopping centers, schools, offices, and in multifamily residential buildings as well as ample shower facilities, lockers and maintenance stands will also make bicycling a more attractive travel option.

The Plan includes an objective of having at least half of all residents ride bicycles for transportation purposes at least monthly. Such a participation level would indicate that "average" residents find bicycling to be safe and convenient

classes. Bicyclists and all other travelers, can benefit from a proposed greater emphasis on safety educational and enforcement efforts including the adoption of policies which seek to prevent roadway fatalities and serious injuries. Similarly, Arlington's Complete Streets policy helps all street users by creating safer and more comfortable accommodations

**The MTP ... focuses on increasing the use of bicycles as a transportation mode in Arlington by broadening the population of people that feel safe and comfortable riding bicycles on our streets.**

**SUMMARY OF REVISIONS**

The primary focus of the Bicycle Element is the completion of a more fine-grained and comprehensive bicycle network of multi-use trails, bicycle lanes, and protected or buffered on-street facilities in order to create a safer and more comfortable bicycling experience for persons of all ages and abilities. Bicycling will be a more viable travel option for many Arlingtonians when a better-connected network of bikeway facilities is in place across

enough for at least some of their transportation needs. Achieving this level of comfort with bicycling will require, in addition to the facility network improvement, an effort by the County to address safety concerns. Many policy proposals in this plan are aimed at achieving greater safety and enhancing user comfort include facility upgrades, enhanced traffic law enforcement, safety education efforts, and promotional events such as mass rides and training



for all thereby reducing conflicts between bicyclists, motorists and pedestrians.

All Arlington travelers are expected to benefit from the overall efforts to expand the multimodal aspects of its transportation system. In particular, the effort to rebalance and right-size street space allocation to achieve more Complete Streets (explained in detail in the Streets Element of this plan) will help create safer and more comfortable streets. Dedicated bicycle facilities will reduce conflicts between bicyclists and pedestrians by shifting bicycle riding off sidewalks and multi-use trails and provide a level of comfort for families seeking safe bicycle rides to schools. Upgrading bicycle access to transit stations, through the construction of secure, sheltered parking and better bikeways expands transit service areas and improves the convenience of public transit travel.

This Plan carries forth the overall goals and policies of Arlington's MTP while simultaneously bringing the Plan up to date with the advances in bicycle infrastructure, planning, execution, evaluation and technology and community desires that have occurred over



*Pilot intallation of protected bikeway barriers in Crystal City*

the past ten years. The Plan seeks to achieve community desires through many, sustained County actions over the next decade. It focuses on increasing the use of bicycles as a transportation mode in Arlington by broadening the population of people that feel safe and comfortable riding bicycles on our streets. The primary initiatives are to upgrade the bicycling network through achievement of a comprehensive network of low-stress bicycling routes and making bicycling a “normal” activity for persons of all ages and abilities. In addition to facility upgrades, achieving the objective will include actions directed towards education: raising general awareness, increasing the use of bicycles as part of multi-modal travel, and

further integrating bicycling needs in all aspects of planning, design, operation and maintenance of our community resources. Other aspects of bicycling that are strictly recreational in nature are excluded from this document and may be addressed in the Public Spaces Master Plan and other guidance. Other processes to regulate the use of small electric vehicles are underway and may necessitate future revisions to this and other County documents and policies.

## III. Arlington's Vision for Bicycling

Bicycling is an integral part of Arlington's equitable, multi-modal transportation system and provides safe, reliable, convenient and comfortable travel for persons of all ages and abilities.

The vision statement captures a few important themes:

- Bicycling supports the MTP's general policies of providing multiple viable travel options, supporting the design and operation of complete streets and managing travel demand and transportation systems.
- Providing a safe environment to bicycle within is a top County priority.
- Reliability and convenience are important determinants as to whether bicycling is actually an attractive travel option.
- The level of comfort of a route will affect a person's desire to bicycle on that route.
- Bicycling should be a viable travel option for everyone regardless of their age or physical abilities and skills. Facilities and services should also be provided in an equitable manner.



Photo credit: Sam Kittner/Kittner.com



Photo credit: Sam Kittner/Kittner.com

## IV. Goals of the MTP and Bicycle Element

### *Master Transportation Plan Goals*

The MTP outlines six broad goals to guide and unify Arlington's approach to transportation. These overall goals are:

#### **MASTER TRANSPORTATION PLAN GOALS**

- Provide high-quality transportation services
- Move more people without more traffic
- Promote safety
- Establish equity
- Manage effectively and efficiently
- Advance environmental sustainability

#### **BICYCLE ELEMENTS GOALS**

- A. Provide an environment in which people of all ages and abilities can get places by bicycle safely and comfortably.
- B. Make all of Arlington accessible by bicycle using easy-to-follow, low-stress routes.
- C. Increase the mode share of bicycle travel, aiming to have the population of persons who bicycle for transportation be demographically similar to the population of Arlington overall.
- D. Provide an excellent trail system that serves the needs of people walking and bicycling for transportation and for recreation.
- E. Properly manage, maintain, and operate the infrastructure that supports bicycling in Arlington.
- F. Integrate bicycling into an efficient, sustainable and equitable transportation system.



## V. Policies and Implementation Actions

Fourteen policies have been developed to direct the County's approach to bicycling and to support the Bicycle Element goals. Each policy is implemented via specified actions intended to achieve desired outcomes.

### **GOAL A. PROVIDE AN ENVIRONMENT IN WHICH PEOPLE OF ALL AGES AND ABILITIES CAN GET PLACES BY BICYCLE SAFELY AND COMFORTABLY.**

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*Arlington County aims to make bicycling safe, secure, convenient and accepted. This is achieved through projects that improve the physical infrastructure for bicycling, and by programmatic activities that build public acceptance for safe, convenient, and accessible bicycling. Persons of all ages, abilities and backgrounds are considered when developing bicycle projects and programs.*

#### **Policy 1: Make existing streets safer and more comfortable for bicycling by persons of all ages and abilities.**

##### **Implementation Actions**

- a. Review all bicyclist crash reports, and consider other reports of safety concerns, to identify street and trail locations where user safety can be improved through physical changes or other engineering, enforcement or education interventions.
- b. Upgrade existing on-street bikeways on arterial streets to include buffer striping or protective barriers where possible. Provide protected or buffered bicycle lanes on roadways with speed limits of 30 miles per hour or greater and all roadways with daily traffic volumes of 6,000 vehicles per day or greater.
- c. Provide for safer, more comfortable bicycling at intersections with high-volumes of vehicular traffic. Make full use of traffic control devices able to detect bicycles including: signals, signs, beacons, delineators and roadway markings to encourage safe behavior of all uses at intersections.
- d. Design and implement traffic plans that calm motor vehicle traffic without discouraging or disadvantaging bicycle and other traffic. Allow exceptions for bicycles on any local street with motorized traffic access restrictions. Construct vertical traffic calming devices in a manner that permits safe and comfortable bicycle passage.

## Policy 2 – Enhance the safety of bicycling in Arlington by addressing unsafe behaviors and encouraging safe travel behaviors. Increase traffic law enforcement pertaining to bicycle safety, placing priority on those violations that endanger vulnerable road users.

### Implementation Actions

- a. Incorporate bicycle safety efforts into an integrated travel safety program that has the goal of zero traffic deaths, or serious injuries, occurring in Arlington.
- b. Promote PAL, the County’s approach to travel safety wherein all street and trail users are encouraged to be Predictable, Alert, and Lawful. Provide education materials in multiple languages and reach out to population groups across Arlington.
- c. Collect and analyze bicyclist crash reports on a regular basis to understand crash conditions and causes, and to coordinate DOT and Police safety-related engineering, enforcement and education efforts
- d. Coordinate with local police to implement traffic law enforcement programs directed towards the violations of traffic safety law, by motorists, bicyclists and pedestrians, that are most likely to cause crashes and injuries. Target efforts at the locations with frequent bicycle/motor vehicle or bicycle/pedestrian conflicts.
- e. Utilize public awareness campaigns, law enforcement, functional design and, physical barriers (where appropriate) to discourage drivers from obstructing bicycle lanes and from opening car doors in the path of oncoming bicyclists.
- f. Continue headlight and helmet distributions, in particular, reach out to young bicyclists and persons of limited incomes.
- g. Encourage greater use of bicycles by police and County staff for routine and special work, such as trail patrols and site visits. Provide County staff with access to a variety of bicycles, including electric-assisted bikes, for official use.
- h. Offer training to continuously upgrade planning, engineering, law enforcement and maintenance staffs’ knowledge of best practices for bicyclist safety. Establish minimum training requirements for these professionals.





### Policy 3– Expand travel safety education programs for children and adults.

#### Implementation Actions

- a. Develop multi-lingual public safety campaigns and education materials aimed at addressing educating drivers, pedestrians and bicyclists on how to share the road and operate safely around others on streets and multi-use trails.
- b. Continue to undertake local and regional safety education campaigns (such as Arlington’s PAL campaign) that remind bicyclists, pedestrians, and motorists of safe and courteous behavior on streets and trails and encourage ongoing cooperation amongst travelers. Include multi-lingual materials and targeted outreach efforts to achieve broad awareness across Arlington.
- c. Conduct adult and youth bicycle safety and maintenance courses through Arlington Public Schools (APS), Arlington Adult Education and BikeArlington programs. Encourage community colleges, civic organizations, fitness clubs, and others to offer bicycling safety instruction. Consider providing financial assistance to institutions or to students to encourage participation.
- d. Continue to participate in the Washington region’s multi-lingual Street Smart safety campaign.
- e. Support an ongoing Safe Routes to School program for Arlington’s schools that includes encouragement, education, enforcement, engineering and evaluation components, and involves school administrators, faculty, staff and parents, in addition to students
- f. Provide all Arlington elementary and middle school students on-bike and classroom training in safe and confident bicycling and extend the training to high school physical education programs.
- g. Designate recommended bicycling routes to neighborhood schools. Criteria for safe routes should be established jointly among the staff of Arlington Public Schools, Parks, Transportation, and Police. Continue to improve public infrastructure to increase the number and extent of routes that can be recommended for bicycling to school.

## **GOAL B. MAKE ALL OF ARLINGTON ACCESSIBLE BY BICYCLE USING EASY TO FOLLOW, LOW TRAFFIC STRESS ROUTES.**

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*Arlington County desires a network of low-traffic-stress bicycling infrastructure that reduces travel barriers for persons of all ages and abilities and improves connectivity between origins and destinations across all of Arlington. The low-traffic-stress bicycling network will incorporate multi-use trails, local neighborhood streets and arterial streets with protected or buffered bicycle lanes to support bicycling between residential neighborhoods, retail and commercial districts, schools, recreation centers and parks, employment sites, transit stations, and activity centers in neighboring jurisdictions.*

**Policy 4 – Provide a network of low-traffic-stress bicycling routes that connect residential areas, commercial centers, transit stations, schools, parks and County facilities across all of Arlington with links to outside destinations. Implement those projects that will have the greatest impact in providing safer travel across the network for persons using bicycles, small electric vehicles or walking while achieving a more equitable traveling environment.**

### **Implementation Actions**

- a. Fund and build planned bicycling infrastructure projects identified in adopted County planning documents. Establish a regular funding stream and level of staff support to enable timely implementation of planned bikeway projects.
- b. Develop new multi-use connector trails or on-street bikeways that link low-volume streets and establish more effective and efficient bicycle travel corridors. Emphasize access to public facilities such as schools, transit stations, parks and community centers.
- c. Evaluate the geographic coverage of the existing bicycle network and provide additional bikeways to serve the under-represented areas and populations.
- d. Identify desired land acquisitions or easements needed to connect bikeway routes, and prioritize the pursuit of such land acquisitions or easements through donations, site development or public purchase.
- e. Prioritize projects that overcome barriers and complete network connectivity, in particular work with regional partners to enhance bicycle access to all Potomac River bridges. Improve the safety and comfort of bicycling on existing north-south routes, and identify opportunities to provide additional low-stress corridors for north-south bicycle travel.
- f. Provide or enhance bikeways on new or existing streets, or on new multi-use trails, in conjunction with major new development or redevelopment activities and with new school construction.
- g. Work with regional partners on the development of grade-separated bicycle and pedestrian crossings of major highways and to enhance existing at-grade crossings.
- h. Work with the Metropolitan Washington Airports Authority (MWAA) to establish convenient bicycle connections to Reagan National Airport from Crystal

- City and the Mount Vernon Trail and provide secure bicycle parking for airport staff and visitors.
- i. Work with the Department of Defense to identify means to make bicyclist access to routes through joint base Fort Myer-Henderson Hall easier.
- j. Increase engagement with federal landowners to develop safe, comfortable and efficient routes for crossing or circumnavigating large federal institutions and properties, such as Joint Base Fort Myer-Henderson Hall, the Pentagon Reservation, the National Foreign Affairs Training Center, George Washington Memorial Parkway, and Arlington National Cemetery.
- k. Work with the Virginia Department of Transportation (VDOT) and the National Park Service (NPS) to ensure that bikeways are provided on and across VDOT and NPS operated arterial roadways, interstate and parkway corridors, as part of all projects to improve or reconstruct these roadways. Support the National Park Service with implementation of its 2016 Paved Trails Plan.
- l. Designate recommended bicycling routes to schools with criteria jointly established by County Police, Transportation and APS staff along with input from parents. Continue to improve public infrastructure to increase the number and extent of routes that can be recommended for student use.

**Policy 5 – Accommodate bicycle infrastructure as part of all street improvement projects and provide the highest-quality on-street bikeway possible, as referred in Appendix C.**

**Implementation Actions**

- a. Review existing arterial street cross-sections and look for opportunities, through restriping or reconstruction, to reallocate street space to enhance safety, access and comfort for persons using bicycles or small personal mobility devices. Look for opportunities to create new protected or buffered bicycle lanes that bridge gaps in the existing bikeway network.
- b. Identify opportunities to achieve new or upgraded bikeway facilities from new land development projects, including schools and community centers, as they undergo the development approval process. In particular, implement significant sections of the projects identified in Appendix D of this plan.
- c. Design and install new and upgraded on-street bicycle facilities in accordance with the National Association of City Transportation Officials (NACTO) guidelines and multi-use trails in accordance with the American Association of State Highway Officials (AASHTO) guidelines.
- d. Pilot innovative street, traffic signal and bikeway designs, considering examples and research from across the USA and rest of the world including designs that prioritize bicycle travel. Conduct test applications of markings, and reallocation of road space with paint or delineators.
- e. Add contra-flow bicycle facilities to one-way streets, where safe and appropriate.
- f. Implement traffic calming and other speed management measures, particularly on bicycle boulevards, to improve safe sharing of roads by bicyclists and motorists.
- g. Upgrade and expand the signed bike route system. Provide wayfinding for bicyclists with signs, maps and mobile apps and adjust as necessary over time to account for changes to routes and destinations.
- h. Consider bicyclist use in the design of sidewalks, particularly along arterial streets and in locations where bikeways connect with streets. New sidewalks built with the intent of serving as bicycling and walking facilities should be a constructed with a minimum clear width of 8 feet, and greater widths may be warranted.

## **GOAL C. INCREASE THE MODE-SHARE OF BICYCLE TRAVEL, AIMING TO HAVE THE POPULATION OF PERSONS WHO BICYCLE FOR TRANSPORTATION BE DEMOGRAPHICALLY SIMILAR TO THE POPULATION OF ARLINGTON OVERALL.**

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*Make using a bicycle for transportation, at least occasionally, an accepted travel option for most Arlington residents. When a large-enough portion of a community participates in an activity, it spawns a culture whereby an activity previously considered “fringe” becomes embraced by the mainstream of the community. Approaches should aim to address challenges to greater bicycle use such as: limited-English skills, physical restrictions and lack of access to bicycles and bikeways. Expanding bicycle use will help to achieve Arlington’s goals of reduced: traffic congestion, energy consumption and greenhouse gas emissions while expanding travel opportunities.*

### **Policy 6 - Establish bicycle use as a mainstream travel mode. Raise visibility and participation of bicycling in Arlington through events, prominent facilities, education and encouragement activities.**

#### **Implementation Actions**

- a. Expand the BikeArlington encouragement program, including map publication, Bike-to-Work Day, Bike-to-School Day, organized group rides, Car Free Day, valet bicycle parking at events, learn to ride classes and route assistance. Collaborate with Arlington Public Schools staff to provide bicycling encouragement that reaches students, parents and staff.
- b. Distribute bikeway maps, program brochures, and safety education materials. Include guidance for safe and courteous use of multi-use trails and streets. Educate bicyclists and others about facility types that may be relatively new to the Arlington public.
- c. Improve outreach to potential bicyclists that have been traditionally underrepresented in County planning and programs. Aim to reach and influence persons of lower incomes, recent immigrants, non-residents who pass through Arlington and young people and renters who may be less engaged in civic affairs.
- d. Identify new marketing and education approaches, including multi-lingual and age targeted media, to reach groups and individuals that are not currently bicycling or are low-confidence riders. Expand outreach about bicycling options through targeted on-line resources such as social media postings and advertisement.
- e. Continue to promote bicycling as a part of the County’s Transportation Demand Management (TDM) activities aimed at businesses, employees, schools, and residents. Expand school-based TDM efforts to incentivize more bicycle use by staff and driving-age high school students.
- f. Encourage employers to provide cash compensation to their staff who choose to bike to work, rather than receiving subsidizing motor vehicle parking at their workplaces.
- g. Conduct regular surveys and focus groups to



- determine actions to encourage greater bicycle use.
- h. Promote bicycling as an activity that will improve health and fitness and conveniently incorporate exercise and recreation into daily life. Support activities such as group bicycle rides and competitions that encourage more bicycle use.
  - i. Support a range of programs to encourage bicycling for transportation, fitness, and recreation, including:
    - Bicycle fitness and training programs by the County and schools. Encourage similar programs by bike shops, bicycle advocacy organizations and bicycle clubs.
    - Recognition awards and incentives for bicycling — e.g., awards honoring residents who bicycle to work, and ride through the winter; awards for businesses and citizens who help make Arlington a better place for bicycling; awards for exemplary bicycling support in schools, businesses, and youth organizations.
    - Regular community-based bike rides that appeal to less-experienced bicyclists.
    - Open street events.
    - Learn-to-ride classes and training for the less-confident bicyclists.
    - Bicycling incentive programs at County schools for staff and students.
    - Special training on the use of tricycles and other adaptive cycle types for persons with physical mobility restrictions.
  - j. Promote and brand Arlington’s bikeway infrastructure, such as “The Arlington Loop” to raise public awareness of and attract additional use to the bikeways.
  - k. Incorporate information about Arlington’s bicycle registration program in County publications and in bicycling classes and events.
  - l. Identify where electric-assisted bicycles, and other small vehicles such as scooters and skateboards, can be safely and legally ridden. Encourage the use of electric-assisted bicycles, as a means to broaden the appeal and range of uses of bicycling.
  - m. Undertake policing and communications programs that address reducing bike theft and enhancing personal security while bicycling.
  - n. Work with transit operators, such as WMATA, on the integration of bike sharing services into transit promotions and fare media. Emphasize Capital Bikeshare as part of a multi-modal, regional public transit system.
  - o. Work with the Bicycle Advisory Committee, as well as local advocates and organizations, to identify measures to improve bicycling conditions in Arlington and to encourage more bicycle use especially by persons that are traditionally outside of the bicycling mainstream.
  - p. Undertake measures that will lead to achieving by the year 2020, Gold Level Bicycle Friendly Community status, an honor awarded by the League of American Bicyclists for communities with exemplary bicycle programs and bicycle use. Strive to achieve Platinum Level status within 10 years.



Photo credit: Sam Kittner, Kittner.com

## Policy 7 – Encourage and support provision of facilities to support bicycling, including showers, lockers and adequate bicycle parking throughout the County

### Implementation Actions

- a. Utilize the [Arlington County Bicycle Parking Standards](#) document to develop new bicycle parking installations by public and private efforts. Study occupancy levels of bike parking in site plan developments; review and adjust the standards as needed to match evolving trends in bicycle types and use.
- b. Pursue amending the County zoning ordinance to require all newly-constructed by-right commercial and multifamily residential buildings to provide ample, convenient and secure bicycle parking.
- c. Where appropriate, seek to assist the managers and owners of commercial properties, including multifamily residential buildings, in selecting and installing high-quality, secure bicycle parking at existing buildings.
- d. Consider requiring appropriate bicycle support facilities, such as room for changing clothes, showering and bicycle parking in site plan conditions for commercial developments, including establishing minimum standards for quality and location. Aim to include appropriate bicycle support facilities in all new school construction and major renovation/ expansion projects.
- e. Include adequate bicycle parking in all County streetscape and street improvement projects in commercial areas.
- f. Encourage the provision of bicycle parking both in buildings and on-streets that can accommodate cargo bikes.
- g. Provide more bicycle maintenance (“Fixit”) stands and resources, particularly in lower-income areas.
- h. Promote or provide opportunities for charging of electric-assisted bicycles at commercial, multi-family and public facilities.

## **GOAL D. PROVIDE AN EXCELLENT MULTI-USE TRAIL SYSTEM THAT SERVES THE NEEDS OF PEOPLE WALKING AND BICYCLING FOR TRANSPORTATION AND FOR RECREATION.**

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*Arlington's multi-use trail system is a highly-valued resource. Sufficient resources must be dedicated to enable all multi-use trails to be well-maintained and available for year-round use. Attention must be directed to: physical improvements, including lighting where appropriate; management and education; and issues of user conflicts and security.*

### **Policy 8 – Manage multi-use trails as community assets that enhance transportation and recreational opportunities for everyone.**

#### **Implementation Actions**

- a. Provide additional multi-use trails where significant community demand and support are expected. Develop and formalize concepts identified in adopted County documents such as the Public Spaces Master Plan, and area and sector plans. Implement the Inner and Outer Trail Loops as specified in the Public Spaces Master Plan.
- b. Promote volunteer maintenance on County-owned multi-use trails.
- c. Establish operation and maintenance responsibilities and protocols for all multi-use trails in public access easements on privately-owned properties.
- d. Perform periodic pavement condition assessments on multi-use trails and establish a regular maintenance cycle for repaving and repair.
- e. Implement measures such as consistent mileage markers, new trailheads, and GPS coordinates to help emergency personnel and vehicles.
- f. Establish guidance for the installation and operation of night-time lighting on multi-use trails. Prioritize lighting installations on those trail sections in close proximity to commercial districts and transit stations, and on trails with relatively high evening use, or with known safety concerns. Upgrade existing trail light equipment to improve reliability and energy efficiency while achieving specified light coverage with minimal spillage or glare. Include technology that allows for light dimming in late night/early morning hours. Consider potential lighting impacts upon adjacent residences and sensitive natural resources and environments.
- g. Provide access to drinking fountains, bathrooms, seating, bicycle repair stands and shaded resting areas on popular trails.
- h. Evaluate all existing multi-use trail signage and markings and modify as needed to enhance user safety and clarity.
- i. Expand the bikeway network wayfinding signage system, particularly for multi-use trails and on-street connecting routes. Implement identification signs, markers or art features at key trail entry points.
- j. Expand public outreach methods to ensure that information alerts about activities on multi-use trails, are distributed widely to reach local and regional bicycling networks.

- k. Utilize adequate caution signage and markings to alert multi-use trail users of potential hazards, such as roadway crossings, steep grades or pinch points. Post detour signage for trail locations that experience frequent flooding.
- l. Endeavor to protect multi-use trails and their buffer areas against encroachments from adjacent roadways and new development.

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**Policy 9 – Manage multi-use trails for safety with increased use and new user types. Improve facilities to address user conflicts and encourage safer user practices.**

**Implementation Actions**

- a. Enhance the primary multi-use trails as needed to more safely accommodate the increasing numbers of users both on foot and on wheels. Prioritize multi-use trail widening and trail/roadway intersection projects based upon crash statistics, frequent user conflicts and shared use path level of service. Minimize addition of impervious pavement within or near sensitive natural areas.
- b. Undertake safety evaluations of all street/trail intersections. Identify how safety might be improved through changes to traffic signals, signage, markings, traffic calming, trail and street lighting, tunnels/overpasses, or other measures. Ensure that crosswalk markings and curb ramps are adequately wide for the accommodation of both bicycle and pedestrian crossings.
- c. Expand staff expertise in the proper design, upkeep and operation of heavily-traveled multi-use trails.
- d. Strive for patrols by Police, park rangers, and volunteers on multi-use trails, especially during early morning and evening hours to the extent that resources are available.
- e. Design new multi-use trails in a manner that minimizes user conflicts, and where appropriate, test innovative use of pavement markings and/or



**be a PAL**  
**Predictable | Alert | Lawful**

- f. Undertake awareness campaigns that emphasize proper behavior and etiquette by all multi-use trail users.
- g. Improve user security and safety on multi-use trails with measures including trail lighting where appropriate, convex mirrors and landscape treatments that improve visibility.
- h. Provide additional, high-quality, on-street bicycle facilities that encourage faster bicycle and scooter traffic to relocate from multi-use trails to on-street facilities.

**Policy 10 - Make multi-use trail corridors more environmentally sustainable, with reduced storm-water run-off, additional shade and increased planting for bio-retention. Recognize the positive aspects of natural resources along trail corridors and seek to improve scenic value of multi-use trails.**

**Implementation Actions**

- a. Submit plans for new or significantly modified trails to Arlington’s environmental assessment process early in the design stage. Consult with County forestry and natural resources staff in the scoping and siting of new trail projects.
- b. Review multi-use trail width standards; consider widening to accommodate heavy use and allowing narrow (8-foot width) trails for lighter use and smaller footprint.
- c. Minimize adverse impacts from paved multi-use trails in environmentally-sensitive areas, such as Resource Protection Areas and Natural Resources Conservation Areas; study and identify preferred permeable paving materials or boardwalks for multi-use trails.



- d. Modify County design practices to identify and allow species of native trees that can be planted closer to trails without danger of root heaves or requiring significant increases in tree pruning to keep trails clear.
- e. Utilize energy-efficient lighting fixtures in new and retrofitted trail light installations.

**GOAL E. PROPERLY MANAGE, MAINTAIN, AND OPERATE THE INFRASTRUCTURE THAT SUPPORTS BICYCLING IN ARLINGTON.**

*Planning, designing, funding, and building infrastructure brings it into existence. To extend the life and utility of infrastructure, it must be well-managed, maintained and operated. This applies to the bicycle network – including the on-road portion - in order to provide sufficient bicycle travel capacity, an attractive level of service, functional reliability, safety, and security.*

**Policy 11 – Implement measures to assure safe and convenient bicycle travel during and after inclement weather and with street and trail construction.**

**Implementation Actions**

- a. Improve the County’s Report-a-Problem system to ensure that users can report all manner of problems relating to bicycle infrastructure and operations.
- b. Develop Maintenance of Travel (MOT) plans that maintain safe, continuous, and equivalent bicycling and pedestrian routes as part of all significant

construction in the public right-of-way. Strive to provide advance notice to neighbors and the general public of planned street, sidewalk and trail closures. Vigorously enforce MOT requirements throughout the duration of construction projects.

- c. Develop guidance for use by contractors about how to maintain safe bicycling routes while working in the public right-of-way. Where possible and appropriate, undertake enforcement and other corrective action to address any contractor work that compromises public safety. Review existing enforcement options and penalties and ensure they are sufficient to facilitate compliance.
- d. Designate priority transportation trails that require snow clearance and other regular maintenance.
- e. Consider design and maintenance measures (like snow removal) that can accommodate more year round use of trails.
- f. Enhance multi-use trail, bike lane and sidewalk snow/ice/debris clearance practices to minimize the time such travel facilities are unusable.




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## **Policy 12 – Ensure that the street and trail network is operated in a way that supports safe, efficient, low-stress travel by bicycle.**

### **Implementation Actions**

- a. Ensure that all traffic signals and traffic control devices can properly detect bicycles. Traffic signals should utilize technology that can automatically detect bicyclists waiting in the street.
- b. Implement coordinated traffic signal timing on heavily-traveled bicycling corridors that accommodates all traffic, including bicyclists, without undue stopping and delays.
- c. Assign right-of-way priority to the more heavily-traveled facility at all intersections of trails and streets. Switch the STOP signs at those intersections where trail traffic regularly exceeds traffic on the street.
- d. Consider changing STOP signs to YIELD controls or relocating STOP signs to the cross streets, on bicycle boulevards where the such changes would not compromise the safety of all street users.

**Policy 13 – Manage the bicycle network through regular collection and analysis of data including user counts and reported crash data.**

**Implementation Actions**

- a. Refine bicycle data collection on streets, multi-use trails, and bridges, to establish baselines, and monitor use, plan for maintenance and expansion, evaluate safety, and model active transportation. Conduct regular user counts on all new protected bicycle lanes and on all new primary trails.
- b. Operate trail and bikeway data collection systems in an efficient, sustainable, collaborative and comprehensive manner. Provide open access to collected data when possible.
- c. Conduct periodic travel surveys that include bicycle use questions.
- d. Apply bicycle count and crash data in project prioritization, identification of bicycle facility needs, and other decisions regarding the transportation network.
- e. Build on bicycle count data to develop methods for characterizing and estimating bicycle use for future planning efforts.



**GOAL F. INTEGRATE BICYCLING INTO AN EFFICIENT, SUSTAINABLE AND EQUITABLE TRANSPORTATION SYSTEM**

*Continue to integrate bicycling with transit, walking, taxicab, ride-sharing and high-occupancy vehicle (HOV) travel modes. Improve access to bicycling for residents of all backgrounds.*

**Policy 14 - Provide convenient, covered and secure bicycle parking at transit stations, schools, public facilities and commercial centers.**

**Implementation Actions**

- a. Coordinate with WMATA and private property owners to increase the quantity and quality of bicycle parking at all Metrorail stations. Initiate new bicycle/transit integration services, and manage existing services. Provide sufficient free bicycle parking that offers a high level of security and weather protection.
- b. Improve the security of bicycle parking at transit stations with more bicycle lockers, monitored bicycle stations and reliable surveillance. Seek better bicycle parking opportunities and bike sharing opportunities at major regional travel destinations such as National Airport and the Pentagon.

- c. Coordinate with APS to provide sufficient bicycle parking at schools to meet established per-student and per-staff ratios. Provide secure bicycle parking for APS staff, and locations for parent/child bike drop-off.
- d. Work with property-owners to enhance the quality and quantity of parking in commercial centers for bicycles and scooters, and to increase the provision of on-street bike parking for visitors and shoppers and emphasize new installations at locations with little existing secure parking. Work to require new high-quality bicycle parking on private property as part of development approval and incentivize improvements at other times.
- e. Regularly assess the availability of secure, convenient bicycle parking for all types of bicycles,

- at County facilities and park and recreation sites. Upgrade quality and quantity of bicycle parking as part of regular facility/site improvements.
- f. Work to install County-supplied bicycle parking on public right-of-way within commercial districts and elsewhere where demand is sufficient. Provide technical assistance to private property owners, property managers and business improvement districts (BIDs) to achieve more and better bicycle parking installations in private spaces.
- g. Assess the market for integrating bicycle transportation with carpools, vanpools, taxis, car-sharing programs, and commuter bus or rail services.

**Policy 15 – Coordinate with regional partners and private providers to increase bike-sharing across Arlington and the Washington, D.C. region.**

**Implementation Actions**

- a. Reduce barriers, such as payment methods and age requirements, that limit the use of Capital Bikeshare and other bicycle-sharing systems.
- b. Locate bike share stations to attract greater numbers of system users and improve non-motorized access to County facilities and transit services and ensure that convenient access to bike share is available especially in lower-income residential areas.
- c. Identify how GPS-based, dock-less bike sharing systems can best integrate with and complement Capital Bikeshare and other transportation services. Investigate best practices for regulation of dockless bike share and implement agreements with private providers of dockless bikes.
- d. Promote bike sharing as a preferred travel mode for

- first and last mile trips to and from transit services.
- e. Work with bike-share providers to add electric-assist bikes, tricycles and other types of bicycles that can better accommodate the travel needs of persons with mobility disabilities.
- f. Support privately provided loaner bicycle programs for users such as employees and hotels guests.



# VI. Measures of Performance and Progress Targets

Figure 1 identifies quantifiable measures to gauge progress towards achieving the six goals of the Bicycle Element. Establishment of target dates and outcomes will assist County staff and members of the public in tracking Arlington’s progress in achieving the plan’s goals. Several measures will require the collection and

analysis of data that is not currently being captured by Arlington County. The measures should be reviewed annually (when feasible) to evaluate the level and rate of progress achieved, and to determine if additional data collection is need. In addition, progress in applying the specified Implementation Actions will be noted.

**FIGURE 1: PROGRESS TARGETS WITH APPLICABLE GOALS**

	Progress Target	Baseline 2018-19	Goal A	Goal B	Goal C	Goal D	Goal E	Goal F
1	Reduce bicycle crash injury rates per 10,000 residents by at least 5% per year	1.72/year	★				★	
2	Provide bicycle safety education to at least 75% of APS’ K-12 students by 2025 and 100% by 2030	TBD	★		★			★
3	Increase number of adult participants in bicycle education and encouragement events, such as Bike to Work Day, by at least 5% per year	4,000	★		★			★
4	Complete 75% of the planned Low Traffic Stress Bicycle Network by year 2025 and 90% by year 2030	TBD	★	★	★		★	★
5	Provide a low-traffic-stress bicycle route within ¼ mile of at least 80% of all households by year 2025, and 95% by 2030	65%	★	★	★	★		★
6	Achieve 8% bicycle commute mode share by year 2025, and achieve 12% bicycle mode share by 2030	5.0% estimate			★			

Figure 1, cont'd

	Progress Target	Baseline 2018-19	Goal A	Goal B	Goal C	Goal D	Goal E	Goal F
7	Achieve at least 10% of K-12 students bicycling to school by year 2025, and achieve 15% by year 2030	<b>3% estimate</b>			★			
8	Increase the number of bicyclists counted on specified trail and street facilities by an average of at least 2% each year	<b>Varies</b>			★			★
9	Reconstruct or repave at least 4% of all the multi-use trail miles each year	<b>2% for 2017-18</b>	★			★	★	
10	Provide covered bicycle parking spaces at 100% of transit stations and schools by year 2030	<b>50% of transit schools</b>	★		★			★
11	Expand access and use of bikeshare with the number of unique users increasing by 5% annually	<b>TBD</b>	★	★	★			★

**PART 2: INFRASTRUCTURE FACILITIES AND IMPLEMENTATION**

# VII. The Primary Bicycling Corridors and the Bikeway Network

As part of the update process for the Bicycle Element, County staff consulted with local bicyclists to learn more about: where they currently bicycle, what destinations they wish to travel to, what streets and multi-use trails they current use or would prefer to use, and where bicycle infrastructure improvements are most needed. A review of the thousands of collected responses has helped to guide the development of the infrastructure and facilities section of this plan.

An analysis of the collected responses identifies the most frequently used, or desired, bicycling routes within and across Arlington County. This plan is labeling those routes as the Primary Bicycling Corridors (PBCs). There are seven PBCs that run approximately north-south and six that run approximately east-west. Some of the corridors converge and the east-west and north-south corridors intersect to form a countywide grid of routes. The corridors, along with some of the primary locations that they serve, are depicted in Figure 2 and are listed below:

**NORTH-SOUTH CORRIDORS:**

- **W&OD/Four Mile Run Corridor:** Regional off-street

trails within park space that access many community facilities and provide connections to Falls Church and Alexandria.

- **George Mason Drive Corridor:** An on-street route with some limited sections of bicycle lanes. The George Mason Drive corridor provides a bicycling route to Yorktown and Wakefield high schools, Virginia Hospital Center as well as a connection to the Bailey’s Crossroads area in Fairfax County.
- **Glebe Road Corridor:** On-street route through the center of Arlington currently with no bicycle infrastructure. Desired for its potential to provide access to Ballston, Buckingham and other commercial centers.
- **Henderson/Quincy/Military Road Corridor:** An on-street route that primarily serves north Arlington connecting the Arlington Forest and Chain Bridge areas and passing by Central Library, Washington Lee High School and through the Ballston and Virginia Square neighborhoods.
- **Walter Reed Drive/Fillmore Street:** A primarily on-street route that connects northern Alexandria and the Fairlington neighborhood with destinations



and neighborhoods on the central parts of the Columbia Pike, Arlington Boulevard Trail and Wilson/Rosslyn-Ballston corridors.

- **Crystal City to Clarendon Corridor:** A mixed on and off-street corridor that serves south Arlington and links the Rosslyn-Ballston with the Route 1 commercial corridors. Provides access to the Pentagon and multiple Metrorail stations and employment centers.
- **The Mount Vernon Trail:** A regional off-street trail that follows the Potomac River and provides access to Alexandria, several Potomac River bridges, National Airport, Crystal City and Long Bridge Park.

#### EAST-WEST CORRIDORS:

- **Columbia Pike Corridor:** A mixed on and off-street corridor that provides connections, on the east end, to the Pentagon, Pentagon City and the 14th Street Bridge/ Washington DC. The west end provides a connection of Arlington to Bailey's Crossroads area shopping.
- **Arlington Boulevard Trail:** A regional, primarily off-street multi-use trail facility that parallels the Arlington Boulevard highway. Sections of the route are currently on-street or on older trail segments. This corridor provides a connection to the Seven Corners area, Thomas Jefferson Community Center/ middle school, Kenmore Middle School and the Courthouse and Rosslyn neighborhoods.
- **Wilson Boulevard/Rosslyn-Ballston Corridor:** The corridor runs the width of Arlington linking the Seven Corners area, to the Key and Roosevelt bridges. It includes the Rosslyn-Ballston commercial corridor and links with Bluemont Park and several local schools. Much of the corridor has on-street bicycle infrastructure, although with some gaps.
- **Custis Trail:** A regional multi-use trail that parallels Interstate 66 within Arlington and connects with the W&OD and Mount Vernon trails. Includes Arlington's most comprehensive bicycle infrastructure and provides connections to Georgetown and downtown DC via the Key and Roosevelt bridges.
- **Lee Highway Corridor:** A primarily on-street route along a heavily trafficked, VDOT-owned roadway. Currently contains some segments of bicycle lanes and converges with the Custis Trail at its east end. Provides for connection to Falls Church and an internal route across north Arlington commercial centers. In places, the corridor encompasses lower-volume parallel streets adjacent to Lee Highway.
- **Sycamore Street/Williamsburg Boulevard Corridor:** An on-street route that traverses lower volume arterial streets. Includes bicycle lanes on most of the corridor length between the Seven Corners area, East Falls Church Metrorail Station and the Chain Bridge neighborhood.



FIGURE 2: PRIMARY BICYCLING CORRIDORS MAP



Many of these corridors either are part of, or parallel to, the most-heavily trafficked streets in Arlington, as they typically are the most direct routes to commercial centers, transit stations and other popular destinations. Moreover, they often are the only, or one of few, continuous routes across Arlington and/or to destinations, such as Georgetown, Bailey’s Crossroads and Falls Church; in neighboring jurisdictions. As such, the Primary Bicycling Corridors are the most important routes for bicycle travel and should have the highest priority for bicycle facility improvement. They form the framework for the more comprehensive Bikeway Network across Arlington.

Currently there is great variance amongst the corridors in the perceived quality of their bicycling accommodations. Several corridors are primarily off-street trails where bicyclists have limited interaction with motor vehicles, while some other corridors have little or no bicycle infrastructure and were identified as “desire lines” that would provide for more direct bicycle travel within and across Arlington. A few corridors have on-street bicycle facilities, such as standard bicycle lanes, that are beneficial for many bicyclists yet still do not provide sufficient traffic separation to encourage many less-confident bicyclists. An objective of this plan is to provide routes within the Primary Bicycling Corridors, either on the primary street or on nearby parallel routes, that all bicyclists can use and experience a low level of stress from motorized traffic.

The PBC bikeways are also important regionally and locally for transportation and recreation purposes. Arlington’s portions of the Custis, W&OD, Four Mile Run, Mount Vernon, Arlington Boulevard, Bluemont Junction, Washington Boulevard, Route 110 and Crystal City Connector trails also are part of the Capital Trails Network, which is a developing network of over 700

miles of trails that serve the Washington DC region. Several of the PBCs also comprise the Inner and Outer Trail Loops which are identified in Arlington’s Public Spaces Master Plan as featured routes for bicycling and walking. Improving the bicycle accommodations within the PBC corridors can benefit pedestrians as more bicyclists will shift from riding on the sidewalks to bicycling in the streets.

Appendix D lists many bicycle infrastructure projects intended to provide a more comprehensive bicycling network that can be suitable for comfortable use by bicyclists of all ages and abilities. A large number of the projects listed in Appendix D are within the PBCs. Several of the PBCs encompass State- or County-owned roadways with heavy vehicular traffic volumes and that currently have limited bicycle facilities and may be space constrained. Achieving better bicycling facilities within those corridors will be difficult. Strategies to do so may include: establishing parallel bicycle facilities on adjacent streets, reserving land for new on- or off-street facilities whenever redevelopment occurs, and targeted reallocation of roadway space for on-street or shared use off-street bikeways. A mix of the strategies will likely be required and improvements may require several decades of implementation to achieve desired results. County staff should be proactive in identifying opportunities to fund and implement bikeway improvements in the corridors.

### **THE BIKEWAY NETWORK**

The Arlington Bikeway Network is the connected system of bicycle facilities that provides the infrastructure for bicycle travel in Arlington. It is intended to provide for safe, comfortable and convenient travel in connecting all neighborhoods and significant destinations within Arlington, while also providing linkages to neighboring jurisdictions. While the network is built upon the Primary Bicycling Corridor framework, there are many

**FIGURE 3: MTP PLANNED BIKE AND TRAIL NETWORK MAP**



other on- and off-street components that are needed to provide for safe and comfortable bicycle travel and access to all the neighborhoods and destinations within Arlington. A major objective of this plan is to provide for a more equitable bicycling environment, therefore there are many concepts for projects listed in Appendix D that propose new bicycle boulevards, or other facilities, on neighborhood streets to access destinations such

as schools and community centers, as well as to link residential neighborhoods with the primary multi-use trails and bikeways. There are also many project proposals which carry forward recommendations identified in the previous Bicycle Element and in other planning studies developed and adopted by Arlington County.

## VIII. Network and Program Implementation Procedures

### **PRIORITIZING PROPOSED FACILITY IMPROVEMENTS**

Appendix D lists proposed projects with locations and project descriptions. Existing and planned facilities are depicted in the MTP Map document. The planned bikeway network is shown in Figure 3 of this document. Prioritizing projects remains a dynamic process that will evolve over time as the MTP is implemented.

### **THE PRIORITIZATION PROCESS AND CRITERIA**

Bikeway project priorities are periodically evaluated in conjunction with funding opportunities, such as the

Arlington 10-Year Capital Improvement Plan (CIP). Prioritization takes place through a formal process that involves Bicycle Advisory Committee members, BikeArlington staff, and representatives of other County and Arlington Public Schools agencies as appropriate. The needs of pedestrians should also be considered in the project prioritization process. The prioritization criteria in the text box below are to be considered in determinations regarding resource allocation and timing. While these criteria are used to develop project priorities, public input is also considered in finalizing priorities.

### **Project Prioritization Criteria**

#### **Highest Priority Criteria:**

- Enhancement of safety for bicyclists, pedestrians and other users
- Importance of improvement to connectivity of the bikeway network
- Estimated demand for usage and potential to attract new bicyclists
- Ability to reduce level of traffic stress and increase bicyclist's comfort of use
- Opportunity to improve the network coverage to better serve under-represented areas and populations or link with adjacent jurisdiction's bikeways
- Opportunity to improve network coverage to better access schools and other community facilities

#### **Secondary Priority Criteria:**

- Distance to and convenience of access to existing, high-quality alternative facilities
- Potential to relieve user congestion and /or conflicts on multi-use trails
- Cost relative to capital budget and availability of non-County funding
- Low impact to existing natural resources
- Ease of implementation, including neighborhood, environmental clearance, and need for additional right-of-way
- Opportunity to achieve cost savings or easier implementation through combination with another project

**IMPLEMENTATION**

The Arlington Division of Transportation’s bicycle program is responsible for implementing many of the policies and strategies in this document to ensure that bicycling accommodations and considerations are appropriately integrated into land development and regional transportation plans. The program also manages the design and construction of bicycling improvements undertaken by the County and works with the agencies responsible for projects not controlled directly by the County.

Cooperation and coordination amongst County agencies, especially agencies such as Parks and Recreation (DPR); Police; Community Planning, Housing and Development (CPHD); and Arlington Public Schools (APS) is essential. For example, DPR is regularly involved in the design, development and maintenance of Arlington’s multi-use trails and is also involved in bicycle promotion and recreation. The Police Department is responsible for traffic law enforcement and crash reporting. CPHD directs neighborhood and sector planning, zoning, and development review. APS is responsible for guiding Safe Routes to School initiatives, providing safety education, and addressing school transportation issues. Coordination with neighborhood-based and business associations is also important for successful project implementation.

Arlington’s Trail Modernization Program is focused on replacement and major renovation of several of the County’s primary multi-use trails that are approaching the end of their useful lives. The program covers design and construction of trail replacement, as well as, asphalt surface repaving for the Custis, Four Mile Run and Bluemont Junction trails. During trail replacement, trails will be brought up to current standards, including appropriate sub-base, pavement, shoulders, striping, signage, safety markers, drainage and site furnishings. The program also replaces existing trail lighting with energy-efficient lights and adds new areas of trail lighting as guided by the Public Spaces Master plan and the goals and standards set by the updated Natural Resources Management Plan. Funding for the program is provided through the County’s Capital Improvement Plan (CIP) and annual budgeting process. Factors considered in allocating the program’s funds include: volume of trail use, reported user safety concerns, trail facility age and condition, compliance with County and national design standards, and proximity to other funded park improvements.

Arlington County, by working with the Virginia Department of Transportation (VDOT) and other regional transportation agencies, can get some planned bikeway projects implemented as part of roadway repaving and other highway improvement efforts.



Several bike concept plans through the County and construction at Potomac Yard Transitway



## STAFF

In early 2019, the County's Division of Transportation provided the equivalent of three full-time employees to implement infrastructure, policy, educational and encouragement activities. This work includes developing and managing projects, encouraging bicycling, and educating people about bicycling. Additionally, other staff members work on projects and activities that are bicycle-related, such as:

1. managing multimodal projects that include bicycle facilities and elements;
2. conducting promotional activities related to bicycling; and
3. working on safety, maintenance, traffic operations, and other multimodal transportation activities.

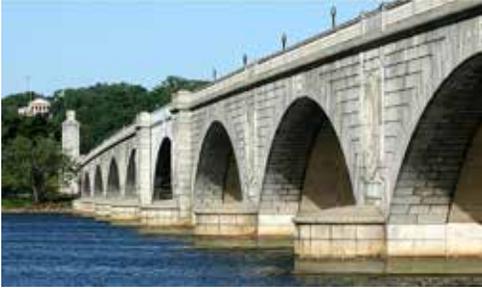
Staffing is required to develop the large projects that enhance the bikeway network, as well as review all street improvement projects, increase the amount and quality of bicycle parking, enable bicycle safety education efforts, collect data such as usage and crashes and initiate the many encouragement activities that build the bicycle culture. The pace of project implementation will largely be governed by the staff and financial resources available to the program. Significant increases in the annual number of projects implemented will require additional staff resources. County staff are supported by volunteer assistance with advisory

committees, event staffing, bike counts, condition reports, education, and other activities.

## PROJECT IMPLEMENTATION MECHANISMS

Bicycle facilities are routinely considered in the planning and scoping phases of transportation projects in Arlington County. The Complete Streets element of the County's Capital Improvement Plan outlines the County's full project portfolio of multi-modal "Complete Streets" projects. Most projects incorporate bicycle and pedestrian infrastructure. Many will be done as opportunities arise, such as with a street resurfacing or rehabilitation project. Some projects may be developed for both bicyclists and pedestrians and as part of "Complete Street" efforts. Although providing a complete bikeway at one time is preferred, to avoid missed opportunities, planned facilities may be implemented in a phased manner.

The County strives to achieve modal balance when reviewing improvements to its transportation infrastructure. When improvements are considered for streets in the bikeway network, priority will be given to the provision of high-quality bicycle facilities. However, some streets in this bikeway network have constrained rights-of-way and are also significant to local and regional travel for other modes. In situations where limited right-of-way exists to adequately accommodate the highest-quality facility per mode, the County will



consider the needs of each mode and balance them as much as possible. This balancing will consider the overall MTP goals as well as the need to complete and enhance the bikeway network. Typically bicycle lanes and shared-use-lanes (“sharrows”) have been implemented by reallocating roadway space from overly-wide travel lanes. Alternatively, on-street bicycle improvements, such as protected or buffered bicycle lanes, may be implemented by reducing the number of travel or parking lanes. Providing bicycle facilities, such as bike boulevards, on parallel streets may also be considered where right-of-way is particularly limited. Impacts upon traffic flow, safety, accessibility and community welfare are all considered in determining the composition of the right-of-way.

### REGIONAL COORDINATION

Many of the arterial roads within Arlington are under Federal or State management and are not directly subject to County policy. All of the bridges that cross the Potomac River and the riverfront along with the Mount Vernon Trail, are outside of Arlington’s jurisdiction. As a result, many planned bicycle projects will be implemented either by or in conjunction with other agencies. In addition, large areas of Arlington, and several key travel routes, are under the control of Federal agencies such as the Department of Defense. Even though these areas and facilities are not under Arlington’s direct control, the County should take

an active approach in advocating for the facility improvements that it sees as necessary for improving the local bicycling environment.

It is critical that Arlington staff continue to work closely with regional, state, and federal agencies to ensure that projects undertaken by these agencies contribute to and not hinder the completion of the Arlington bikeway network. Arlington staff should also coordinate closely with neighboring jurisdictions on bicycling-related improvements within those jurisdictions that have the potential to connect to Arlington’s bicycle network and enhance regional bicycling.

### FUNDING

In both the areas of capital improvements and maintenance, the County must allocate an adequate amount of funding to ensure regular progress toward achieving the bicycle objectives of the MTP. Expansion of the County’s on-street and off-street bikeway network will require additional annual funding for operations and maintenance of pavement, markings, signage, structures and landscaping. The County works to identify new sources of funding to implement bicycle-related projects and programs and seeks to maximize the amount of Federal, State and private funding that can be used to leverage local dollars. Funding decisions will be made by the Arlington County Board as part of the Capital Improvement Program (CIP) and the annual budget processes.

## APPENDIX A

## Glossary of Terms

- 
- All Ages and Abilities** Design with the intent of accommodating and attracting the traditionally under-represented bicyclists, in particular children, seniors, women, people of color, persons with disabilities and low-income riders as well as the traditional confident bicyclist.
- Bicycle Infrastructure** The physical facilities including: marked lanes, trails, bridges, traffic signals, wayfinding signage and bicycle parking that are provided to enable bicycle use.
- Bikeway** A street or trail facility that has been specifically developed or designated for bicycle use. Bikeways may be designed for the exclusive use of persons riding bicycles or shared with either pedestrians and motorized vehicles.
- Bike Share** Systems wherein persons can obtain short-term rental of bicycles from either publicly or privately owned bicycle fleets. Bike share may be through term membership or via single-trip purchases. Bike share is intended to expand access to bicycles, often as a means to enable more convenient access to and from transit services. Bicycles may be either obtained from centralized stations (or docks) or via more dispersed, “dockless” systems wherein bicycles are parked independent of a station.
- Connectivity** The linkage of bicycle facilities into a network that provides for convenient access to and between places within a community.
- Electric-Assisted Bicycles** Bicycles that have been constructed or retrofitted to be at least partially powered by an electric motor. Bicycles are classified by motorized top speed and utilization of human power through pedaling.

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**Low Traffic Stress** Generally as motor vehicle volume, travel speed, truck traffic and parking turnover increase so too does the amount of traffic stress that bicyclists and other users of streets. Increased traffic stress often degrades the comfort and safety of street users such as bicyclists. Low-traffic stress bicycling routes either utilize streets with naturally low travel speeds and volumes or employ devices to either protect the bicyclist on the street or calm/buffer the street traffic.

**Open Street Events** Short-term events that will close or substantially restrict private motor vehicle access to a street or streets, in order to encourage use of the street space for pedestrians and bicycle travel as well as community activities such as fairs, displays, games and other public gatherings.

**Small Electric Vehicles** A category of low-powered, personal transport vehicles that transport individuals at low speeds over public rights-of-way including streets and bikeways. Included are wheelchairs, scooters, unicycles and skateboards that are powered by small electric motors. Such devices may be individually-owned or part of a commercial fleet rented for short-term use.

## APPENDIX B

# Bicycle Infrastructure Facility Types

*Arlington County has a variety of different types of bicycle facilities that help make traveling in Arlington County by bike friendlier for residents and visitors. There may be variations within each facility type depending upon a number of factors including: available public right-of-way, traffic volumes on the street, roadway width, anticipated use and the local environment.*

## Multi-Use Trails



Arlington County has an extensive network of bicycle infrastructure. These multi-use trails are generally 8 to 12 feet wide with a yellow line striped down the middle to separate users. These trails are used by a wide variety of types of users, including children and adults, ranging from pedestrians, dog walkers, runners, and people on bikes. Cars and other motor vehicles are prohibited from operating on the multi-use trails. Some multi-use trails include over- or under-passes that carry the trail across highways, streams and other possible barriers or conflict points.

## Protected Bicycle Lanes



Protected bicycle lanes, also known as “cycletracks,” provide physical separation between people on bikes and motor vehicles. The separation can be provided in a number of ways including: plastic bollards, concrete barriers, landscaping or large planters, curbs or motor vehicle parking. Raised curbs and/or paint and bollards may also be installed on the leading edges of street intersections to create a [Protected Intersection](#), to provide additional protection for bicyclists entering a street intersection.

## Buffered Bike Lanes



Buffered bicycle lanes included a marked buffer area to provide greater separation between bicyclists and motor vehicles than the standard bicycle lane. The marked buffer space may be on one or both sides of the lane depending upon the street width and other conditions.

**Green Bicycle Lane Markings**



The use of green paint within existing bicycle lanes is relatively new in Arlington. They help reinforce the presence of the bicycle lane in places where the street markings might not get noticed by drivers. Arlington County also uses green paint or markings at critical locations where bicycle lanes and drive lanes cross each other in unusual configurations, such as at “Y” intersections or at the start of some dedicated right turn lanes.

**Bicycle Lanes**



The basic, or standard, Bicycle Lane is a striped area on the roadway designated for the preferential use of bicyclists over motor vehicles. On most streets, bicycle lanes are provided either adjacent to the curb, or between the curbside parking lane and the right travel lane. Bicycle lanes provide for a single direction of travel and typically match the travel direction as the adjacent vehicular lane. However, in some applications, a contra-flow bicycle lane is marked that has bicyclists traveling in the opposite direction of the adjacent motor vehicle lane.

**Advisory Bicycle Lanes**



These are roadway striping configurations which provides for two-way motor vehicle and bicycle traffic using a central travel lane and dashed bicycle lanes on either side. The center lane is dedicated to and shared by motorists traveling in both directions. This treatment is intended for streets with relatively low volumes of vehicles traveling at low speeds (25 mph or less).

**Shared-Lane Markings/Sharrows**



These are markings used to indicate a shared lane environment for bicycles and motor vehicles and intended to help motorists & cyclists safely share and navigate streets. Sharrows are typically marked as a means to connect or continue bicycle facilities such as bicycle lanes and trails. Sharrows are designated with a bicycle symbol and two chevron stripes to indicate where a bicyclist should ride in the travel lane. Signs permitting bicyclists to use the full travel lane are typically installed.

**Bicycle Boulevards**



Bicycle boulevards are designated routes on streets which have been optimized for bicycle travel. Bicycle boulevards use signs, pavement markings, intersection treatments, trail connections and speed management measures to enhance the safety, comfort and continuity of bicycling on the street. Bicycle Boulevards are designed to give priority to bicyclists for through travel and to link with trails and other streets that are safe and comfortable for bicycling.

**Designated Bicycle Routes**



Arlington County has many miles of designated, on-street bicycle routes that are streets which have been determined to be bicycle friendly and provide important connections within the bicycle network. Designated bicycle routes can include arterial and local streets, as well as short sections of off-street trail. These routes are signed in many places and are identified on Arlington County's bicycle maps.

**Bike Boxes**



A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase. Bike boxes are marked with green paint and bicycle symbols.

**Bicycle Turn Box**



A variation of the painted Bicycle Box, that is sometimes used to provide a refuge area for bicyclists to use when making a two-stage left turn across opposing traffic lanes.

### Wayfinding Signs



Wayfinding signs consist of comprehensive signing to guide bicyclists to their destinations along preferred bicycle routes. These wayfinding signs help bicyclists and pedestrians more easily identify and navigate multi-use trails, on-street bike lanes and designated bike routes. Directions and distances to destinations such as transit stations, schools, commercial districts and community facilities are typically provided on the signs.

### Bicycle Parking and Fixit Stands



There are many thousands of bicycle racks across Arlington. Multi-family residential and office buildings often have indoor, locked facilities for all-day or overnight use by tenants and residents. In commercial districts and at County facilities short-term visitor parking is often an open rack, like a standard “inverted-U.” Shelters are provided at many transit stations to provide weather protection for bicycle parking facilities. Arlington also has several bicycle repair “Fixit” stands, mostly located near Metrorail stations, which provide the public with an air pump and tools for basic repairs and adjustments.

## APPENDIX C

# Design Guidance

Arlington utilizes design guidance provided by the U.S. Federal Highways Administration (FHWA) American Association of State Transportation and Highway Officials (AASHTO) and the National Association of City Transportation Officials (NACTO) in the development of its bicycle facilities on streets and trails. Recently, FHWA published its Bikeway Selection Guide which discusses in detail bikeway designs for low-stress bicycling facilities.

The most commonly referenced design guidance for bicycle facilities in urban settings is the NACTO Urban Bikeway Design Guide. It provides examples of bicycle related street treatments along with conditions for when those treatments are considered to be most appropriate for use. NACTO guidance is used by County staff in the design and implementation of on-street bikeways. Figure D provides NACTO's contextual guidance, considering key roadway characteristics, that can be used for selecting bicycle facilities appropriate for bicycling by persons of all ages and abilities. In all cases good engineering judgement, based upon a knowledge of bicycle transportation, should be employed in choosing the most appropriate design for a street.

The AASHTO Guide for the Development of Bicycle Facilities is used by Arlington County staff primarily for the design of multi-use trails.



U.S. Department  
of Transportation  
**Federal Highway  
Administration**



The Manual on Uniform Traffic Control Devices (MUTCD) provides national guidance of the appropriate use of signs and markings on public streets and includes a section applicable to on-street bikeways.

Arlington County staff have developed a set of design details that refine the general guidance provided by NACTO, AASHTO and the MUTCD intended to best fit the context of Arlington's streets and trails. The design details have been developed by and kept by the DES Transportation Engineering & Operations Bureau. The details are revised, updated and appended by staff as needed to reflect operational experience, national research and technology changes.

Bikeway project design shall also consider the potential for negative impacts upon private property, and the natural environment, particularly for new trails in or near sensitive natural areas. Guidance on how best to minimize negative environmental impacts and how to enhance trails' scenic values can be provided by knowledgeable County staff.

FIGURE 4: NACTO GUIDANCE FOR SELECTING APPROPRIATE BIKEWAY TYPES

Contextual Guidance for Selecting All Ages & Abilities Bikeways				All Ages & Abilities Bicycle Facility
Roadway Context				
Target Motor Vehicle Speed*	Target Max. Motor Vehicle Volume (ADT)	Motor Vehicle Lanes	Key Operational Considerations	
Any		Any	Any of the following: high curbside activity, frequent buses, motor vehicle congestion, or turning conflicts†	Protected Bicycle Lane
< 10 mph	Less relevant	No centerline, or single lane one-way	Pedestrians share the roadway	Shared Street
≤ 20 mph	≤ 1,000 – 2,000		< 50 motor vehicles per hour in the peak direction at peak hour	Bicycle Boulevard
≤ 25 mph	≤ 500 – 1,500	Single lane each direction, or single lane one-way	Low curbside activity, or low congestion pressure	Conventional or Buffered Bicycle Lane, or Protected Bicycle Lane
	≤ 1,500 – 3,000			Buffered or Protected Bicycle Lane
	≤ 3,000 – 6,000			Protected Bicycle Lane
	Greater than 6,000			Protected Bicycle Lane
Greater than 26 mph†	≤ 6,000	Single lane each direction	Low curbside activity, or low congestion pressure	Protected Bicycle Lane, or Reduce Speed
		Multiple lanes per direction		Protected Bicycle Lane, or Reduce to Single Lane & Reduce Speed
	Greater than 6,000	Any	Any	Protected Bicycle Lane, or Bicycle Path
High-speed limited access roadways, natural corridors, or geographic edge conditions with limited conflicts		Any	High pedestrian volume	Bike Path with Separate Walkway or Protected Bicycle Lane
			Low pedestrian volume	Shared-Use Path or Protected Bicycle Lane

\* While posted or 85th percentile motor vehicle speed are commonly used design speed targets, 95th percentile speed captures high-end speeding, which causes greater stress to bicyclists and more frequent passing events. Setting target speed based on this threshold results in a higher level of bicycling comfort for the full range of riders.

† Setting 25 mph as a motor vehicle speed threshold for providing protected bikeways is consistent with many cities' traffic safety and Vision Zero policies. However, some cities use a 30 mph posted speed as a threshold for protected bikeways, consistent with providing Level of Traffic Stress level 2 (LTS 2) that can effectively reduce stress and accommodate more types of riders.<sup>18</sup>

‡ Operational factors that lead to bikeway conflicts are reasons to provide protected bike lanes regardless of motor vehicle speed and volume.

## APPENDIX D

## Bikeway Facility Projects

The listed projects constitute the Bikeway Network improvement currently envisioned to occur by the year 2040. Over time the project lists may be amended to reflect changes in the network vision including addition, modification or deletion of certain projects. Decisions regarding funding prioritization will be made on annual basis by the Arlington County Board. Unless indicated otherwise, all projects are to be implemented by Arlington County.

In the project descriptions below, references to “enhanced bicycle facility” call for low-stress bicycle facilities that comply with the design guidance in Appendix C. Taken together and with current bicycle facilities that meet the guidance, these projects establish the Low Traffic Stress Bicycle Network referenced in Figure 1 of this document. The exact facility type will be determined through a project scoping process once funding is identified with the minimum acceptable facility being determined by Figure 4 in Appendix C. Project design and refinement will be determined through further public input and engineering study or design and alternative alignments may be suggested to address identified design issues. Projects titled in **bold typeface** are intended to be part of a Priority Cycling Corridor and are listed at the beginning of each section. Projects are also generally grouped by geographic area.

**1-01: W&OD Trail Crossing at Lee Highway** Construct an overpass of Lee Highway for the W&OD Trail. Incorporate trail lighting and widening as part of project. Also identified in the East Falls Church Sector Plan. (VDOT) (0.2 mile)

**1-02: Four Mile Run & W&OD Trail Improvements in Benjamin Banneker Park** Renovate trails within the park and widen the primary sections of the Four Mile Run & W&OD Trails pavements to 12 feet. Widen the W&OD Trail to 10 feet wide north of Four Mile Run towards N. Tuckahoe Street, and incorporate modified signs, new markings to enhance safety and reduce conflicts between users. (0.3 mile)

**1-03: Potomac Yard – Four Mile Run Trail Connector** Construct a trail to connect the Four Mile Run Trail and Potomac Avenue bicycle facilities with additional bicycle/pedestrian connections to adjacent development and streets. (0.2 mile)



**1-04: Crystal Drive Two-Way Conversion Bicycle Lanes** Complete the conversion of Crystal Drive from a one-way street to two-way travel. Include a bicycle lane for the southbound direction between 26th and 27th streets. (0.2 mile)

**1-05: S. Clark Street Cycle Track** Construct an off-street cycle track that connects the planned Army Navy Drive protected bicycle lane at 12th Street South to 18th Street and the Crystal City Metrorail station. Also identified in the Crystal City Sector Plan. (0.4 mile)

**1-06: Army Navy Drive Protected Bicycle Lanes** Reconstruct Army Navy Drive between 12th Street South and S. Joyce Street to include a bi-direction protected bicycle lane. Link with existing protected bicycle lanes between S. Joyce Street and 20th Street South. (1.6 miles – currently partially completed)

**1-07: Boundary Channel Connection** Reconstruct the Shirley Highway (I-395) interchange with Boundary Channel Drive to include an off-street linkage of Long Bridge Park and Long Bridge Drive to the existing Mount Vernon Trail underpass at Boundary Channel. Also provide for an improved bicycle connection of Crystal City with the Pentagon reservation via bicycle facilities on Long Bridge Drive and Boundary Channel Drive. (VDOT, NPS, DOD, Arlington) (0.5 mile)

**1-08: Columbia Pike Multi-Use Trails** Implement wide multi-use trails, or wide sidewalks, along at least one side of Columbia Pike, in the areas east of S. Wayne Street and west of Four Mile Run, to serve both bicycle and pedestrian travel. Improvements will be implemented in conjunction with other streetscape improvements and the east end realignment of Columbia Pike. (1.2 miles)

**1-09: Rosslyn Esplanade/Circle Improvements** Implement at-grade improvements to the Custis Trail crossings of Lynn Street and Fort Myer Drive. Widen the trail to better accommodate large volumes of bicyclists and pedestrians. Extend the N. Lynn Street bicycle lane and widen the sidewalks over I-66. Also included in the Rosslyn Sector Plan. (VDOT, Arlington) (0.2 mile)



- 1-10: Shirlington Road Bridge      Reconstruct the Shirlington Road bridge, and adjacent sidewalks, to provide an enhanced, wide bicycle and pedestrian path along the west side of the roadway that links the W&OD and Four Mile Run trails. Also included in the Four Mile Run Valley Area Plan. (0.2 mile)
- 1-11: McKinley Road      Also included in the Four Mile Run Valley Area Plan. (0.2 mile) Revise the roadway markings on McKinley Road between the Custis Trail and Wilson Boulevard to include buffered bicycle lanes. Undertake the roadway marking along with construction of crossing enhancement to provide for improved access to McKinley Elementary School and the Custis Trail. (0.7 mile)
- Buffered Bicycle Lanes

**RECOMMENDED TRAIL PROJECTS**

- 2-01: W&OD and Four Mile Run Trail Upgrades**      Upgrade the entire W&OD Trail Arlington section, and the portion of the Four Mile Run Trail south of West Glebe Road, for improved user safety and comfort with heavier volumes of bicycle and pedestrian use. Improvements may include: trail widening, minor realignments, new pavement markings, wayfinding signage and the addition of trail lighting. (NOVA Parks, Arlington) (5.5 miles)
- 2-02: Four Mile Run Trail Enhancements**      Widen the Four Mile Run Trail pavement to a minimum of 10 feet of paved width where trail usage averages at least 1,000 persons per day and natural features would not be significantly impacted. Undertake spot safety improvements to enhance safety and reduce conflicts between users between Columbia Pike and Shirlington Road including below the George Mason Drive overpass. Incorporate the trail improvements identified in the Four Mile Run Valley – Park Master Plan (1.8 miles)
- 2-03: W&OD/FMR Trail Crossing of Shirlington Road**      Improve the safety of the existing at-grade crossings of Shirlington Road and examine alternatives including construction of a grade-separated crossing for the trail. Also included in the Four Mile Run Valley Area Plan (0.2 mile)



- 2-04: W&OD Realignment at East Falls Church**      Conduct an engineering study to identify how to provide an off-street direct connection of the W&OD Trail across N. Sycamore Street. May include an overpass of N. Sycamore Street and the East Falls Church Metrorail station's south parking area. Also identified in the East Falls Church Area Plan. (NOVA Parks, Arlington) (0.2 mile)
- 2-05: West Ballston Connection**      Develop a north-south route through the west side of Ballston that includes construction of new trail sections between Fairfax Drive and Wilson Boulevard, and along the south side of Wilson Boulevard near N. Wakefield and Vermont/Tazewell streets. Link with the Bluemont Junction, Custis and Ballston Pond trails at Fairfax Drive and via on-street bicycle facilities on N. Wakefield, and at Vermont and Tazewell streets. (0.4 mile)
- 2-06: Army Navy Country Club Emergency Access Road**      Construct an emergency access street suitable for bicycle and pedestrian use, from the edge of the Hoffman Boston School in the Arlington View neighborhood to Army Navy Drive in the Arlington Ridge/Pentagon City area. The facility will utilize public easement across the country club property and an existing public street underpass of Shirley Highway (I-395) to enhance north-south access for pedestrians and bicyclists. Initiate construction prior to August 2032 to vest the public easement. (0.7 mile)
- 2-07: Washington Boulevard Sidewalk Upgrade**      Widen the existing Washington Boulevard sidewalk between Memorial Circle and the Pentagon to meet trail standards. The trail would also link to other Pentagon area trails. (Arlington, DC, NPS, VDOT) (1.2 miles)

**2-08: Route 110 Trail Upgrades**      Upgrade the entire Route 110 Trail for improved user safety and comfort. Improvements should include trail widening to a minimum 10 feet of paved width, new pavement markings, wayfinding signage and consideration of the addition of trail lighting. (0.5 mile)

- .....
- 2-09: Mount Vernon Trail Widening** Widen the pavement of the entire Mount Vernon Trail between the Roosevelt Island parking area and Four Mile Run to a minimum 12-foot pavement width. (NPS) (4.8 miles)
- 2-10: Long Bridge Park to Mt. Vernon Trail Connection** Construct a trail connection of Long Bridge Park to the Mount Vernon Trail via an overpass of the George Washington Memorial Parkway. Pursue linkage of the trail to a planned new bridge across the Potomac River. (NPS, Arlington) (0.2 mile)
- 2-11: Roosevelt Bridge to Mt. Vernon Trail** Include a connection from the Theodore Roosevelt Bridge to the Iwo Jima Memorial roadway in a reconstruction of the bridge. This connection would improve access to Rosslyn and the Fort Myer Heights neighborhood. Also identified in the Rosslyn Sector Plan. (Arlington, DC, NPS) (0.9 mile)
- 2-12: Iwo Jima Memorial Connection to Theodore Roosevelt Bridge** Include a connection from the Theodore Roosevelt Bridge to the Iwo Jima Memorial roadway in a reconstruction of the bridge. This connection would improve access to Rosslyn and the Fort Myer Heights neighborhood. Also identified in the Rosslyn Sector Plan. (Arlington, DC, NPS) (0.9 mile)
- 2-13: Columbia Pike Bicycle Boulevards Expansion** Extend the existing bicycle boulevards on 9th and 12th streets westward to connect with the W&OD Trail, and eastward to connect with the Washington Boulevard Trail or Arlington View neighborhood. Utilize newly-developed on-street bicycle facilities and off-street trail sections as appropriate. Include new traffic signals/beacons and other intersection treatments at difficult street crossings. Also identified in the revised Columbia Pike Streets Plan. (1.2 miles)
- 2-14: Arlington Boulevard Trail Renovation** Reconstruct portions of the Arlington Boulevard Trail, between Rosslyn and the Seven Corners area, to enhance user safety and usability. Reconstruction should include resurfacing to achieve a minimum 10-foot paved width, enhancing the crossings of highway ramps and providing contra-flow facilities for those sections of one-way service road that constitute parts of the trail. Evaluate installation of trail lighting. Also identified in the Fort Myer Heights North Plan. (VDOT, Arlington) (2.0 miles)

- 
- 2-15: Custis (I-66) Trail Renovation**    Renovate trail sections with asphalt cracking and washout, and, where feasible, widen the trail surface to 12 feet in width. Enhance trail markings and signage to lessen user conflicts. Rehabilitate or replace the existing trail lighting and extend trail lighting between Fort Myer Drive and the GWMP overpass. (VDOT, Arlington) (3.9 miles – currently partially implemented)
  - 2-16: Rosslyn Circle Underpass**    Design and construct an underpass of N. Lynn Street for the Custis Trail. (Arlington, NPS, VDOT) (0.2 mile)
  - 2-17: Airport Viaduct Connector    Use the Airport Viaduct structure to provide a grade- separated connection of S. Eads Street and Crystal City with the National Airport passenger terminals area and Mount Vernon Trail. This project could be replaced by alternative, new pedestrian/bicycle connection(s) of Crystal City to airport buildings. Also identified in the Crystal City Sector Plan. (MWAA, NPS, Arlington) (0.3 mile)
  - 2-18: Four Mile Run Bridge    Construct a bicycle/pedestrian bridge over Four Mile Run to connect S. Eads Street to Commonwealth Avenue and connect the two trails paralleling Four Mile Run on the Arlington and Alexandria sides of the stream. Also identified in the Four Mile Run Restoration Master Plan. (Arlington, Alexandria) (0.2 mile)
  - 2-19: Arlington National Cemetery  
Wall Trail    Construct a trail parallel to the east wall of Arlington Cemetery to link Columbia Pike to Memorial Drive. Coordinate trail installation with the reconfiguration of the east end of Columbia Pike at Washington Boulevard. (VDOT, Arlington) (1.2 miles)
  - 2-20: Route 110 South Trail    Pave an existing informal trail that provides access to the Pentagon from Memorial Drive and Memorial Bridge. (Arlington, VDOT) (0.7 mile)

- 2-21: I-66 Overpass Construct a multi-use trail overpass of I-66 to link 19th street and the Rosslyn Esplanade with the Potomac River shoreline and Mt. Vernon Trail. May include construction of a new overpass/crossing of the George Washington Memorial Parkway (GWMP) or a link to the existing overpass. Also identified in the Rosslyn Sector Plan. (0.2 mile)
- 2-22: Freedom Park Enhancements Improve Freedom Park to be a multi-use trail from 17th Street to 19th and  
2-23: Key Boulevard Trail Renovation Kent streets. Also identified in the Rosslyn Sector Plan. (0.3 miles) Resurface and renovate the Key Boulevard Trail between N. Uhle and N. Scott streets, to provide a wider paved surface with less-abrupt curves. Improve the connection between the east end of the trail and N. Scott Street. Consider addition of trail lighting. (0.4 mile)
- 2-24: Alcovia Heights/South Glebe Road Improvements Enhance connectivity between S. George Mason Drive and S. Glebe Road via enhancements to streets, sidewalks and traffic signals along S. Glebe Road, 7th and 8th streets to provide for safer pedestrian and bicycle travel and crossings. Continue engagement with local communities and the U.S. GSA to explore opportunities for alternative trail routes and public access points with the NFATC. (0.9 mile)
- 2-25: Glencarlyn/Hospital Trail Construct a new bicycle and pedestrian trail on the former Northern Virginia Community Hospital site to link the Glencarlyn and Forest Glen neighborhoods and provide improved access to Campbell school and adjacent parkland. Minimize impacts upon nearby natural areas. Link with planned bicycle facilities on 5th Road South, S. Lexington Street and S. Carlin Springs Road to provide a low-stress route between Arlington Boulevard and Columbia Pike. (0.5 mile)
- 2-26: N. Carlin Springs Road Trail Construct a shared bicycle and pedestrian trail along the west side sidewalk of N. Carlin Springs Road between Kenmore Middle School and N. Kensington Street. Enhance connection of the existing trail along N. Kensington Street near its connection with the Bluemont Junction Trail. Build a new trail connection to the W&OD Trail, near the electrical substation, north of N. Carlin Springs Road. (0.3 mile)



- 2-27: Manchester Street/  
Bluemont Connection

Provide a new section of bicycle and pedestrian trail to link N. Manchester Street between 4th Road N. and 4th Street N. in the Bluemont Park area. (0.1 mile)
- 2-28: Bluemont Junction  
Trail Upgrades

Upgrade the entire Bluemont Junction Trail for improved user safety and comfort. Improvements should include repaving, enhancements to the street crossings and consideration of the addition of trail lighting. (1.3 miles)
- 2-29: Bluemont Park to  
Upton Hill Park Trail

Complete construction of an 8 to 10-foot wide pedestrian and bicyclist trail along the south sidewalk of Wilson Boulevard between the W&OD and Four Mile Run Trails in Bluemont Park with an existing trail in Upton Hill Park. Provide a trail linkage of the parks with Ashlawn Elementary School and the Dominion Hills Recreation Association property. (0.7 mile- currently partially implemented)
- 2-30: 8th Road North/  
Bluemont Park Connector

Pave and improve an existing access route that links 8th Road North, near N. Lexington Street, to the W&OD Trail in Bluemont Park. (0.1 mile)
- 2-31: Chain Bridge Road/  
Pimmit Run Trail

Construct a trail connection of the Chain Bridge Forest area to Kirby Road in McLean. (VDOT, NPS, Fairfax Co. Arlington) (0.5 mile)
- 2-32: Donaldson Run  
Trail Renovation

Renovate the Donaldson Run Trail to provide a safer surface on the portion with existing asphalt pavement, replace old bridge structures and enhance street crossings and access points. Minimize the creation of any new impervious surface area or tree removal. (0.5 mile)
- 2-33: Culpepper to  
20th Street North Connector

Reconstruct the path through the park land between N. Culpepper and 20th streets to accommodate bicycle traffic. The trail and low- traffic street will enable an easier bicycle connection between the Halls Hills High View Park neighborhood with N. Glebe Road, Waverly Hills and the Lee Heights commercial center. (0.2 mile)

- 2-34: Mount Vernon Trail Extension    Extend the Mount Vernon Trail from its current terminus at Theodore Roosevelt Island using existing trails, bike lanes and streets. Construct a short segment of trail between N. Randolph Street and the Fairfax line, following an existing sanitary sewer easement near Pimmit Run. (Arlington, NPS) (0.2 mile)
- 2-35: Chain Bridge Access Improvements    Implement improvements to the existing bicycle and pedestrian facility on 41st Street North and N. Glebe Road. Renovate the separated path on the Glebe Road bridge over Pimmit Run and improve the signalized crossing of Chain Bridge Road. Also study potential new trail alignments to lessen the grade of the existing route on 41st Street. (Arlington, VDOT) (0.3 miles)

### RECOMMENDED ON-STREET FACILITIES INCLUDING BICYCLE LANES (OF ALL TYPES) AND BICYCLE BOULEVARDS

- 3-01: S. George Mason Drive Bicycle Facility**    Provide an enhanced bicycle facility along the entirety of S. George Mason Drive to provide improved north-south bicycling within Arlington as well as improved bicycle access to Wakefield High School and the Skyline area. (2.1 miles)
- 3-02: North George Mason Drive Bicycle Facility**    Develop an enhanced bicycle facility on George Mason Drive to connect the existing bicycle facilities north of Lee Highway with the Virginia Hospital Center, the Custis Trail, Wilson Boulevard and Bluemont Junction Trail. (1.5 miles)
- 3-03: South Glebe Road Enhanced Bicycle Facility**    Develop an enhanced bicycle facility along S. Glebe Road between the Arlington Boulevard Trail and the Four Mile Run Trail at West Glebe Road. (2.3 miles)
- 3-04: North Glebe Road Bicycle Facility**    Develop an enhanced bicycle facility between N. Quincy Street/Henderson Road and N. Woodstock Street. (1.5 mile)

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- 3-05: West Ballston On-Street Bicycle Facility**     Develop a north-south bicycle boulevard to parallel N. Glebe Road using N. Tazewell and Thomas streets between Wilson Boulevard and Cathedral Lane. Link Tazewell and Thomas street either via an on-street facility on N. Carlin Springs Road or with a trail linkage and planned extensions of Tazewell and Randolph streets. (1.2 mile)
  - 3-06: North Ballston Custis Connection**     Provide a connection to the Custis Trail and Waycroft-Woodlawn neighborhood via an enhanced bicycle facility on Washington Boulevard between N. Glebe Road and N. Aberdeen and N. Abingdon Streets. Link with the Ballston Beaver Pond Trail to enhance north-south access. (0.2 mile)
  - 3-07: N. Glebe Road Bicycle Facility**     Implement an enhanced bicycle facility on N. Glebe Road between Old Glebe Road and Arlington Boulevard to provide better north-south bicycle connectivity within Arlington. The N. Glebe Road bikeway would link existing or planned bikeways on Lee Highway, Wilson Boulevard, the Custis and Arlington Boulevard trails and South Glebe Road, as well as provide direct bicycle access to commercial centers including Ballston and Buckingham. (4.3 miles)
  - 3-08: Park Drive Bicycle Boulevard**     Develop a bicycle boulevard on Park Drive between bicycle lanes on N. Carlin Springs Road and the Arlington Forest shopping center and W&OD Trail. (1.0 mile)
  - 3-09: Quincy Street/Military Road Bicycle Facility**     Develop an enhanced bicycle facility on N. Quincy Street to include protected bicycle lanes wherever feasible and a new bikeway facility for Military Road between Lee Highway and Nelly Custis Drive. (0.5 mile)
  - 3-10: Walter Reed Drive Bicycle Facility**     Develop an enhanced bicycle facility on Walter Reed Drive between S. Arlington Mill Drive and S. Monroe Street. (1.1 miles- currently partially implemented)
  - 3-11: Walter Reed Drive/ Fillmore Street Bicycle Facility**     Develop an enhanced bicycle facility on Walter Reed Drive and Fillmore Street between Pershing Drive and S. Monroe Street. (2.0 miles)

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- 3-12: Crystal Drive/Potomac Avenue Enhanced Bicycle Facilities** Upgrade the existing bicycle lanes on Potomac Avenue and Crystal Drive through the Potomac Yard and Crystal City areas. Where feasible provide further separation or protection of bicyclists from motor vehicle traffic. Provide for a lower stress route to link the Four Mile Run Trail to Crystal City, Pentagon City and Long Bridge Park. (1.5 miles)
- 3-13: 18th Street South Bicycle Facility** Reconstruct 18th Street South between Jefferson Davis Highway (Rt. 1) and Crystal Drive to include an enhanced on-street bicycle facility and improve the connection with the Crystal City Connector Trail. Also identified in the Crystal City Sector Plan. (0.2 mile)
- 3-14: 18th Street South Bicycle Facility** Upgrade the existing bicycle lanes on S. Joyce Street and 15th Street South between Army Navy Drive and S. Hayes Street to include more separation from motor vehicle traffic. (0.5 mile)
- 3-15: Penrose–Courthouse Bicycle Boulevard** Develop a low-stress bicycle connection between the Penrose and Courthouse neighborhoods by designating a bicycle boulevard on N. Barton, 3rd and Cleveland streets and connecting it with the Lyon Park and Washington Boulevard trails. Enhance the crossing of 3rd Street North and Washington Boulevard, and the trail underpass of Arlington Boulevard. (1.3 miles)
- 3-16: North Fillmore Street Bicycle Boulevard** Designate a bicycle boulevard to connect the Lyon Park Trail, near 3rd Street, to Pershing Drive and 7th Street N. (0.4 mile)
- 3-17: Courthouse Road Bicycle Facility** Extension and potential upgrade of the bicycle lanes on Courthouse Road between 14th Street and Clarendon/Wilson Boulevards. Also identified in the Court House Sector Plan. (0.4 mile)
- 3-18: Clarendon Metro Station Access** Develop an enhanced bicycle facility on N. Highland and N. Herndon Streets, between Key Boulevard and 7th Street North, to provide improved access to the Metrorail station and commercial district. (0.5 mile)

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- 3-19: Wilson Boulevard/Clarendon Boulevard Enhanced Bicycle Facilities** Upgrade the existing bicycle lanes on Wilson and Clarendon boulevards to provide more separation of bicyclists from motor vehicle traffic in the Rosslyn, Courthouse and Clarendon areas. Link with an enhanced bikeway on Fairfax Drive to provide a lower-stress bicycle route east-west route through the Rosslyn-Ballston Corridor and across the center of Arlington. (1.4 miles)
  - 3-20: Wilson Boulevard Protected Bicycle Lanes** Implement protected bicycle lanes on Wilson Boulevard from Arlington Ridge Road to N. Courthouse Road. Also identified in the Rosslyn Sector Plan. (1.1 miles - currently partially implemented)
  - 3-21: Fairfax Drive Enhanced Bicycle Facility** Enhance the bicycle lanes on Fairfax Drive between N. Glebe Road and Washington Boulevard to include additional separation and protection of bicyclists from motor vehicle traffic. The facility should provide a lower-stress route through the Ballston and Virginia Square areas and connect the Custis and Bluemont Junction trails to enhanced bicycle facilities on Wilson and Clarendon boulevards in the Clarendon, Courthouse and Rosslyn areas. (1.2 miles)
  - 3-22: Wilson Boulevard Bicycle Facility** Develop an enhanced bicycle facility on Wilson Boulevard between the County line and N. Glebe Road. (2.0 miles)
  - 3-23: N. Meade Street Bicycle Facility** Develop an enhanced bicycle facility on N. Meade Street connecting bicycle facilities in Rosslyn to the Iwo Jima Monument and trails adjacent to Arlington Cemetery and Fort Myer. Implement project as part of a renovation of the Meade Street bridge and adjacent street interchanges. (Arlington, VDOT, National Park Service) (0.2 miles)
  - 3-24: Fort Myer Drive Protected Bike Lanes** Install a protected bicycle lane(s) on Fort Myer Drive from Lee Hwy near the Custis Trail to the North Meade Street Bridge. (0.5 mile)
  - 3-25: Lee Highway (eastbound) Bicycle Lane** Mark a bicycle lane along eastbound Lee Highway between N. Veitch and N. Lynn streets. Also identified in the Rosslyn Sector Plan. (1.0 mile)

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- 3-26: Lee Highway Bicycle Facility (West)** Install an enhanced bicycle facility on Lee Highway between N. Veitch and N. Culpepper streets. Existing partial bicycle lane segments should be extended and provided in both directions of travel. Where feasible, separation and protection from motor vehicle traffic should be provided. Project will likely require some modifications to existing curbs and median strips. (2.4 miles)
- 3-27: Lee Highway Bicycle Facility (East)** Develop an enhanced bicycle facility on Lee Highway between N. Quincy and N. Veitch streets. (1.3 miles)
- 3-28: 22nd Street North Bicycle Boulevard** Develop a bicycle boulevard on 22nd Street North between N. Sycamore Street and Lee Highway. Include construction of bicycle and pedestrian trail segment between N. Cameron and Culpepper streets. (2.0 miles)
- 3-29: 26th Street Bicycle Boulevard** Develop a bicycle boulevard on 26th Street North between N. Westmoreland Street and Old Dominion Drive. (2.3 miles)
- 3-30: Lee Highway Bicycle Lanes** Add bicycle lanes on both sides of Lee Highway between the Arlington/Falls Church line and N. Sycamore Street. Also identified in the East Falls Church Area Plan. (0.5 mile)
- 3-31: Old Dominion Drive – Lorcom Lane-Old Lee Highway Connection** Connect existing bicycle lanes on Old Dominion Drive, Lorcom Lane and N. Woodstock Street by reconstructing the Old Dominion Drive and Lee Highway intersection and installation of a bikeway on Old Lee Highway between Lorcom Lane and Old Dominion Drive. This project will link several primary bicycling corridors and enhances safe access to Marymount University, Stratford Middle School and the Lee Heights shopping center. (0.2 mile)
- 3-32: Chain Bridge Connection Enhancements** Improve on and off-street bicycle facilities to provide a safe and easier to use connection from Arlington to Chain Bridge. (Arlington, VDOT) (0.3 miles)
- 3-33: N. Sycamore Street/N. Roosevelt Street Bicycle Facility** Develop an enhanced bicycle facility on Sycamore and Roosevelt streets between the Falls Church line and Williamsburg Blvd. (1.6 Mile)



**3-34: N. Lynn Street Protected Bicycle Lanes** Implement protected bicycle lanes on N. Lynn Street between 17th Street and Lee Highway. Also identified in the Rosslyn Sector Plan. (0.5 mile)

3-35: N. Nash Street Protected Bicycle Lanes Implement protected bicycle lanes on N. Nash Street between 19th Street and Wilson Boulevard. Also identified in the Rosslyn Sector Plan. (0.2 mile)

3-36: 19th Street North Bicycle Lanes Mark bicycle lanes on 19th Street North between N. Nash and N. Kent streets. Also identified in the Rosslyn Sector Plan. (0.2 mile)

3-37: Fairfax Drive Bicycle Facility Provide an enhanced bicycle facility on Fairfax Drive, along the south side of Arlington Boulevard, to connect the Arlington Boulevard Trail to N. Meade Street bicycle lanes and trails near the Iwo Jima Memorial. The new facility could be a widened sidewalk for shared bicycle and pedestrian use, or an on-street bike lane. (VDOT, Arlington) (0.7 mile)

3-38: Fairfax Drive Bicycle Boulevard Develop a Bicycle Boulevard route along Fairfax Drive between N. Barton Street and the trail along the north side of Arlington Blvd. (0.3 mile)

3-39: 15th and 16th Streets N. Bicycle Boulevard Implement a bicycle boulevard along 16th and 15th streets to link the Westover area to Washington-Liberty High School and the Custis Trail. (1.6 miles)

3-40: Washington Boulevard Bicycle Facility (East) Develop an enhanced bicycle facility on Washington Boulevard between Wilson and Arlington boulevards. (1.0 mile)

3-41: Washington Boulevard Bicycle Facility (Central) Develop an enhanced bicycle facility on Washington Boulevard between N. Glebe Road and Wilson Boulevard. (1.2 miles)

3-42: Washington Boulevard Bicycle Facility (West) Develop an enhanced bicycle facility on Washington Boulevard between Lee Highway and N. Glebe Road. Also identified in the East Falls Church Area Plan. (2.5 miles - currently partially implemented)

- 3-43: Key Boulevard/13th Street  
Bicycle Boulevard
- Designate a bicycle boulevard on Key Boulevard, N. Jackson and 13th Street North between N. Rhodes and N. Quincy Streets to provide a low-stress circulation within the Rosslyn-Ballston corridor and for access to Washington-Liberty High School and commercial districts. (1.7 mile)
- 3-44: Ashton Heights-  
Lyon Park Bicycle Boulevard
- Develop a bicycle boulevard on 5th, 6th 7th and Fillmore streets to connect Henderson Road in the Buckingham area to Pershing Drive at Washington Boulevard. The route would provide a low-stress option for east-west bicycling through the middle of Arlington. (1.2 mile)
- 3-45: 10th Street North  
Bicycle Facility
- Develop an enhanced bicycle facility on 10th Street North between Fairfax Drive and the Arlington Boulevard Trail. (0.9 mile)
- 3-46: N. Jackson Street  
Bicycle Boulevard
- Develop a bicycle boulevard on N. Jackson Street between Fairfax Drive and the Arlington Boulevard Trail. (0.4 mile)
- 3-47: Kirkwood Road Bicycle Lanes
- Mark bicycle lanes on Kirkwood Road between the existing lanes at Washington Blvd to the existing bicycle lanes on Fairfax Drive. (0.1 mile)
- 3-48: Virginia Square –  
Cherrydale Bicycle Boulevard
- Develop a bicycle boulevard to connect Lee Highway with the Virginia Square Metro via Lincoln, Monroe, 13th, 14th and Nelson streets. (1.0 mile)
- 3-49: 11th Street North  
Bicycle Boulevard
- Develop a bicycle boulevard on 11th Street between N. Quincy Street at Quincy Park and the Ballston Pond Trail. (0.6 mile)
- 3-50: N. Stafford Street  
Bicycle Boulevard
- Develop a bicycle boulevard on N. Stafford Street to connect Old Lee Highway and the Ballston area. Provide for improved bicycle access to Washington-Liberty High School, the Custis Trail, Ballston Metrorail station and Ballston Quarter mall. (1.4 miles)
- 3-51: N. Abingdon/ N. Cameron/  
Columbus Streets Bicycle Facility
- Develop a bicycle facility parallel to N. Glebe Road that connects 26th Street North, Lee Highway and Wilson Boulevard. Utilize on- and off-street facilities to link N. Columbus, Cameron, and Abingdon streets, with the Custis and Ballston Pond trails. The route provides a low-stress alternative to N. Glebe Road for bicycling between Ballston and northern Arlington. (1.9 miles)



- 3-52: N. Edison/4th Street  
Bicycle Boulevard

Connect the Bluemont Junction Trail to the Lubber Run Trail, Lubber Run Community Center, Barrett Elementary School and the Arlington Forest Shopping Center via on-street bicycle boulevard on N. Edison, 4th, 3rd and Park streets. Enhance existing trails across Lubber Run Park to provide a suitable link between on-street sections, and improve the N. Edison Street crossing of N. Carlin Springs Road (1.0 mile)
- 3-53: N. Harrison Street  
Bicycle Boulevard

Develop a bicycle boulevard on N. Harrison Street between the Bluemont Junction Trail and the County line near Williamsburg Middle School. (3.1 miles)
- 3-54: Rock Spring Road Bicycle  
Boulevard

Develop a bicycle boulevard on N. Rock Spring Road to connect bicycle lanes on Little Falls Road to the Washington Golf and Country Club and Marymount University on N. Glebe Road. (0.4 mile)
- 3-55: John Marshal Drive/  
Ohio Street Bicycle Boulevard

Develop a bicycle boulevard on John Marshall Drive and N. Ohio Street from near the County line at 36th Street North to the Custis Trail near 11th Road North. Designate new bicycle facilities on John Marshall Drive, between 36th Street and Little Falls Road, and N. Ohio Street, between Lee Highway and link them to existing on- and off-street bikeways in the corridor (1.7 mile)
- 3-56: N. Carlin Springs Rd.  
Bicycle Facility

Develop an enhanced bicycle facility on North Carlin Springs Road between N. Glebe Road and Arlington Boulevard. (1.5 miles)
- 3-57: S. Fern Street Bicycle Facility

Develop an enhanced bicycle facility on S. Fern Street between the Pentagon reservation and 18th Street South. (0.6 mile)
- 3-58: S. Joyce – June Street  
Bicycle Boulevard

Develop a bicycle boulevard on S. Joyce Street between 15th Street South and S. June Street. Continue the bikeway on June Street to Fort Scott Drive. (0.8 mile)
- 3-59: S. Lynn St/Arlington  
Ridge Road Bicycle Facility

Develop an enhanced bicycle facility on S. Lynn Street and S. Arlington Ridge Road between the Four Mile Run Trail and Army Navy Drive. (1.5 miles)

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| 3-60: 20th Street South<br>Bicycle Boulevard             | Develop a bicycle boulevard on 20th street South, between S. Fern Street and Army Navy Drive, to provide a low-stress bicycling route through the Arlington Ridge and Aurora Highlands neighborhoods and to connect with other bikeways in the Pentagon City area. (0.9 mile) |
| 3-61: Fort Scott Drive<br>Bicycle Boulevard              | Develop a bicycle boulevard on Fort Scott Drive between S. Eads Street and S. Oakcrest Road, with a connection on Oakcrest Road to Arlington Ridge Road. (1.0 mile)   |
| 3-62: 16th Street South<br>Bicycle Boulevard             | Develop a bicycle boulevard on 16th Street South to link Four Mile Run Drive and the W&OD Trail with the Walter Reed Community Center and Arlington Heights neighborhood. Route via 15th Street North between S. Glebe Road and Walter Reed Drive. (0.9 mile)                 |
| 3-63: 22nd Street South<br>Bicycle Boulevard             | Develop a bicycle boulevard on 22nd Street South with Nauck neighborhood that connects with the bikeway on S. Kenmore Street near Drew Elementary School, and the Walter Reed Drive bikeway via S. Pollard Street. (0.5 mile)   |
| 3-64: S. Monroe Street<br>Bicycle Boulevard              | Develop a bicycle boulevard on S. Monroe Street between 7th and 22nd streets South including enhanced crossings of arterial streets. (1.2 miles)  |
| 3-65: S. Courthouse Road<br>Bicycle Facility             | Develop an enhanced bicycle facility on S. Courthouse Road between Sequoia Plaza/Walter Reed Drive. Include a signed on-street link via 6th Street to the Washington Boulevard Trail. (0.7 mile)  |
| 3-66: South 2nd Street<br>Bicycle Facility               | Develop an enhanced bicycle facility on S. Second Street between S. Glebe Road and the entrance to Fort Myer/Henderson Hall. (1.0 mile)   |
| 3-67: Shirlington Road/S. Kenmore<br>St Bicycle Facility | Develop an enhanced bicycle facility on Shirlington Road and S. Kenmore Street connecting the W&OD Trail with Walter Reed Drive. (1.0 mile)   |
| 3-68: Quaker Lane Bicycle Facility                       | Develop an enhanced bicycle facility on Quaker Lane between King Street (U.S. Route 7) and the 32nd Road/Preston Avenue intersection. (Arlington, Alexandria) (0.7 mile)  |



- 3-69: S. Carlin Springs Road  
Bicycle Facility

Develop an enhanced bicycle facility along S. Carlin Springs Road to link the planned off-street trail near 7th Road to Columbia Pike and the Bailey’s Crossroads area. (0.4 mile)
- 3-70: Fifth Road South  
Bicycle Facility

Provide an enhanced bicycle facility on Fifth Road South between S. Carlin Springs Road and the county line. Work with Fairfax County to extend the facility into the Bailey’s Crossroads area. (Arlington, Fairfax) (0.3 mile)
- 3-71: Irving Street Bicycle Boulevard

Develop a bicycle boulevard on Irving Street between 6th Street North to 9th Street South. (1.3 miles)
- 3-72: Henderson Rd/S.  
Abingdon/3rd Street/  
S. Wakefield Bicycle Boulevard

Designate a bicycle boulevard route that links the Buckingham area, at N. Glebe Road to Columbia Pike, via Henderson Road, S. Abingdon Street, 3rd Street S. and S. Wakefield Street. (1.5 miles)
- 3-73: Manchester Street  
Bicycle Facility

Provide an enhanced bicycle facility on Manchester Street between First Street North and the county line. Work with Fairfax County to extend the facility into the Bailey’s Crossroads/Culmore area. Provide for enhanced access to and between Bluemont Park, the Arlington Boulevard trail and Kenmore Middle School, via Second Street South. (0.3 mile)
- 3-74: Rock Spring Road/35th Street  
Bicycle Boulevard

Develop a bicycle boulevard on 35th Street North and Rock Springs Road to connect Military Road to North Glebe Road. (1.1 miles)

**BICYCLE PARKING, INTERSECTIONS ENHANCEMENT & TRAINING FACILITY**

**4-01: Intersection Crossing Enhancements** Establish a program to improve bicyclist and pedestrian safety and ease of crossing primary streets at selected locations on bikeway routes. Improvements may include reconstruction of curbs, medians and sidewalk areas for improved accessibility and refuge, installation of traffic signals or traffic beacons and enhanced signage and roadway markings.

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- 4-02: Bicycle Parking at County Facilities As needed to meet County bicycle parking guidelines, provide additional bicycle parking, and/or upgrade existing bicycle parking, to serve the needs of visitors, students and employees at County offices, schools, libraries, parks and community recreation and nature centers.
- 4-03: Bicycle Parking in Commercial Areas Install bicycle racks in the public right-of-way at locations within primary commercial corridors. With the assistance of business improvement districts and commercial property owners, bicycle racks will be installed where there is an established unmet need for bicycle parking and sufficient space exists for installation.
- 4-04: Transit Station Bicycle Parking Add or upgrade covered bicycle parking at transit stations (bus and rail) and incorporate some overhead cover for weather protection. Develop secure bicycle stations at the Ballston, East Falls Church, Rosslyn and Pentagon City Metrorail stations. (Arlington, WMATA)
- 4-05: Youth Training Facility Establish a “Traffic Garden” facility to teach younger children how to operate a bicycle in safe manner on the grounds of a County school, park or other community facility. The training facility would introduce young bicyclists to traffic signs and roadway markings in an off-street location away from motor vehicle traffic and would allow beginner bicyclists a place to practice turning, stopping and other bicycle riding skills.