

# Policy Plan Amendment Transportation Element 4/30/2025

### PROJECT BACKGROUND

The Department of Planning and Development (DPD), in collaboration with multiple agencies, the Board of Supervisors, and the Planning Commission, is updating the Comprehensive Plan Policy Plan (Policy Plan) as authorized by the Board of Supervisors in December 2022. Phase One of the project includes revisions to key elements such as the Preface, Land Use, Parks and Recreation, Transportation, Environment, and Human Services. It will also integrate themes of equity and healthy communities to include a new Healthy Communities element. The Policy Plan serves as a guide for planning and development in Fairfax County, shaping future growth while protecting natural and cultural resources. This update will help inform future planning and development decisions across the county.

### PROCESS FOR REVISIONS

This paper outlines the draft revisions and methodology for updating the Policy Plan Transportation Element. The Transportation Element provides guidance regarding the overall network of streets, active transportation, public transportation, transportation demand management (TDM), coordination with land use and the environment, and forward-looking innovative and technological improvements to facilities and services. It also includes alignment with existing and new county plans and strategies, such as One Fairfax, the Countywide Strategic Plan, Safe Streets and Roads for All, the Comprehensive Plan Area Plan recommendations, the Comprehensive Transportation Analysis User's Manual and other recently adopted or endorsed plans, programs, and guidance. In addition to the Objectives and Policies, there are three maps (Transportation Plan Map, Countywide Trails Plan Map, and Countywide Bicycle Network Map), and five appendices entitled:

- Appendix 1: Roadway System Functional Classification
- Appendix 2: Types of Transit Services and Facilities
- Appendix 3: Bicycle and Trail Classification and Definitions
- Appendix 4: Roadway Right-of-Way Requirements
- Appendix 5: Fairfax County Bicycle Master Plan<sup>1</sup>

The element has undergone multiple reviews, including coordination with various county agencies and review by representatives from Planning and Development, Health and Human Services, the Park Authority and Transportation, including Transportation staff and leadership.

Staff gathered input from the public and external entities through two phases of community outreach from May 2024 through February 2025. In 2024, FCDOT staff met three times with the Transportation Advisory Commission (TAC), had two joint meetings with the Planning Commission Transportation Committee and TAC, and one meeting with the Fairfax Alliance for Better Bicycling

<sup>1</sup> Due to the length of Appendix 5, and as no changes are proposed through this Plan amendment, it is not included in this series of attachments. The appendix can be found at <u>Countywide Bicycle Master Plan | Transportation</u>

(FABB). In these meetings, staff presented the strategies for updating transportation objectives and policies, gathered input and comments, and learned which transportation topics are of interest or concern. The feedback received informed the preparation of the updated and reorganized Transportation Element.

Other feedback from the overall Policy Plan community meetings and outreach events included some recommendations which are better suited for other Policy Plan elements or county plans, or are outside of the scope of the Policy Plan. Finally, FCDOT staff prepared research papers (Comprehensive Transportation Analysis, Activating and Completing Fairfax County Streets, and Micromobility, Microtransit and Autonomous Vehicles) to inform the revisions to this element.

Through this coordination and research, the element was found to be strong and providing appropriate flexibility to adapt to changing circumstances. The proposed modifications and reorganization and updates of the objectives, policies and appendices, better align this element with recent county initiatives and adopted county plans. The revised Transportation Element provides guidance regarding the overall transportation network, from public transportation to micromobility; guidance for engaging with the community in transportation planning, design, and implementation; and forward-looking approaches to complete streets and technology in transportation design and infrastructure.

### **NEXT STEPS**

The draft text for the Comprehensive Plan Transportation Policy Plan Element is included as Attachments I and II and is available for the public, Planning Commission, and Board of Supervisors to provide feedback. The element will be discussed with the Planning Commission Policy Plan Committee at their May 8, 2025, meeting which will include representatives from TAC and the Trails, Sidewalks, and Bikeways Committee. A meeting is also scheduled with the Board of Supervisors Land Use Policy Committee on May 20, 2025. Feedback can be sent to the public input email at PlanForwardFFX@PublicInput.com and may inform future revisions to this draft text in advance of a final round of community outreach before finalizing the staff report and draft text this summer. Public hearings on the revised Policy Plan Elements, including the Transportation Element, are expected to take place in fall 2025. Additional information on the project, meeting updates, and draft text can be found at Plan Amendment 2022-CW-2CP | Planning Development (fairfaxcounty.gov).

### **ATTACHMENTS**

Attachment I: Draft Transportation Element (Clean Version)
Attachment II: Draft Transportation Element (Redline Version)

#### TRANSPORTATION

#### INTRODUCTION

Fairfax County is served by an extensive transportation system comprised of streets, sidewalks, trails, bicycle routes, and public transportation. This multimodal system supports thousands of daily trips by people using all these different modes. The County's transportation system fulfills the mobility demands of a growing and changing population, both within the County and from neighboring jurisdictions.

Transportation plays a role in shaping land use, mobility choices, and providing mobility choices and connectivity throughout the county. The county is committed to providing safe, efficient, and equitable mobility options by expanding multimodal opportunities including transit, pedestrian and bicycle infrastructure, and by integrating transportation planning with land use decisions. Through continued planning, collaboration with the community and regional partners, and strategic investment, Fairfax County aims to implement innovative and sustainable transportation solutions to reduce congestion, provide and enhance equitable transportation access, and support the county's long-term vision.

The following objectives and policies emphasize the importance of providing safe, efficient, and equitable mobility choices. These policies prioritize expanding transit options, enhancing pedestrian and bicycle infrastructure, and integrating transportation planning with land use decisions. The Transportation Element, with accompanying appendices, provides the county's objectives and policy recommendations for a comprehensive multimodal transportation network and is implemented in coordination with other county policies, strategies, and programs, in addition to other documents, studies, and maps maintained by the Fairfax County Department of Transportation.

#### **COUNTYWIDE OBJECTIVES AND POLICIES**

Objective 1: Develop a multimodal transportation system to facilitate the efficient movement of people and goods, placemaking, and increase travel options.

- Policy a. Accommodate local and regional trips with the Interstate and Primary Highway Systems, public transportation, high-occupancy-vehicle (HOV), and high-occupancy-toll (HOT) facilities, to reduce single occupant vehicle (SOV) travel.
- Policy b. Establish a network of multimodal transportation corridors to facilitate travel options.
- Policy c. Coordinate with neighboring jurisdictions in developing a planned multimodal transportation network to increase regional connectivity and provide enhanced transportation options.

- Policy d. Plan, design, and operate the roadway system consistent with the Appendix 1: Roadway Functional Classification System.
- Policy e. Provide roadway, active transportation and supporting facilities that meet the standards in the Fairfax County Public Facilities Manual.
- Policy f. Provide transportation improvements that meet county goals as determined by detailed corridor, area plan, and/or subarea studies.
- Policy g. Integrate Comprehensive Transportation Analysis (CTA) metrics and methodology into transportation studies, Comprehensive Plan amendments, and entitlement applications to balance active transportation, public transit, safety, and vehicle usage.
- Policy h. Implement roadway improvements to repurpose excess right-of-way for expanding multimodal opportunities.
- Policy i. Optimize the use of curb space, on-street parking facilities, and loading zones (e.g. various deliveries to residential, commercial land uses), while ensuring accessibility.
- Policy j. Implement transportation improvements in communities where limited facilities or access to transportation exist.
- Policy k. Provide public transportation stops and shelters that are accessible by active transportation facilities.
- Policy I. Ensure streetscape design incorporates placemaking, public art promoting community identity and engagement, and environmental benefits through the provision of pedestrian-scale lighting, street furniture, native or adaptive vegetation (e.g., non-invasive, climate resilient) and permeable hardscape permeable where appropriate.
- Policy m. Create a sense of community awareness and cultural continuity by enhancing, preserving, and actively maintaining the unique character and heritage of public spaces, neighborhoods, and transportation corridors.

#### Objective 2: Align land use and transportation to create a complementary system.

- Policy a. Prioritize the programming of transportation improvements that assist in accomplishing the county's land use goals and objectives.
- Policy b. Enhance accessibility and multimodal connectivity between a variety of land uses throughout the county, (e.g. homes, parks, shopping centers, public facilities, and community gathering areas).

Policy c. Provide the full planned typical section and right-of-way requirements, as outlined in Appendix 4, where planned roadway improvements have not yet been designed.

#### **Objective 3:** Develop and enhance active transportation facilities and services.

- Policy a. Provide active transportation facilities for pedestrians, bicyclists, and micromobility users on both sides of the street.
- Policy b. Connect adjacent active transportation routes to transit stations and park-and-ride lots. Provide amenities to include bicycle and micromobility share stations, parking and lockers.
- Policy c. Connect active transportation facilities (e.g., libraries, parks, shopping centers) and public transportation facilities throughout the county.
- Policy d. Implement clearly marked bicycle and pedestrian features (e.g., bicycle routes, trails, crosswalks) when improving transportation infrastructure.
- Policy e. Promote walkable and bikeable communities to enhance quality of life, public health, and the environment.

### Objective 4: Increase the use of public transportation and improve facilities and services.

- Policy a. Coordinate with regional partners to support the enhancement and expansion of the Metrorail system, bus and bus rapid transit (BRT) routes, and additional transit stations.
- Policy b. Provide accessible transportation services and facilities that increase transit coverage and accommodate the travel needs for all ages and abilities.
- Policy c. Integrate public transportation services seamlessly into the broader public transportation network, improving first- and last- mile connectivity, with attention to underserved areas.
- Policy d. Promote and provide public transportation vehicles, equipment, and support facilities and services.
- Policy e. Provide and connect feeder, local, and circulator bus services to transit stations, park-and-ride lots and garages, and transit-oriented development (TOD) and mixed-use centers.
- Policy f. Facilitate ease of transfers between modes at transit stations, park-and-ride lots and garages, and transit stops.

- Policy g. Improve and expand park-and-ride facilities to include vehicle parking, bus bays, covered waiting areas, and charging stations for transit buses. Enhance the rider experience with amenities (e.g. restrooms, water fountains, seating areas, private vehicle charging stations).
- Policy h. Develop parking management strategies which include reduced parking rates for ride-share carpooling, holiday and weekend rates.
- Policy j. Collaborate with Fairfax County Public Schools (FCPS) and human service agencies to provide education and training for safe ridership and awareness for all public transportation riders.

#### Objective 5: Prioritize safety for people who use transportation facilities and services.

- Policy a. Minimize travel mode conflicts and enhance safety for all individuals by prioritizing the protection of vulnerable users.
- Policy b. Upgrade existing roadways to improve safety conditions where road segments do not meet current standards.
- Policy c. Maintain accessible pedestrian and bicycle access during construction of transportation facilities and land development.
- Policy d. Install wayfinding signage across roadways, pedestrian and bicycle paths, and public transportation hubs to clearly indicate evacuation routes and emergency transportation pathways.
- Policy e. Coordinate with local and regional public safety and transportation agencies for emergency operations and transportation incident management.

# Objective 6: Promote and implement Transportation Demand Management (TDM) strategies to optimize the transportation network and reduce single occupant vehicle (SOV) use.

- Policy a. Planning studies and developments should reduce SOV trips and exceed baseline TDM goals.
- Policy b. Promote TDM strategies including flexible working arrangements (e.g., remote work, remote learning, alternative work schedules, flexible work hours).
- Policy c. Work with private and public employers by establishing alternative commute programs to reduce vehicle congestion.
- Policy d. Promote and market public transportation, ridesharing, shuttle services, transit station amenities to increase awareness of multimodal options.
- Policy e. Coordinate with Fairfax County Public Schools (FCPS), private schools, area colleges, and the Safe Routes to School (SRTS) program to use programs that

encourage walking, bicycling, rideshare, carpooling and transit to reduce SOV use and traffic congestion.

## Objective 7: Leverage technology and infrastructure improvements to maximize operational efficiency for all modes.

- Policy a. Assess alternative roadway configurations with innovative and low-cost strategies to maximize multimodal capability within available right-of-way.
- Policy b. Make appropriate use of advanced transit technologies to provide service information and optimize system operations. Evaluate and implement innovative services and strategies to increase transit ridership.
- Policy c. Develop an integrated HOV system on freeways and major arterials with direct connections between park-and-ride lots, bus and rail transit stations, TODs, and mixed-use centers, and other modal transfer facilities.
- Policy d. Consider providing HOT lanes on limited access roadways to enhance traveler throughput. Encourage buses and HOVs to have and utilize free access to HOT lanes.
- Policy e. Use technology and large-scale data collection tools to analyze trends and patterns in people and vehicle movement to improve overall multimodal connectivity.
- Policy f. Advance autonomous vehicles pilot programs and infrastructure by partnering with public and private agencies, and higher education partners (e.g., to establish safety standards, protocols, operational guidelines).

## Objective 8: Implement transportation solutions that minimize adverse community and environmental impacts.

- Policy a. Adopt strategies to reduce greenhouse gas emissions to meet federal standards and county climate goals (e.g., carbon reduction, climate resilience).
- Policy b. Plan and design multimodal transportation facilities and services to minimize adverse impacts on Environmental Quality Corridors (EQCs), Resource Protection Areas (RPAs), other environmental resources, and heritage resources.
- Policy c. Promote the creation of thriving, sustainable, and inclusive communities by centering environmental stewardship and equitable access to transportation in all new and revitalized development projects.
- Policy d. Minimize impacts of stormwater runoff from transportation infrastructure, facilities, and services by using innovative techniques, technologies, and low impact development (LID).

Policy e. Evaluate and invest in infrastructure improvements to enhance resiliency to extreme weather events, reduce the urban heat island effect, and encourage alternative modes of transportation to reduce reliance on SOV use.

Objective 9: Facilitate collaborative engagement with community members and stakeholders in multimodal planning, initiatives, and projects.

Policy a. Integrate feedback from community engagement efforts throughout a study and/or project when proposing designs, initiatives, and transportation improvements.

Policy b. Collect and analyze community input through surveys, focus groups, and interactive tools to identify priority transportation needs.

Objective 10: Identify and secure funding to support the implementation of the Fairfax County multimodal transportation system.

Policy a. Develop and implement a financial plan that effectively pursues local, regional, state, federal, and private funding.

Policy b. Pursue and negotiate public-private partnerships to complement transportation studies, design, program implementation, and infrastructure development.

Policy c. Consider direct and indirect costs, including operations and maintenance, when making programming decisions.

Policy d. Pursue funding new technologies for transportation development (e.g., autonomous vehicle pilot programs, electric vehicles, charging stations, microtransit).

Maps are located on the Comprehensive Plan Maps webpage, and as follows.

Figure 1: Transportation Plan Map

Figure 2: Countywide Trails Plan Map

Figure 3: Bicycle Master Plan Map

#### **APPENDIX 1**

#### ROADWAY SYSTEM FUNCTIONAL CLASSIFICATION

Roadway functional classification is the process by which streets and highways are grouped into classes according to the type of service any given facility provides. It defines the role of any road or street in serving the flow of trips through the roadway network. Functional classification is very useful in considering the dual role of the transportation network in providing both travel mobility and access to property. Although access is a fixed requirement which is necessary at both ends of a trip, mobility can be provided at varying levels incorporating a wide range of elements.

The development of an effective circulation plan for any area should rely on the delineation of a basic roadway functional classification system of that area. In developing such a system, consideration is given to the magnitude and distribution of projected travel demand, and types and spatial distribution of activities within the county. Because the effectiveness of any one type of transportation facility is dependent upon the adequacy of other types, it is necessary to determine the purpose and function of facilities and services prior to making recommendations.

The county's roadway functional classification is based on the Federal Highway Administration's (FHWA) functional classifications for arterial, collector and local roads. The FHWA further classifies the roadway system into interstates, other freeways and expressways, other principal arterials, minor arterials, major and minor collectors, and local roads. Given the local characteristics and variation within the county's road network, these are the following classifications for use in Fairfax County, as shown in Figure 4. Refer to Appendix 4 Roadway Right-of-Way Requirements for dimensions of typical sections and features of the right-of-way.

Freeways and expressways are controlled access facilities providing for high-volume travel. Servicing abutting land is subordinate to accommodating the through movement of vehicles. It is desirable that medians, shoulders, acceleration and deceleration lanes, and grade separated interchanges be included in the design. Parking and pedestrian travel should not be permitted along the traveled portion of the roadway.

Other principal arterials also serve as main travel corridors. Some access is provided to abutting land, but the primary function of the roadway, particularly during peak periods, is to carry through traffic. Intersections with expressways and other principal arterials (see following description under Minor Arterials) should generally be grade separated. Where many turning movements could occur over a relatively short roadway section, service drives are desirable. Medians, shoulders, and acceleration and deceleration lanes are also desirable. Where shoulders cannot be provided, bus storage bays are desirable. Adequate and safe pedestrian and bicycle travel along and across these facilities should be included in the design. Parking should not be permitted along the traveled position of the roadway. These facilities should include four to six travel lanes.

Minor arterials usually carry an even mix of local and through traffic. They link collectors, and sometimes local streets, with principal (major) arterials. Minor arterials are lower service level roadways with partial control of access. Adequate and safe pedestrian and bicycle travel along and across these facilities should be included in the design.

A wide disparity exists in the characteristics of minor arterials found in the county. At one end, Braddock Road, with segments of six lanes, represents a very high design standard. Conversely, Fox Mill Road, a two-lane rural road, is also a minor arterial because it carries

a significant volume of through traffic over a relatively long distance. In recognizing and accommodating these differences, minor arterials are divided into two categories in this Plan.

Type A minor arterials are those which perform a particularly significant function in the transportation network due to their length and/or their design. These facilities closely approach principal arterials in terms of their traffic characteristics and role in the network. They include Braddock Road, Old Keene Mill Road-Franconia Road, Centreville Road, and several other roads. They should be multi-lane divided facilities. Parking should not be permitted along the traveled portion of the roadway. Interchanges should be provided at intersections with freeways. Interchanges at other locations should only be provided where the results of a detailed transportation study indicate that an at-grade intersection cannot accommodate the traffic.

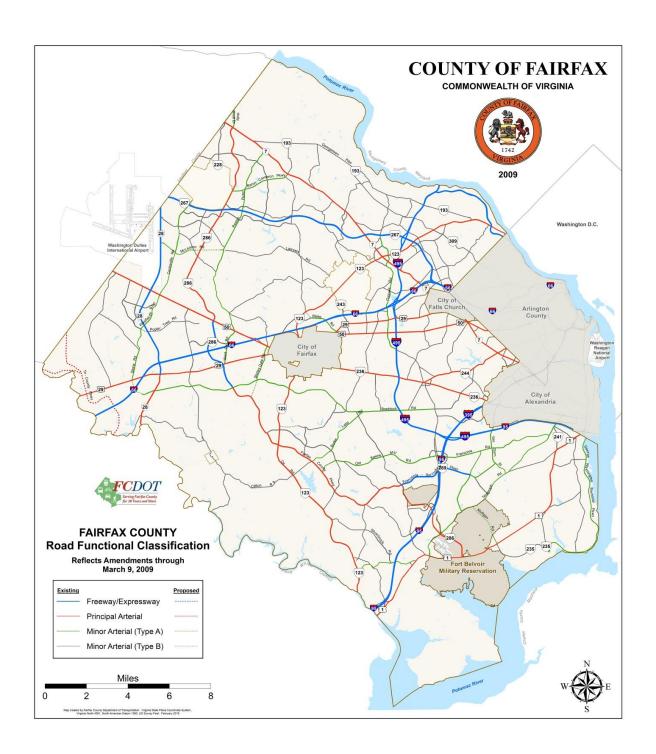
Type B minor arterials represent the remaining minor arterials which are somewhat shorter in length, traverse a less densely developed area, or are in more mature areas and consequently were built to a somewhat older design standard. Examples include Backlick Road, Annandale Road, and Sherwood Hall Lane. Refer to Table 1 in Appendix 4 for ROW requirements. In less developed areas or where additional lanes are needed, additional right-of-way may be necessary. Parking may be permitted, although it should generally be discouraged along the traveled portion of the roadway due to the arterial nature of the road. Interchanges should only be provided with freeways, and then only at selected locations, or where the results of a detailed transportation study indicate that an at-grade intersection cannot accommodate the traffic.

Collector streets provide direct service to and from local areas, routing traffic to the arterial street system. Generally, these roadways are not used for through trips. Collector streets are very important for the collection and distribution functions of transit service. As such, they should be designed in conjunction with the arterial system to permit safe boarding and alighting, and allow buses to safely enter, exit, and turn around if necessary. Medians, access control, and turning lanes are desirable only where the traffic volume is expected to exceed about 5,500 vehicles per day. Parking is optional and can generally be safely accommodated in most sections. Active transportation facilities should be provided on both sides of the road. Collector streets should generally allow for two travel lanes with sufficient pavement width to permit safe bus operations. Where traffic volumes are anticipated to be high due to relatively intense use of the area served, four travel lanes should be provided. Many unimproved rural roads in lower-density areas of the county serve a collector function. They are characterized by narrow pavement, poor horizontal and/or vertical alignment, and a lack of shoulder. These roads should be improved for safety reasons to minimum geometric standards.

**Local streets** provide access to properties abutting the roadway and within the immediate vicinity. Traffic speed and volume should be low. Parking should be accommodated and active transportation facilities should be provided. Right-of-way widths should be in conformance with standards for safe operation and proper maintenance.

The above functional classification system is used to help develop recommendations to facilitate the flow of trips generated in or traveling through the county. Facilities intended to serve a certain type and magnitude of travel will require improvements consistent with such a function. The plan has been developed with heavy emphasis on separating local and non-local facilities by functional classification and maintaining the integrity of local streets by recommending improvements on higher type facilities. The highest three

classification categories of the roadway system functional classification are depicted on Figure 4. The following lists the freeway and arterials in the county.



## LISTING OF ROADWAYS BY FUNCTIONAL CLASSIFICATION (Exclusive of Collectors and Local Streets)

	Freeways/Expressways	From	То
1.	Beltway (I-495)	American Legion Memorial Bridge	Alexandria City Line
2.	Dulles Airport Access Road (DAAR) and Dulles Toll Road (DTR)	Loudoun County	I-66
3.	Fairfax County Parkway	Braddock Road	Route 50
4.	Franconia-Springfield Parkway	Fairfax County Parkway	Beulah Street
5.	George Washington Memorial Pkwy	I-495	Arlington County Line
6.	I-66	Prince William County Line	Arlington County Line
7.	Shirley Highway (I-95 & I-395)	Prince William County Line	Alexandria City Line
8.	Route 28	Route 29	Loudoun County Line
0.	110000 20	Route 25	Loudoun County Line
0.	Other Principal Arterials	From	To
1.			·
	Other Principal Arterials  Arlington Boulevard	From	То
1.	Other Principal Arterials  Arlington Boulevard (Route 50)	From Fairfax City Line	To  Arlington County Line
1.	Other Principal Arterials  Arlington Boulevard (Route 50)  Route 28	From Fairfax City Line Route 29	To  Arlington County Line  Prince William County Line
1. 2. 3.	Other Principal Arterials  Arlington Boulevard (Route 50)  Route 28  Route 123	From  Fairfax City Line  Route 29  Fairfax City Line	To  Arlington County Line  Prince William County Line I-495
1. 2. 3. 4.	Other Principal Arterials  Arlington Boulevard (Route 50)  Route 28  Route 123  Route 123	From  Fairfax City Line  Route 29  Fairfax City Line  George Washington Parkway	To  Arlington County Line  Prince William County Line I-495  Arlington County Line
1. 2. 3. 4. 5.	Other Principal Arterials  Arlington Boulevard (Route 50)  Route 28  Route 123  Route 123  Columbia Pike	From  Fairfax City Line  Route 29  Fairfax City Line  George Washington Parkway  Little River Turnpike	To  Arlington County Line  Prince William County Line I-495  Arlington County Line  Arlington County Line
1. 2. 3. 4. 5. 6.	Other Principal Arterials  Arlington Boulevard (Route 50)  Route 28  Route 123  Route 123  Columbia Pike  Route 123	From Fairfax City Line Route 29 Fairfax City Line George Washington Parkway Little River Turnpike I-495	To  Arlington County Line  Prince William County Line I-495  Arlington County Line Arlington County Line George Washington Parkway

10.	Route 29	Prince William County Line	Fairfax City Line
11.	Route 50	Loudoun County Line	Fairfax City Line
12.	Route 7	Loudoun County Line	Falls Church City Line
13.	Route 7	Falls Church City Line	Alexandria City Line
14.	Little River Turnpike	Fairfax City Line	Alexandria City Line
15.	Route 123	Fairfax City line	Prince William County Line
16.	Route 1	Prince William County Line	Alexandria City Line
17.	Manassas National Battlefield Bypass	Route 29	Prince William County Line
18.	Tri-County Parkway	Prince William County Line	Loudoun County Line
	Minor Arterials (Type A)	From	То
	Millor Arterials (Type A)	From	10
1.	Baron Cameron Avenue	Herndon Town Line	Route 7
2.	Beulah Street	Franconia Road	Telegraph Road
3.	Blake Lane	Jermantown Road	Fairfax City Line
<ul><li>3.</li><li>4.</li></ul>	Blake Lane Braddock Road	Jermantown Road Backlick Road	Fairfax City Line Union Mill Road
			•
4.	Braddock Road	Backlick Road	Union Mill Road
<ul><li>4.</li><li>5.</li></ul>	Braddock Road Burke Lake Road	Backlick Road Fairfax County Parkway	Union Mill Road Braddock Road
<ul><li>4.</li><li>5.</li><li>6.</li></ul>	Braddock Road Burke Lake Road Centreville Road	Backlick Road Fairfax County Parkway Herndon Town Line	Union Mill Road Braddock Road Route 50
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li></ul>	Braddock Road Burke Lake Road Centreville Road Franconia Road	Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road	Union Mill Road Braddock Road Route 50 Telegraph Road
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li><li>8.</li></ul>	Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington	Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road Route 7	Union Mill Road Braddock Road Route 50 Telegraph Road I-495
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li><li>8.</li><li>9.</li></ul>	Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington Memorial Parkway	Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road Route 7 Mount Vernon Highway	Union Mill Road  Braddock Road  Route 50  Telegraph Road  I-495  Alexandria City Line
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li><li>8.</li><li>9.</li><li>10.</li></ul>	Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington Memorial Parkway Holly Knoll Drive	Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road Route 7 Mount Vernon Highway Route 7	Union Mill Road  Braddock Road  Route 50  Telegraph Road  I-495  Alexandria City Line  Loudon County Line

14.	Lorton Road	Route 1	Route 123
15.	Manchester Boulevard	Beulah Street	Kingstowne Village Parkway
16.	McLearen Road	Route 28	Reston Parkway
17.	New Braddock Road	Union Mill Road	Route 29
18.	Old Keene Mill Road	Backlick Road	Fairfax County Parkway
19.	Poplar Tree Road	Sully Station Drive/ Sequoia Farms Drive	Braddock Road
20.	Reston Parkway	Route 7	Lawyers Road
21.	Shirley Gate Road	Route 29	Fairfax County Parkway
22.	South Van Dorn Street	Alexandria City Line	Telegraph Road
23.	Stone Road	Route 29	Braddock Road
24.	Telegraph Road	Alexandria City Line	Route 1
25.	Walney Road	Route 50	Westfields Boulevard
26.	Waples Mill Road	Route 50	Route 29
27.	West Ox Road	Route 29	Lawyers Road
28.	Westfields Boulevard	Walney Road	Sully Station Drive/ Sequoia Farms Drive
29.	Old Mill Road	Telegraph Road	Route 1
	Minor Arterials (Type B)	From	To
1.	Alban Road	Backlick Road	Rolling Road
2.	Anderson Road	Route 123	Magarity Road
3.	Annandale Road	Little River Turnpike	Falls Church City Limit
4.	Amherst Avenue	Calamo Street	Highland Street
5.	Armisted Road	Lorton Road	Route 1

## FAIRFAX COUNTY COMPREHENSIVE PLAN, 2017 Edition POL Transportation, Amended through XX-XX-20XX – Appendix

#### POLICY PLAN Page 13

7.	Beacon Hill Road	Route 1	Fort Hunt Road
8.	Belle View Boulevard	Fort Hunt Road	George Washington Parkway
9.	Beauregard Street	Little River Turnpike	Alexandria City Line
10.	Beulah Road	Route 7	Vienna Town Limits
11.	Braddock Road	Backlick Road	Columbia Pike
12.	Braddock Road	Pleasant Valley Road	Stone Road
13.	Browns Mill Road	Crowell Road	Beulah Road
14.	Burke Center Parkway	Burke Lake Road	Fairfax County Parkway
15.	Burke Lake Road	Fairfax County Parkway	Route 123
16.	Carlyn Springs Road	Seminary Road	Arlington County Line
17.	Cedar Lane	Gallows Road	Route 50
18.	Chain Bridge Road	Anderson Road	Route 123
19.	Clifton Road	Route 29	Route 123
20.	Colvin Run Road	Walker Road	Route 7 East
21			
21.	Commerce Street	Old Keene Mill Road	Franconia Road
22.	Commerce Street Compton Road	Old Keene Mill Road Ordway Road	Franconia Road Clifton Road
22.	Compton Road	Ordway Road	Clifton Road
<ul><li>22.</li><li>23.</li></ul>	Compton Road Crowell Road	Ordway Road Hunter Mill Road	Clifton Road Browns Mill Road
<ul><li>22.</li><li>23.</li><li>24.</li></ul>	Compton Road Crowell Road Dranesville Road	Ordway Road Hunter Mill Road Route 7	Clifton Road Browns Mill Road Herndon Town Limits
<ul><li>22.</li><li>23.</li><li>24.</li><li>25.</li></ul>	Compton Road Crowell Road Dranesville Road Fair Lakes Parkway	Ordway Road Hunter Mill Road Route 7 West Ox Road	Clifton Road Browns Mill Road Herndon Town Limits Stringfellow Road
<ul><li>22.</li><li>23.</li><li>24.</li><li>25.</li><li>26.</li></ul>	Compton Road Crowell Road Dranesville Road Fair Lakes Parkway Edsall Road	Ordway Road Hunter Mill Road Route 7 West Ox Road Backlick Road	Clifton Road Browns Mill Road Herndon Town Limits Stringfellow Road Alexandria City Limits
<ul><li>22.</li><li>23.</li><li>24.</li><li>25.</li><li>26.</li><li>27.</li></ul>	Compton Road Crowell Road Dranesville Road Fair Lakes Parkway Edsall Road Fort Hunt Road	Ordway Road Hunter Mill Road Route 7 West Ox Road Backlick Road Route 1	Clifton Road Browns Mill Road Herndon Town Limits Stringfellow Road Alexandria City Limits Vernon View Drive

31.	Furnace Road	Route 123	Route 1
32.	Gallows Road	I-495	Hummer Road/ Annandale Road
33.	Gallows Road	Annandale Road/ Hummer Road	Columbia Pike
34.	Georgetown Pike	Route 7	Route 123
35.	Glen Carlyn Road	Route 7	Arlington County Line
36.	Gosnell Road	Route 7	Old Courthouse Road
37.	Graham Road	Annandale Road	Route 29
38.	Great Falls Street	Route 123	Falls Church City Line
39.	Guinea Road	Little River Turnpike	Route 123
40.	Haycock Road	Route 7	Westmoreland Street
41.	Hayfield Road	Manchester Boulevard	Telegraph Road
42.	Henderson Road	Old Yates Ford Road	Clifton Road
43.	Hooes Road	Fairfax County Parkway	Route 123
44.	Hummer Road	Little River Turnpike	Gallows Road
45.	Hunter Mill Road	Baron Cameron Avenue	Blake Lane
46.	Huntington Avenue	Fort Hunt Road	Telegraph Road
47.	Idylwood Road	Cedar Lane	Great Falls Street
48.	Lee Road	Route 50	Stonecroft Boulevard
49.	Jermantown Road	Fairfax City Line	Blake Lane
50.	John Marr Drive	Ravensworth Road	Columbia Pike
51.	Kirby Road	Great Falls Street	Route 123
52.	Lawyers Road	Fox Mill Road	Vienna Town Line
53.	Lee Chapel Road	Burke Lake Road	Route 123
54.	Lewinsville Road	Route 7	Route 123

55.	Lincolnia Road	Columbia Pike	Beauregard Street
56.	Loisdale Road	Franconia Road	Newington Road
57.	Magarity Road	Lisle Avenue	Great Falls Street
58.	Monroe Street	West Ox Road	Herndon Town Line
59.	Mount Vernon Highway	Route 1	Mount Vernon Memorial Highway
60.	Mount Vernon Memorial Highway	Route 1	Mount Vernon Highway
61.	Newington Road	Loidale Road	Fairfax County Parkway
62.	North Kings Highway	Route 1	Telegraph Road
63.	Nutley Street	Vienna Town Line	Route 50
64.	Old Courthouse Road	Beulah Road	Gallows Road
65.	Old Dominion Drive	Georgetown Pike	Arlington County Line
66.	Old Yates Ford Road	Prince William County Line	Henderson Road
67.	Ordway Road	Prince William County Line	Compton Road
68.	Park Street	Vienna Town Line	Cedar Lane
69.	Patrick Henry Drive	Route 7	Route 50
70.	Pleasant Valley Road	Route 29	Route 50
71.	Pohick Road	Fairfax County Parkway	Route 1
72.	Poplar Tree Road	Stringfellow Road	Westfields Boulevard
73.	Prosperity Avenue	Little River Turnpike	Gallows Road
74.	Ravensworth Road	Little River Turnpike	Braddock Road
75.	Roberts Parkway	Fairfax County Parkway	New Guinea Road
76.	Rolling Road	Braddock Road	Franconia-Springfield Parkway
77.	Rolling Road	Fairfax County Parkway	Pohick Road
78.	Seminary Road	Carlyn Springs Road	Alexandria City Limits
79.	Sherwood Hall Lane	Route 1	Fort Hunt Road

## FAIRFAX COUNTY COMPREHENSIVE PLAN, 2017 Edition Transportation, Amended through XX-XX-20XX – Appendix

#### POLICY PLAN Page 16

80.	Shreve Road	Route 29	Route 7
81.	Silverbrook Road	Route 123	Lorton Road
82.	Sleepy Hollow Road	Columbia Pike	Route 7
83.	South George Mason Drive	Seminary Road	Arlington County Line
84.	South Kings Highway	Telegraph Road	Route 1
85.	Spring Hill Road	Route 7	Georgetown Pike
86.	Springvale Road	Georgetown Pike	Route 7
87.	Stonecroft Boulevard	Route 50	Westfields Boulevard
88.	Stringfellow Road	Route 50	Route 29
89.	Sunrise Valley Drive	Centreville Road	Hunter Mill Road
90.	Sunset Hills Road	Herndon Town Line	Hunter Mill Road
91.	Swinks Mill Road	Georgetown Pike	Lewinsville Road
92.	Sydenstricker Road	Old Keene Mill Road	Fairfax County Parkway
93.	Towlston Road	Old Dominion Drive	Trap Road
94.	Trap Road	Towlston Road	Beulah Road
95.	Twinbrook Road	Braddock Road	Guinea Road
96.	Vale Road	West Ox Road	Vienna Town Line
97.	Vernon View Drive	Fort Hunt Road	George Washington Parkway
98.	Wakefield Chapel Road	Little River Turnpike	Braddock Road
99.	Walker Road	Georgetown Pike	Colvin Run Road
100.	Waples Mill Road	Route 50	West Ox Road
101.	West Ox Road	Centreville Road	Lawyers Road
102.	West Street	Route 29	Falls Church City Limit
103.	Westmoreland Street	Chain Bridge Road	Arlington County Line
104.	Westpark Drive	International Drive	Route 7
105.	Wiehle Avenue	Crestview Drive	Sunrise Valley Drive
106.	Willard Road	Stonecroft Road	Walney Road

107. Wilson Boulevard

Route 7

Arlington County Line



#### **APPENDIX 2**

#### TYPES OF TRANSIT SERVICES AND FACILITIES

The Countywide Transportation Plan map identifies improvements and designates several Enhanced Public Transportation Corridors (EPTC) and facility types. The EPTC notes where major transit services will be provided in corridors that carry higher volumes of local and regional vehicular traffic. This map provides approximate locations for supporting facilities of the existing and planned transit services for the purpose of reserving right-of-way required by the facility development. Final locations of component facilities are subject to completion of area plans or appropriate studies. This appendix outlines the types of transit services and facilities based on comprehensive consideration of transit modes, technologies, rights-of-way, capacities, and service and operational characteristics.

#### **Transit Services**

Public transportation services can be generally categorized into three major types: rail transit, bus transit and paratransit.

**Rail Transit** is a mass transit service using rail technology and occupying a separate right-of-way. Heavy rail, commuter rail and light rail are the common rail transit services.

Heavy rail transit (HRT) is an electric railway with the capacity for carrying a heavy volume of urban passenger traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating in multi-car trains on fixed rails, separate rights-of-way from which all other vehicular, foot and bicycle traffic are excluded, and high platform loading. Most passengers access heavy rail services by walking, bicycle, riding feeder bus services, ride-share services, or using park-and-ride facilities near suburban stations. The heavy rail transit service in the Washington DC region is referred to as Metrorail.

Commuter rail (CR) is a type of passenger train service that utilizes diesel-electric or electrically propelled trains and operate over existing railway track on the same rights-of-way used by intercity railway freight and passenger trains. Services are operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas, or between urbanized areas and outlying areas. The Virginia Railway Express (VRE) is a commuter rail service that provides service between Virginia suburbs, including outlying counties, and downtown Washington DC.

Light rail transit (LRT) is essentially an improved and modernized version of the old streetcars and electric interurban railways that were common in the United States from the 1890s through World War II. It utilizes electrically propelled passenger cars operating on fixed rails in rights-of-way that may or may not be separated from other traffic for much of the way. Light rail vehicles typically operate at surface level with power drawn from overhead electric lines via trolley pole. Light rail serves passenger trips within the densely developed urban and suburban areas. A modern streetcar is a form of light rail that has less capacity.

Automated guideway transit (AGT), or people mover, is an electric railway of guided transit vehicles, operating singly or in multi-car trains, without an onboard crew. AGT systems provide short-distance collection and distribution service, usually

in major activity centers. Service may be on a fixed schedule or in response to a passenger activated button. AGT systems are located in several U.S. cities but are more commonly found in downtown areas and at airports and amusement parks.

**Monorail** is a form of guided transit where the vehicles are supported by or suspended from a guideway formed by a single beam, rail or tube, usually elevated. If the trains do not have an onboard crew, they are considered automated guideways.

**Bus Transit** utilizes rubber-tired vehicles operating on fixed routes with fixed schedules on roadways. Bus transit can be further classified in the following types.

**Local bus service** is the most common type of bus service. Buses may stop every block or two along a route several miles long and serve a destination end or traffic generator, for example, a shopping mall or a hospital, for example.

When limited to a small geographic area or to short-distance trips, local service is often called feeder, circulator, or shuttle service. Such routes may operate in a loop and connect, often at a transit station, or rail station, to major routes for travel to more destinations. Most Fairfax Connector bus routes are categorized as a local bus service.

**Express service** is a high-speed limited-stop service generally operating within transportation corridors oriented to a principal destination. It consists of longer trips, especially to major activity centers during peak commuting hours, and operates long distances without stopping. Examples include services accessing freeways, and services on major streets that operate local service on the outlying portions of a route until a certain point and then operate non-stop to activity centers. Reverse commute is a type of express service transporting passengers from residential locations in urban core areas to employment centers in the outlying areas. It is operated in the opposite direction of the peak direction of travel.

**Bus rapid transit (BRT)** is a flexible, rubber-tired, rapid-transit mode that mostly operates in a dedicated right-of-way with at-grade intersections. Limited sections are in mixed traffic. BRT is an integrated system of facilities, services, and amenities that collectively improves the speed, reliability, and identity of bus transit. Distinguishing features may include:

- Distinctive and clearly designated stops/stations with unique passenger amenities at regularly spaced stations;
- Standard or extended sized buses with distinct appearance, high quality passenger comfort, low floor or high platform, and multiple doors for easy and fast boarding/alighting at stops/stations;
- Frequent service headways throughout the day;
- Off-board fare collection;
- Well organized movement of buses along the line, including optimized signal timing and intersection treatments, dispatching at stops; and
- Passenger information controlled by various Intelligent Transportation Systems (ITS) measures to provide reliability.

**Microtransit** is a flexible, on demand, dynamic service that operates similarly to traditional public transit but with more adaptability to individual needs using smaller vehicles including, but not limited to, vans, shuttles, or minibuses. This service often bridges the gap between existing transit options and SOV use, providing a viable alternative where the transportation network is inadequate.

**Paratransit** is a demand-responsive shared-ride transportation service without a fixed route. In practice, paratransit covers two broad areas: ADA paratransit and other paratransit.

**ADA paratransit**, in compliance with the Americans with Disabilities Act (ADA) and other rulings, transports individuals with disabilities who are unable to travel alone on fixed route system. MetroAccess is the ADA paratransit service for the Washington DC metropolitan area.

Other paratransit services can transport individuals to a destination ("many to one") or to several destinations ("many to many"). There are several forms including shared-ride taxi, general public dial-a-ride (typically used in areas of low transit demand), human service agency transportation, and ridesharing including vanpools. Vanpools, comprised of vans operating as a ridesharing arrangement, provide service to a group of individuals traveling directly between their homes and a regular destination within the same geographical area.

#### **Transit Facilities**

Transit facilities provide access and modal transfer for users of public transportation services.

**Bus stop** is where one or multiple bus routes pick up passengers. A bus stop should have minimum amenities such as schedule and route information displays, accessible via active transportation, benches and/or shelters. The provision of benches and shelters should take into consideration daily passenger boarding levels and adjacent land use characteristics.

**Transit station (T)** is a passenger loading and waiting area where bus routes and/or other transportation modes converge. A transit station should have good access to nearby arterials and/or freeways to minimize transit travel times. It could be a free-standing individual facility or could easily be integrated with the design of a building. A transit station typically has significant infrastructure such as a waiting room, areas with seating, restrooms, sales outlet, ticketing or pass vending machines, convenient fare collection areas, and/or other services. In some instances, a timed-transfer system is used and buses converge on the transit station at a specific time to exchange passengers. Parking typically is not provided at these locations, although the transit station could be co-located with a rail station parking facility or park-and-ride lot.

**Rail Station (R)** is defined as a location where a rail rapid transit service picks up and drops off passengers. A rail station typically has a bus transit waiting area, kiss-and-ride, bicycle parking and other amenities listed under transit station. It may or may not be accompanied by vehicle parking areas, depending on the nature of the station area.

Commuter Rail Station (C) is defined as a location where commuter rail service is provided. It has passenger amenities similar to those provided for a rail station.

**Park-and-Ride (P)** is a parking garage and/or surface lot used for parking passengers' vehicles, either free or for a fee, while they use public transportation facilities or vanpools. Park-and-ride facilities are generally established as collector sites for multiple bus routes, rail service, and high-occupancy-vehicle (HOV) lane access, and may also serve as collector sites for vanpools, carpools, shared ride services and bike share stations. They may have amenities similar to transit stations.

**Kiss-and-Ride** is a location where passengers in non-transit vehicles are dropped off to board public transportation vehicles. Kiss-and-Ride areas could be located at transit stations, rail stations, commuter rail stations, and park-and-ride facilities.

Operations, Maintenance and Administrative Facilities are combined transit facilities housing administrative functions, such as executive management, accounting, safety, and scheduling, as well as private vehicle parking for administrative staff and vehicle operators. These facilities also include dedicated areas for vehicle maintenance, where mechanics, machinists, and maintenance personnel conduct preventive maintenance, daily inspections, and corrective maintenance to keep revenue vehicles operational. Typical features include maintenance bays with in-ground or portable lifts, bus and chassis wash systems, parts storage, fuel tanks and pumps, and depot electric plug-in charging stations. Revenue vehicles may also be stored at these facilities overnight or between periods of service.

**On-route chargers** are infrastructure systems co-located with bus stops, providing charging for electric buses outside of Operating and Maintenance Facilities. These chargers are important for longer bus blocks, which may sometimes require more energy than an electric bus battery can store. They are typically installed at busy stops or clusters of stops where multiple bus routes have layovers.



#### **APPENDIX 3**

#### BICYCLE AND TRAIL CLASSIFICATION AND DEFINITIONS

#### **COUNTYWIDE TRAILS PLAN MAP**

Major Regional Trail: Includes the US Bicycle Route 1, Gerry Connolly Cross County Trail, and trails along I-495, I-66, Dulles Airport Access Road, Fairfax County Parkway, Franconia-Springfield Parkway, Norfolk Southern Railway, George Washington Memorial Parkway, Washington and Old Dominion Regional Park, Bull Run, Occoquan River and Potomac River. Most of the trails designated in this category are paved trails, 8 feet or more in width. However, surface materials vary from paved, natural surfaces and stone dust for the US Bicycle Route 1, South County East-West trail, Gerry Connolly Cross County Trail and those trails along the Bull Run, Occoquan River, and Potomac River.

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

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

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

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

**Stream Valley Trail:** Trails along streamways as determined by Fairfax County Park Authority Staff.

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

#### COUNTYWIDE BICYCLE NETWORK MAP(S)

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

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

- Shared Roadways with Safety Treatment: is a recommendation for generally narrow, hilly, and winding two-lane roads. Improvements can include: signs such as "BIKES MAY USE FULL LANE," additional shoulder pavement, and/or pavement markings.
- Shared Lane Markings: (sharrows) are used on roadways where bicyclists and motor vehicles must share the same travel lane. The shared lane marking helps position bicyclists in the most appropriate location to ride, while also providing a visual cue to motorists that bicyclists have a right to use the street. Refer to the Virginia Department of Transportation (VDOT) policy for guidance on the proper use of Shared Lane Markings.
- Striped Shoulder: provides space for bicycle travel to the right of the travel lanes. Paved shoulders serve a variety of transportation purposes in addition to providing a benefit for cyclists, including serving as a breakdown lane, contributing to overall pavement integrity, and providing a place for pedestrian travel where there are no sidewalks. A shoulder designated for bicycles should be no less than four feet in width.
- **Bike Lane:** is an area of roadway pavement designated for preferential or exclusive use by bicycles. The lane is normally 4 6 feet in width and marked with a longitudinal white line and bicycle symbols Refer to the VDOT Bicycle Design Standards for guidance on bike lanes and bicycle pavement markings.
- Climbing Lane: when insufficient width exists to accommodate bike lanes in both directions and the roadway features a vertical grade, a climbing lane is considered. A bike lane (climbing lane) is provided in the uphill direction to accommodate slow moving bicyclists and a shared lane marking is provided in the downhill direction, where bicyclists can typically travel at speeds closer to motor vehicle speeds.
- **Buffered Bike Lanes:** created by striping a buffer zone (three feet in width or greater) between a bike lane and the adjacent travel lane.
- Cycletrack: is a bicycle facility for cyclists only that is physically separated from both the roadway and the sidewalk. A cycletrack may be constructed at the roadway level using roadway space, or at the sidewalk level using space adjacent to the road. Cycletracks can be provided in either one way or two way configurations.
- Shared-Use Path (trail): is an off-street multi-use facility that is physically separated from motor vehicle traffic. Trails are often located in independent right-of-way (e.g. a park, stream valley greenway, a utility corridor, or an abandoned railroad corridor) or located adjacent to the roadway within roadway rights of way. It is intended for use by bicyclists and pedestrians and normally is designed to accommodate two-way traffic
- **Policy Roads:** are multi-lane highways (functionally classified as principal arterials) that carry large volumes of traffic and/or have relatively high posted speeds (40mph or greater). These roads traverse a wide variety of land uses. Specific bicycle facility recommendations must be made in conjunction with other transportation and land use planning efforts.

The bicycle network maps also define recommended spot improvements:

- Bicycle Access Links and Crossings indicate locations where there are opportunities to improve neighborhood connectivity, for example by connecting cul-de-sacs, enhancing mid-block and trail/shared-use path crossings and by improving access to existing trails.
- **Interchange Improvements** represent locations where free flowing entrance and exit ramps create difficult conditions for bicyclists traveling along the road.
- Transit Station Improvements signify locations where existing and planned transit stations (Metro and VRE) create especially high demand for bicycle travel and need for bicycle accommodations. Appropriate accommodations may include bicycle racks, covered bicycle parking, high security parking, facilities on station access roads, curb ramps, crossing improvements or paths that provide safe and convenient station access.
- Stream Crossings are recommended in locations where linear barriers to bicycle travel exist at the crossings of streams. These bridge crossings will be designed for bicycle and pedestrian transportation.
- **Road Crossings** are recommended in locations where linear barriers to bicycle travel exist at the crossings of major highways. These crossings can be standalone bicycle and pedestrian bridges or bike lanes and shared use paths as part of a bridge that also serves motor vehicles.

#### **APPENDIX 4**

#### ROADWAY RIGHT-OF-WAY REQUIREMENTS

Fairfax County preserves land for roadway improvements, to decrease delays in land acquisition, and to obtain land before land values increase with developed properties. The guidelines are described by the right-of-way requirements for roadways shown on the transportation plan.

The rights-of-way specified should be obtained through the development approval process (e.g. rezoning, special exception, site plan, etc.) as applications are submitted to the county. This will allow for future road improvements to be constructed with adequate ancillary features such as turning lanes, sidewalks, trails, bicycle facilities, and buffering, while minimizing impacts on properties which are subsequently developed.

Ultimate roadway designs will recognize available right-of-way to the extent possible; the intent of these requirements is not to impose rigid standards through areas or mature neighborhoods, but rather to secure additional right-of-way needed for road improvements as development or redevelopment occurs.

#### Freeways/Expressways

Right-of-way needs along freeway facilities can be variable and extensive. The right-of-way may need to accommodate HOV/HOT lanes, rail transit, adjacent protected shared use paths, and roadway configurations with interchanges, ramps, and collector-distributor lanes. The rights-of-way for freeway facilities should be based on studies for each facility. These could include detailed corridor analyses, feasibility studies, interchange modification reports, location and design studies and/or environment impact studies.

#### **Arterials**

Right-of-way requirements for arterials should be similar throughout the county. Table 1 summarizes the right-of-way requirements for arterial roadways based upon the number of lanes and the type of edge treatment: 'curb and gutter' or 'shoulder'. The number of lanes refers to the designation on the transportation plan. The edge treatment will vary by location within the county as follows:

- (1). In the low density residential areas of the county, right-of-way should be provided as described for a 'shoulder' edge treatment. The provision of sufficient right-of-way to accommodate shoulders will allow for the ultimate typical section to be determined at the time detailed design is initiated. It is anticipated that this decision will be made based on several factors, including cost, clearing and grading requirements, the presence of storm sewer lines in the area, aesthetics, and other concerns. However, it is recognized that in all other areas of the county, curb-and-gutter treatments having less right-of-way requirements will normally be appropriate.
- (2). The 'shoulder' edge treatment is optional in suburban neighborhoods.
- (3). Additional right-of-way requirements for items such as turn lanes, service drives, parking lanes and on-road bike lanes are noted on Table 1.

When highway projects have approved designs or are in active stages of design, the strict application of these right-of-way requirements, shown in Table 1, could result in inconsistencies with such plans. To avoid this situation, approved or active designs should be utilized to determine right-of-way requirements on those projects where no change is envisioned in the Plan designation for number of lanes. However, where the new Plan recommendation provides for more lanes than were previously shown on the Plan, or where there are no design plans, right-of-way should be provided in accordance with Table 1.

The cross-section illustrations in Figure 5 and Figure 6 correspond to the measurements provided in Table 1. These cross-sections represent the typical right-of-way needed and can serve as guidelines in the development of roadway plans.

#### **Other Considerations**

Additional right-of-way might be required to support traffic operations, bus rapid transit (BRT), and facilitate active and micromobility transportation. Table 1 includes the required rights-of-way for turn lanes, parking and on-road bike lanes, etc. Provision of such facilities should be determined on a case-by-case basis, taking into consideration community development characteristics, land use types and density, traffic volume and turning movements, transit service, and active transportation and supporting facilities.

#### TABLE 1

#### Minimum Right-of-Way Requirements for Roads Shown on Transportation Plan Map Where No Plans Exist (Measurement in Feet for the Entire Cross Section)

	Typical Curb and Gutter Section <sup>1,3</sup>	Typical Shoulder Section <sup>2,3</sup>
Lanes	Feet	Feet
2-lane	50	92
4-lane	90	134
6-lane	114	158
8-lane	138	182

Add XX feet of right-of-way for each of the following special circumstances:

Dual Laft Turn Lance at Major	Feet
Dual Left Turn Lanes at Major Intersections on All Legs	12
Right Turn Lanes at Major Intersections on All Approaches	12
Improved Median Treatments <sup>4</sup>	4
Service Drives <sup>5</sup>	92
Parking Lanes	8
On-Road Bike Route <sup>4</sup>	5

Add 15 feet in ancillary easements. Add supplemental right-of-way transitions to avoid special features (e.g., historic properties, parks, cemeteries, wetlands, landfills, sewage and water treatment facilities, existing buildings, etc.) and/or to improve horizontal alignment. Add 40 feet radius at intersections dedicated to the chord of the radius curve.

<sup>1</sup> Minimum section with 2-lanes includes through lanes, curb and gutter, landscape buffer, sidewalk, and maintenance strip. Section with 4-lanes and higher includes median/center turn lane, through lanes, curb and gutter, landscape buffer, sidewalk and maintenance strip. Landscape buffer width may increase if street trees are included.

<sup>2</sup> Minimum section with 2-lanes includes through lanes, shoulder, ditch, landscape buffer, sidewalk and maintenance strip. Section with 4-lanes and higher includes median/center turn lane, through lanes, landscape buffer, sidewalk, and maintenance strip. Landscape buffer width may increase if street trees are included.

<sup>3</sup> Where design plans consistent with the Comprehensive Plan and providing all anticipated future turn-lane requirements are developed to a sufficient level of detail and approval, right-of-way and easement dedication requirements should be based upon them.

<sup>4</sup> Commercial revitalization areas or other special areas where pedestrian refuge, landscaping or special design features are desired within the median. The additional median width allows for landscaping, trees and/or special paving.

<sup>5</sup> Primary Highways, dimension includes both sides of the road, except where waived.

<sup>6</sup> The preferred bicycle route is an off-road bicycle facility, such as a shared-use path.

Figure 5: Cross Section Illustration of a Typical Curb and Gutter Section (Measured in Feet)

Not to Scale

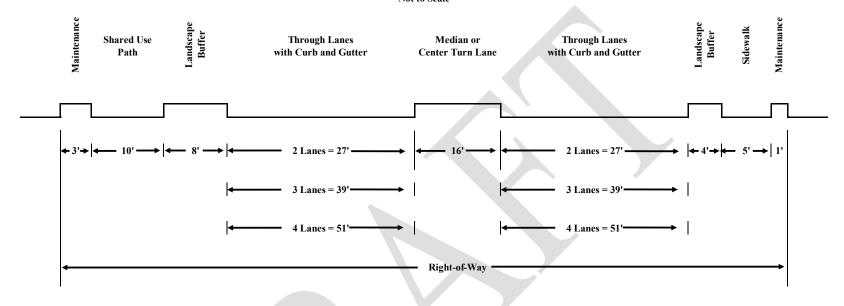
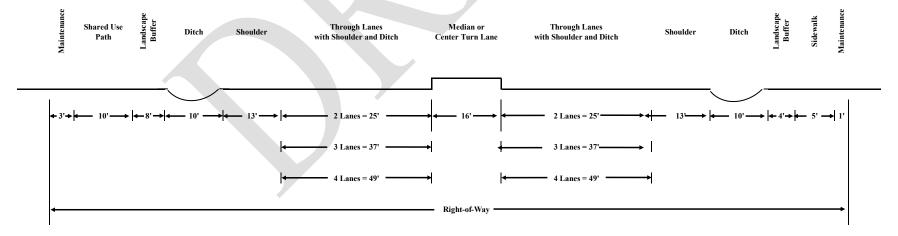


Figure 6: Cross Section Illustration of a Typical Shoulder Section (Measured in Feet)

Not to Scale



#### **Roads in Revitalization Areas**

The right-of-way requirements are generally applicable for improvements in a typical suburban setting, as shown in Figure 5 and Figure 6. The county is comprised of diverse communities and development patterns, some of which have more urban features, higher land use densities, and more active transportation and transit and microtransit services. This Policy Plan allows flexibility and variation in right-of-way requirements for the planned arterial improvements. The planning and design of individual roadways need to fit with the surrounding land use and community, while enhancing mobility and safety for all multimodal transportation uses.

The county has designated several Revitalization Districts and Areas to encourage economic development in the older commercial and residential areas. Special incentives and policies are provided for these areas, such as flexibility within certain zoning regulations and urban design measures. Road improvements that are within the Revitalization Districts and Areas should be in concert with the adopted land use, urban design and economic and administrative policies formulated to foster a sense of place and to support successful revitalization. Additionally, it is important to recognize that land use, and right-of-way for multimodal transportation and for travel patterns differ among these areas.



#### **APPENDIX 5**

#### FAIRFAX COUNTY BICYCLE MASTER PLAN

Appendix 5 was comprised of Chapters 1 through 4 of the *Bicycle Master Plan*. Chapter 5, Bicycle Program Recommendations and Chapter 6, Implementation, were adopted by reference only, and can be viewed by contacting the Fairfax County Department of Transportation.



#### **Key for Text Modifications:**

- Standard black text: Existing Plan language proposed for retention.
- Red text with strikethrough: Existing Plan language proposed for removal.
- <u>Blue text with underline</u>: New proposed Plan language.

#### TRANSPORTATION

#### **INTRODUCTION**

Fairfax County is served by an extensive transportation system comprised of streets, sidewalks, trails, bicycle routes, and public transportation. roadways, bus and rail rapid transit, paratransit services and an international airport. In addition, an extensive sidewalk and trail system serves pedestrian and bicycle travel. The roadway and public transit system accommodates This multimodal system supports hundreds of thousands of daily trips every day by people using all of these different modes. The County's transportation system fulfills the mobility demands of a growing and changing population, both within the County and from neighboring jurisdictions. However, the provision of transportation facilities and services has not kept pace with the increasing travel demand in the county. This increased travel demand is fueled both by the growth within Fairfax County and by the growth in surrounding jurisdictions.

Transportation plays a role in shaping land use, mobility choices, and providing mobility choices and connectivity throughout the county. The county is committed to providing safe, efficient, and equitable mobility options by expanding multimodal opportunities including transit, pedestrian and bicycle infrastructure, and by integrating transportation planning with land use decisions. Through continued planning, collaboration with the community and regional partners, and strategic investment, Fairfax County aims to implement innovative and sustainable transportation solutions to reduce congestion, provide and enhance equitable transportation access, and support the county's long-term vision.

The following objectives and policies emphasize the importance of providing safe, efficient, and equitable mobility choices. These policies prioritize expanding transit options, enhancing pedestrian and bicycle infrastructure, and integrating transportation planning with land use decisions. The Transportation Element, with accompanying appendices, provides the county's objectives and policy recommendations for a comprehensive multimodal transportation network and is implemented in coordination with other county policies, strategies, and programs, in addition to other documents, studies, and maps maintained by the Fairfax County Department of Transportation.

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

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

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

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

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

#### **BOARD OF SUPERVISORS GOAL**

Transportation - Land use must be balanced with the supporting transportation infrastructure, including the regional network, and credibility must be established within the public and private sectors that the transportation program will be implemented. Fairfax County will encourage the development of accessible transportation systems designed, through advanced planning and technology, to move people and goods efficiently while minimizing environmental impact and community disruption.

A keystone policy for future planning and facilities includes achievement of a multi-modal transportation system to reduce excessive reliance upon the automobile. Regional and local

efforts will focus on planning and developing a variety of transportation options. Sidewalks, trails and on-road bicycle routes should be developed as alternate transportation facilities leading to mass transit, high density areas, public facilities and employment areas.

#### COUNTYWIDE OBJECTIVES AND POLICIES

- Objective 1: Develop a multimodal transportation system to facilitate the efficient movement of people and goods, placemaking, and increase travel options.
  - Policy a. Accommodate <u>local and regional inter-county and through</u> trips with the Interstate and Primary Highway Systems, <u>public transportation</u>, <u>mass transit</u>, high-occupancy-vehicle (HOV), and high-occupancy-toll (HOT) facilities, <u>to reduce single occupant vehicle (SOV) travel</u>.
  - Policy b. Establish a network of multimodal <u>transportation corridors</u> multi-modal centers as necessary to facilitate <u>travel options</u>. both inter-county and intra-county travel.
  - Policy c. Coordinate with neighboring jurisdictions in developing a planned multimodal transportation network to increase regional connectivity and provide enhanced transportation options. to promote public transportation usage, bicycle route connectivity, and reduce SOV travel.
  - Policy d. Plan, design, and operate the roadway system consistent with the <u>Appendix 1:</u> Roadway Functional Classification System.
  - Policy e. <u>Provide roadway, active transportation and supporting facilities that meet the standards in the Fairfax County Public Facilities Manual.</u>
  - Policy f. Provide motorized and non motorized transportation facilities or transportation improvements that best meet county goals as determined by detailed corridor, area plan, and/or subarea studies. Provide for full public participation in such studies.
  - Policy g. Integrate Comprehensive Transportation Analysis (CTA) metrics and methodology into transportation studies, Comprehensive Plan amendments, and entitlement applications to balance active transportation, public transit, safety, and vehicle usage.
  - Policy h. <u>Implement roadway improvements to repurpose excess right-of-way for expanding multimodal opportunities.</u>
  - Policy i. Optimize the use of curb space, on-street parking facilities, and loading zones (e.g. various deliveries to residential, commercial land uses), while ensuring

accessibility.

- Policy j. <u>Implement transportation improvements in communities where limited</u> facilities or access to transportation exist.
- Policy k. Provide public transportation stops and shelters that are accessible by active transportation facilities.
- Policy I. Ensure streetscape design incorporates placemaking, public art promoting community identity and engagement, and environmental benefits through the provision of pedestrian-scale lighting, street furniture, native or adaptive vegetation (e.g., non-invasive, climate resilient) and permeable hardscape permeable where appropriate.
- Policy m. Create a sense of community awareness and cultural continuity by enhancing, preserving, and actively maintaining the unique character and heritage of public spaces, neighborhoods, and transportation corridors.

#### Objective 2: Align land use and transportation to create a complementary system.

- Policy a. Give priority to Prioritize the programming of transportation improvements that assist in accomplishing the county's land use goals and objectives. particularly the encouragement of transit oriented development at Transit Station Areas, Commercial Revitalization Areas, and in the cores of the Urban and Suburban Centers.
- Policy b. Enhance accessibility and multimodal connectivity between a variety of land uses throughout the county, (e.g. homes, parks, shopping centers, public facilities, and community gathering areas).
- Policy c. Preserve the maximum potential requirements for Provide the <u>full</u> planned typical section and right-of-way <u>requirements</u>, <u>as outlined in Appendix 4</u>, where planned roadway improvements have not <u>yet</u> been designed. (See the Roadway Right-of-Way Requirements Section in the Transportation Appendix.)

#### **Objective 3:** Develop and enhance active transportation facilities and services.

- Policy a. Provide active transportation facilities for pedestrians, bicyclists, and micromobility users on both sides of the street. Provide sidewalks on both sides of streets.
- Policy b. Connect adjacent active transportation routes to transit stations and park-and-ride lots. Provide amenities to include bicycle and micromobility share stations, parking and lockers.
- Policy c. Connect active transportation facilities (e.g., libraries, parks, shopping centers)

and public transportation facilities throughout the county.

- Policy d. Provide for Implement clearly marked bicycle and pedestrian features (e.g., bicycle routes, trails, crosswalks) when improving transportation infrastructure. such as sidewalks, on road bicycle routes, trails, crosswalks, curb cuts, refuge areas and pedestrian/bicycle signals, in the construction and reconstruction of roads and bridges. Evaluate road dieting and/or lane dieting concepts where roadway volume to capacity ratios allow in order to establish on road bike lanes.
- Policy e. Apply best practices for Promote walkable and bikeable communities to enhance quality of life, public health, and the environment. and ecological preservation.
- Objective 4: <u>Increase the use of public transportation and improve facilities and services.</u>
  - Policy a. Coordinate with regional partners to support the enhancement and expansion of the Metrorail system, bus and bus rapid transit (BRT) routes, and additional transit stations. Support the extension of the Metrorail system in the Dulles Corridor to the Dulles Airport and Loudoun County.
  - Policy b. Provide accessible transportation services and facilities that <u>increase transit</u> coverage and accommodate the travel needs for all ages and abilities. <del>address</del> the travel needs of the senior, disabled, and mobility challenged population.
  - Policy c. <u>Integrate public transportation services seamlessly into the broader public transportation network, improving first- and last- mile connectivity, with attention to underserved areas.</u>
  - Policy d. Promote and provide public transportation vehicles, equipment, and support facilities and services.
  - Policy e. Provide and connect feeder, local, and circulator bus services to transit stations, park-and-ride lots and garages, and transit-oriented development (TOD) and mixed-use centers.
  - Policy f. Facilitate <u>ease of transfers</u> between modes at transit <u>eenters</u> stations, park-and-ride lots and garages, and transit stops. <u>through coordination of services</u>, <u>schedules</u>, <u>fares</u>, <u>communication systems and information</u>.
  - Policy g. Improve and expand park-and-ride facilities to include vehicle parking, bus bays, covered waiting areas, and charging stations for transit buses. Enhance the rider experience with amenities (e.g. restrooms, water fountains, seating areas, private vehicle charging stations).

- Policy h. Develop parking management strategies which include reduced parking rates for ride-share carpooling, holiday and weekend rates.
- Policy j. Work Collaborate with Fairfax County Public Schools (FCPS) and human service agencies to provide education and training for safe ridership and awareness for all public transportation riders. travel train the senior population and people with disabilities in the use of public transportation.
- Objective 5: Prioritize safety for people who use transportation facilities and services.
  - Policy a. Reduce Minimize travel mode conflicts and enhance safety for all individuals by prioritizing the protection of vulnerable users. between motorized and non-motorized traffic and correct unsafe conditions for walking and bicycling.
  - Policy b. Upgrade existing roadways to correct unsafe improve safety conditions where road segments do not meet current standards, along segments with substandard geometries.
  - Policy c. Ensure Maintain accessible pedestrian and bicycle access and safety during construction of transportation facilities and land development.
  - Policy d. <u>Install wayfinding signage across roadways, pedestrian and bicycle paths, and public transportation hubs to clearly indicate evacuation routes and emergency transportation pathways.</u>
  - Policy e. Coordinate with <u>local and</u> regional public safety and transportation agencies using state of the art communications technology for emergency operations and transportation incident management.
- Objective 6: Promote and implement Transportation Demand Management (TDM) strategies to optimize the transportation network and reduce single occupant vehicle (SOV) use.
  - Policy a. Planning studies and developments should reduce SOV trips and exceed baseline TDM goals.
  - Policy b. Promote TDM strategies including <u>flexible working arrangements</u> (e.g., remote work, remote learning, alternative work schedules, flexible work hours). <u>teleworking</u>, <u>teleconferencing</u>, <u>tele education</u>, <u>alternative work schedules</u>, <u>flexible work hours and/or variable pricing</u>.
  - Policy c. Work with private and public employers by establishing alternative commute programs to reduce vehicle congestion.
  - Policy d. Promote and market public transit transportation, ridesharing, shuttle services, transit station amenities to increase awareness of multimodal options. use of HOV lanes, bicycling and walking with all potential users.

- Policy e. Work Coordinate with Fairfax County Public Schools (FCPS), private schools, and area colleges, and the Safe Routes to School (SRTS) program to use establish programs that encourage the use of walking, bicycling, rideshare, carpooling and transit to reduce SOV use and traffic congestion.
- Objective 7: <u>Leverage technology and infrastructure improvements to maximize</u> operational efficiency for all modes.
  - Policy a. <u>Assess alternative roadway configurations with innovative and low-cost strategies to maximize multimodal capability within available right-of-way.</u>
  - Policy b. Make appropriate use of advanced transit technologies to provide service information and <u>improve optimize</u> system operations. Evaluate and implement innovative services and <u>methods strategies</u> to increase transit ridership.
  - Policy c. Provide HOV lanes on freeways and major arterials where substantial travel benefits can be realized. Develop an integrated HOV system on freeways and major arterials with direct connections between park-and-ride lots, bus and rail transit centers stations, TODs, and mixed-use centers, and other modal transfer facilities. Strictly enforce HOV regulations to minimize violations.
  - Policy d. Consider providing HOT lanes on limited access roadways to enhance <u>traveler</u> throughput. <u>Ensure that Encourage</u> buses and HOVs to have <u>and utilize</u> free access to HOT lanes.
  - Policy e. Use technology and large-scale data collection tools to analyze trends and patterns in people and vehicle movement to improve overall multimodal connectivity.
  - Policy f. Advance autonomous vehicles pilot programs and infrastructure by partnering with public and private agencies, and higher education partners (e.g., to establish safety standards, protocols, operational guidelines).
- Objective 8: <u>Implement transportation solutions that minimize adverse community and environmental impacts.</u>
  - Policy a. Adopt strategies to reduce vehicle greenhouse gas emissions to meet federal standards and county climate goals (e.g., carbon reduction, climate resilience). the National Ambient Air Quality Standards.
  - Policy b. Plan and design <u>multimodal</u> transportation facilities and services to minimize adverse impacts on Environmental Quality Corridors (EQCs), Resource Protection Areas (RPAs), other environmental resources, and heritage resources.
  - Policy c. Promote the creation of thriving, sustainable, and inclusive communities by centering environmental stewardship and equitable access to transportation in

all new and revitalized development projects.

Policy d. Minimize adverse impacts of stormwater runoff from transportation infrastructure, facilities, and services by using innovative techniques, technologies, and low impact designs development (LIDs). to manage storm water run-off from transportation facilities.

Policy e. Evaluate and invest in infrastructure improvements to enhance resiliency to extreme weather events, reduce the urban heat island effect, and encourage alternative modes of transportation to reduce reliance on SOV use.

Objective 9: <u>Facilitate collaborative engagement with community members and stakeholders in multimodal planning, initiatives, and projects.</u>

Policy a. <u>Integrate feedback from community engagement efforts throughout a study and/or project when proposing designs, initiatives, and transportation improvements.</u>

Policy b. <u>Collect and analyze community input through surveys, focus groups, and interactive tools to identify priority transportation needs.</u>

Objective 10: <u>Identify and secure funding to support the implementation of the Fairfax County multimodal transportation system.</u>

Policy a. Develop and implement a responsible financial plan that effectively pursues local, regional, state, federal, and private funding, considers both public and private sources of financial support for the county's transportation system.

Policy b. Pursue and negotiate public-private partnerships to complement transportation studies, design, program implementation, and infrastructure development.

Policy c. Consider direct and indirect costs, including operations and maintenance, in when making programming decisions.

Policy d. Pursue funding new technologies for transportation development (e.g., autonomous vehicle pilot programs, electric vehicles, charging stations, microtransit).

Maps are located on the Comprehensive Plan Maps webpage, and as follows.

Figure 1: Transportation Plan Map

Figure 2: Countywide Trails Plan Map

Figure 3: Bicycle Master Plan Map

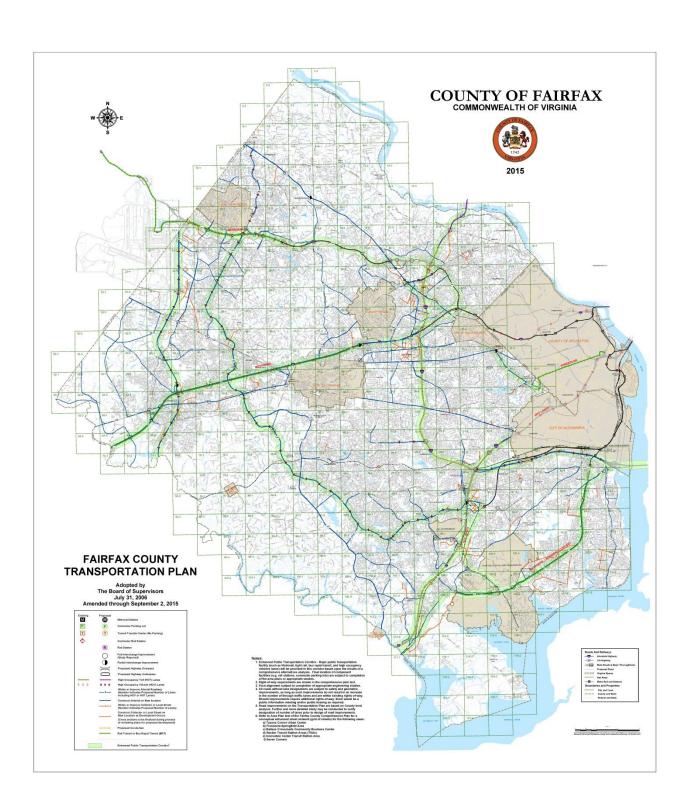
#### **COUNTYWIDE OBJECTIVES AND POLICIES**

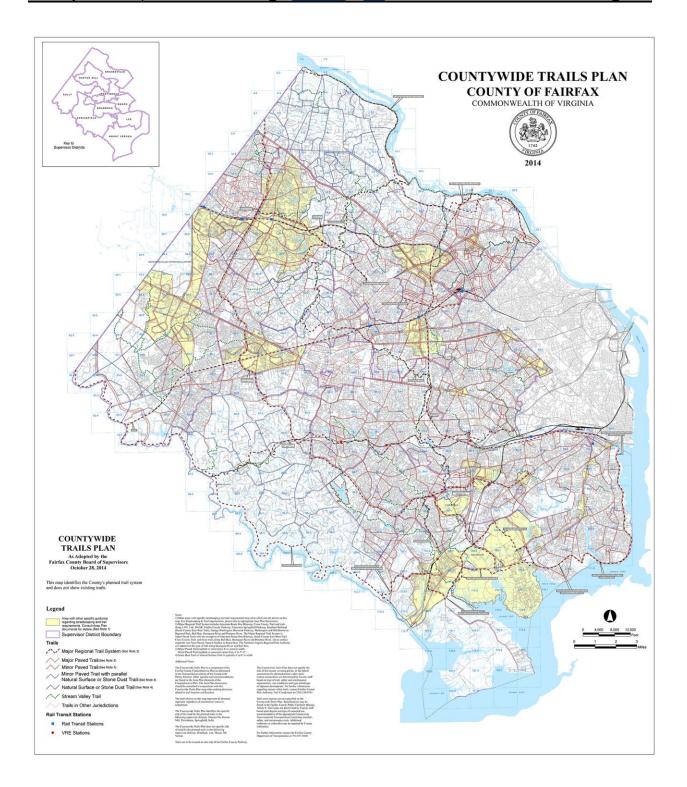
- Objective 1: Provide for both through and local movement of people and goods via a multi-modal transportation system that provides transportation choices, reduces single-occupancy-vehicle (SOV) use and improves air quality.
  - Policy a. Integrate motorized and non-motorized transportation facilities and services in accordance with transportation elements in the Transportation Plan Map (Figure 1), the Countywide Trails Plan Map (Figure 2), Bicycle Network Map (Figure 3) and the Bicycle Master Plan, chapters 1-4 (Appendix 5).
  - Policy b. Provide motorized and non-motorized transportation facilities or improvements
    that best meet county goals as determined by detailed corridor and/or subarea studies. Provide for full public participation in such studies.
  - Policy c. Accommodate inter-county and through trips with the Interstate and Primary Highway Systems, mass transit, high-occupancy-vehicle (HOV) and high-occupancy-toll (HOT) facilities.
  - Policy d. Consider providing HOT lanes on limited access roadways to enhance throughput. Ensure that buses and HOVs have free access to HOT lanes.
  - Policy e. Design and construct trails, sidewalks, overpasses, bike facilities, transit amenities, and other non-motorized facilities leading to and accessing public transportation facilities and commuter collection points.
- Policy f. Provide accessible transportation services and facilities that address the travel needs of the senior, disabled, and mobility challenged population.

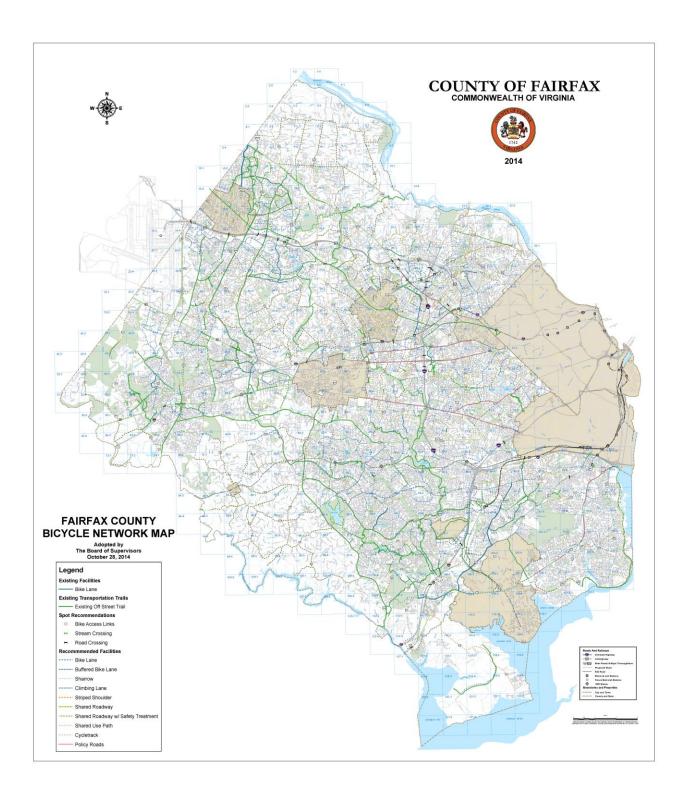
## Objective 2: Increase use of public transportation and non-motorized transportation.

#### Policies on Facilities

- Policy a. Support the extension of the Metrorail system in the Dulles Corridor to the Dulles Airport and Loudoun County.
- Policy b. Provide public transportation facilities (such as rail transit, commuter rail, bus rapid transit and/or HOV lanes) in major radial and intra-county commuter corridors designated as Enhanced Public Transportation Corridors in the Transportation Plan Map. Preserve land and rights-of-way where appropriate.
- Policy c. Provide HOV lanes on freeways and major arterials where substantial travel benefits can be realized. Develop an integrated HOV system with direct connections between park-and-ride lots, transit centers, and other modal transfer facilities and to major mixed-use Centers. Strictly enforce HOV regulations to minimize violations.







Policy m.

Policy n.

Policy o.

Policy p.

Policy d.	Establish and/or expand park-and-ride lots along major inter-county and intra- county corridors and at potential future modal transfer points such as rail stations in order to promote transit and HOV usage.
Policy e.	Incorporate adequate, safe, and secure bieycle parking at all public buildings, park and ride lots, transit facilities, libraries, and schools. Adopt bieycle parking guidelines and policy defining the number of required bieycle parking spaces, approved equipment, and the proper placement/installation of the equipment.
Policy f.	Establish a network of multi-modal centers as necessary to facilitate both intercounty and intra-county travel.
Policy g.	Provide supporting facilities for the transit system, and provide resources to maintain county-owned equipments and facilities effectively.
Policy h.	Provide safe and convenient non-motorized access (e.g., sidewalks, pedestrian crosswalk signals and markings, trails, on road bicycle routes and secure bicycle parking) and user amenities (e.g. paved waiting areas, bus shelters and route/schedule information) for transit services and facilities.
	Policies on Services
Policy i.	Improve the speed, quality, reliability, convenience and productivity of transit service.
Policy j.	Provide mass transit service in major commuter corridors, including those designated as Enhanced Public Transportation Corridors on the Transportation Plan Map. These services, including intra-county express bus service, should connect designated public transit transfer points and park-and-ride lots to mixed use centers, the Metrorail system, and the metropolitan core.
Policy k.	Provide feeder and local bus service to connect to mass transit facilities, mixed-use centers, educational facilities and employment centers.
Policy 1.	Provide local circulation service within mixed-use centers and employment centers.

Make appropriate use of advanced transit technologies to provide service

information and improve system operations. Evaluate and implement

Facilitate transfer between modes at transit centers through coordination of

Coordinate with neighboring jurisdictions to promote public transportation

Coordinate the planning and provision of public, human service agency, and non-profit transportation services targeted to the senior population, people with

Work with Fairfax County Public Schools and human service agencies to travel

innovative services and methods to increase transit ridership.

usage, bicycle route connectivity, and reduce SOV travel.

disabilities and low-income residents.

services, schedules, fares, communication systems and information.

train the senior population and people with disabilities in the use of public transportation.

- Objective 3: Ensure that the roadway system provides adequate local access and capacity for through movements, consistent with financial, social, and environmental constraints and with the county's goal of reducing SOV use.
  - Policy a. Plan, design and operate the roadway system consistent with the Roadway Functional Classification System.
  - Policy b. Provide a street network level of service as high as practical, recognizing the social, environmental, and financial constraints associated with the diverse areas of the county. At a minimum, level of service D should be provided, except where a lower level of service has been determined acceptable.
- Policy c. Encourage the use of context sensitive solutions in roadway design to improve integration of roads into the physical environment and community.
  - Policy d. Provide new roadway construction which can be accepted by the Virginia Department of Transportation (VDOT) for inclusion in the state highway system.
- Objective 4: Provide a comprehensive network of sidewalks, trails and on/off road bicycle routes as an integral element of the overall transportation network.
  - Policy a. Plan for pedestrian, bicycle, and trail system components in conjunction with the Bicycle Master Plan, the Countywide Trails Plan (Figure 2) and Countywide Bicycle Network Map (Figure 3).
  - Policy b. Incorporate pedestrian, bicycle, and other non-motorized components and supporting facilities that meet VDOT, American Association of State Highway and Transportation Officials (AASHTO), the Manual of Uniform Traffic Control Devices (MUTCD), the National Association of City Transportation Officials (NACTO) Guidelines, and/or county Standards.
  - Policy c. Provide for clearly marked bicycle and pedestrian features, such as sidewalks, on-road bicycle routes, trails, crosswalks, curb cuts, refuge areas and pedestrian/bicycle signals, in the construction and reconstruction of roads and bridges. Evaluate road dieting and/or lane dieting concepts where roadway volume to capacity ratios allow in order to establish on-road bike lanes.
  - Policy d. Provide sidewalks, trails and/or on-road bicycle routes which link residential concentrations with transit stations, activity centers, shopping districts, recreational facilities, and major public facilities, and provide for pedestrian and bicycle circulation within activity centers.
  - Policy e. Provide sidewalks on both sides of streets.
- Objective 5: Promote Transportation Demand Management (TDM) to support efficient use of the county's transportation system.

— Policy a.	Promote and market public transit, ridesharing, use of HOV lanes, bicycling and walking with all potential users.
Policy b.	Promote TDM strategies including teleworking, teleconferencing, tele-education, alternative work schedules, flexible work hours and/or variable pricing.
Policy c.	Implement parking management programs and parking controls in activity centers to encourage use of mass transit, HOV and non-motorized transportation.
— Policy d.	Encourage and support employers and landowners to establish transportation management associations (TMAs).
— Policy e.	Work with private and public employers by establishing alternative commute programs to reduce SOV use.
Policy f.	Work with the county residents, developers, homeowner associations and property management companies through residential based programs to promote use of public transportation, HOVs, non-motorized travel, and other alternatives.
Policy g.	Work with Fairfax County Public Schools, private schools, and area colleges to establish programs that encourage the use of bicycling, walking, carpooling and transit.
Policy h.	Require that applicants for rezoning and special exceptions show evidence that they have analyzed and evaluated potential TDM strategies. Encourage proffers of TDMs and develop enforcement mechanisms and proffers in support of the county's transit system.
Policy i.	Develop TDM strategies and programs in cooperation with MWCOG and other local jurisdictions.
Objective 6:	Ensure that improvements to the transportation system are cost-effective and consistent with environmental, land use, social, and economic goals.
Policy a.	Give priority to the programming of transportation improvements that assist in accomplishing the county's land use goals and objectives, particularly the encouragement of transit-oriented development at Transit Station Areas, Commercial Revitalization Areas, and in the cores of the Urban and Suburban Centers.
Policy b.	Allocate capital improvement funds to advance the construction of those transit and HOV/HOT facilities that are the most cost-effective.
Policy c.	Integrate non-motorized transportation projects into the programming of construction and maintenance projects and improve bicycle level of service with road reconstruction projects.

Policy d.	Anticipate future demands and operating conditions in addition to existing conditions when making programming decisions.
Policy e.	Consider direct and indirect costs, including operations and maintenance, in making programming decisions.
Policy f.	Pursue advanced acquisition of easements and rights-of-way to reduce project costs and adverse impacts.
Policy g.	Consider intersection improvements when funds are insufficient to permit construction of full segments between intersections.
Policy h.	Consider the needs of all users, especially seniors and people with disabilities, when making programming deicisions.
Objective 7:	Provide transportation facilities and services that minimize community disruption and adverse environmental impacts.
Policy a.	Plan and design transportation facilities and services to minimize adverse impacts on Environmental Quality Corridors (EQCs), Resource Protection Areas (RPAs), other environmental resources, and heritage resources.
Policy b.	Plan and design transportation facilities and services to minimize and mitigate adverse impacts to residents and neighborhoods.
Policy c.	Adopt strategies to reduce vehicle emissions to meet the National Ambient Air Quality Standards.
Policy d.	Minimize adverse impacts of storm water runoff from transportation facilities and services. Use innovative techniques and technologies to manage storm water run-off from transportation facilities.
Policy e.	Apply best practices for walkable communities, pedestrian and bicycle planning, quality of life, and ecological preservation.
Policy f.	Ensure pedestrian access and safety during construction of transportation facilities.
Objective 8:	Identify the funding needed for the county's transportation system and potential sources for that funding.
Policy a.	Develop and implement a responsible financial plan that considers both public and private sources of financial support for the county's transportation system.
Policy b.	Pursue local, regional, state and federal funding support for the county's transportation system.
Policy c.	Encourage and facilitate private sector initiatives to finance new construction, new transportation services, and improvements to existing facilities and services.

Policy d.	Pursue increased funding for trails, sidewalks and on-road bicycle routes.
Objective 9:	Ensure safety for users of transportation facilities and services and for the general public.
Policy a.	Monitor safety and security associated with existing transportation facilities and services.
Policy b.	Correct safety and security problems associated with existing transportation facilities and services that lie within the control of the County.
Policy c.	Incorporate safety and security features into new transportation facilities.
Policy d.	Incorporate medians and separate turning lanes in the design or redesign of roadways having four or more travel lanes.
Policy e.	Upgrade existing roadways to correct unsafe conditions along segments with substandard geometrics.
Policy f.	Monitor and enforce the provisions and regulations for transporting hazardous materials.
Policy g.	Provide adequate maintenance of county transit vehicles and other county transit facilities, and enhance maintenance resources wherever possible.
Policy h.	Reduce conflicts between motorized and non-motorized traffic and correct unsafe conditions for walking and bicycling.
Policy i.	Work with VDOT and local communities to implement traffic calming and other measures where needed to encourage motorists to drive with caution and consideration in residential communities.
Policy j.	Plan and prepare to assist with orderly evacuations (selected, staged or full-scale) in the event of an emergency. Provide assistance for residents without a means of transportation during an evacuation.
Policy k.	Coordinate with regional public safety and transportation agencies using state-of-the-art communications technology for emergency operations and transportation incident management.
Objective 10:	Maximize the operational efficiency of transportation facilities for all modes.
Policy a.	Maximize the efficiency of existing roads through low-cost strategies to increase capacity such as channelization, turning lanes, optimized signalization, and signage, while avoiding negative impacts on pedestrians and bicyclists.

Policy b. Preserve and enhance the efficiency of the arterial street network by reducing and consolidating private entrances, median crossovers, and similar disruptions

to traffic flow.

- Policy c. Promote accessibility between residential developments to facilitate emergency access, local circulation of motorized and non-motorized traffic and potential neighborhood bus service.
- Policy d. Develop a roadway system which discourages through travel while maintaining connectivity on local and collector streets.

# Objective 11: Ensure that land use and transportation policies are complementary.

- Policy a. Require all new developments to mitigate adverse impacts upon the transportation system. Evaluate measures to facilitate access by transit and to provide other enhancements necessary to promote use of transit and non-motorized transportation.
- Policy b. Limit development to the low end of the planned range unless the applicant demonstrates that arterials and collectors within the impact area of the proposed project as defined by the county will operate at an acceptable level of service, upon completion of the project, taking into consideration expected development and transportation facilities within the area during that period.
- Policy c. Encourage higher density residential development in activity centers to promote non-motorized trips and transit services to reduce SOV use.
- Policy d. Support public transportation and non-motorized travel through the design and development of mixed-use projects in Tysons Urban Center, Suburban Centers, Revitalization Areas, Transit Station Areas, and Community Business Centers. The road design and site design (including the location of parking, transit stops, pedestrian facilities, and secure bicycle parking), and other facilities should be supportive of public transportation usage and non-motorized travel.
- Policy e. Encourage compatible commercial use and appropriate land uses such as childcare facilities in mixed use centers and in close proximity to public transportation transfer points.
- Policy f. Require new development and redevelopment projects, where applicable, to provide temporary pedestrian access when such access is affected by the development.
- Policy g. Evaluate land uses around airports during the development review process, to ensure compatibility in terms of height, noise, and the functional classification of the facility; and encourage the Metropolitan Washington Airports Authority to procure aviation and related facility easements where appropriate.
  - Policy h. Encourage location of activities with significant demand for air transportation in close proximity to existing aviation facilities.

## Objective 12: Preserve land needed to accommodate planned transportation facilities.

- Policy a. Identify streets or highways shown in the Comprehensive Plan for improvement, by the anticipated number of lanes, typical cross-sections, and right-of-way requirements.
- Policy b. Preserve the maximum potential requirements for the planned typical section and right-of-way, where planned roadway improvements have not been designed. (See the Roadway Right-of-Way Requirements Section in the Transportation Appendix.)
- Policy c. Establish right of way requirements and preserve the land for future interchanges, transit stations and transit rights of way in the Enhanced Public Transportation Corridors and other public transportation facilities shown on the Transportation Plan Map. Develop potential right of way requirements based upon conceptual drawings where designs have not been approved.
- Policy d. Prepare engineering plans for future transportation improvements as soon as feasible in order to clarify and secure right-of-way requirements and to develop improved cost estimates.

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

- Policy a. Monitor changes in travel patterns, traffic, transit use, and the implementation of transportation facilities and services for the purpose of evaluating progress towards attainment of transportation objectives.
- Policy b. Promote public participation in the review and update of the transportation plan.
- Policy c. Promote regional and subregional transportation planning by cooperating with neighboring jurisdictions to coordinate a planned network of transit routes, services and roads.
- Policy d. Integrate planning and review so that non-motorized, mass transit, and motorized transportation needs are evaluated concurrently.

#### **APPENDIX 1**

#### ROADWAY SYSTEM FUNCTIONAL CLASSIFICATION

Roadway functional classification is the process by which streets and highways are grouped into classes according to the type of service any given facility provides. It defines the role of any particular road or street in serving the flow of trips through the roadway network. Functional classification is very useful in considering the dual role of the transportation network in providing both travel mobility and access to property. Although access is a fixed requirement which is necessary at both ends of a trip, mobility can be provided at varying levels incorporating a wide range of elements.

The development of an effective circulation plan for any area should rely on the delineation of a basic roadway functional classification system of that area. In developing such a system, consideration is given to the magnitude and distribution of projected travel demand, and types and spatial distribution of activities within the county. Because the effectiveness of any one type of transportation facility is dependent upon the adequacy of other types, it is necessary to determine the purpose and function of facilities and services prior to making recommendations.

The county's roadway functional classification is based on the Federal Highway Administration's (FHWA) functional classifications for urbanized areas arterial, collector and local roads, with consideration given to the local characteristics and variation within the county's roadway network. The FHWA further classifies For this document, the roadway system is classified into interstates, other freeways and expressways, other principal arterials, minor arterials, major and minor collectors, and local streets roads. Given the local characteristics and variation within the county's road network, these are the following classifications for use in Fairfax County, as shown in Figure 4. Refer to Appendix 4 Roadway Right-of-Way Requirements for dimensions of typical sections and features of the right-of-way. (See Figure 4).

<u>Freeways and expressways</u> are controlled access facilities providing for high-volume travel. Servicing abutting land is subordinate to accommodating the through movement of vehicles. It is desirable that medians, shoulders, acceleration and deceleration lanes, and grade separated interchanges be included in the design. Parking and pedestrian travel should not be permitted along the traveled portion of the roadway.

Other principal arterials also serve as main travel corridors. Some access is provided to abutting land, but the primary function of the roadway, particularly during peak periods, is to carry through traffic. Intersections with expressways and other principal arterials (see following description under Minor Arterials) should generally be grade separated. Where many turning movements could occur over a relatively short roadway section, service drives are desirable. Medians, shoulders, and acceleration and deceleration lanes are also desirable. Where shoulders cannot be provided, bus storage bays are desirable. Adequate and safe pedestrian and bicycle travel along and across these facilities should be included in the design. Parking should not be permitted along the traveled position of the roadway. These facilities should include four to six travel lanes with a minimum right of way of 122 feet.

<u>Minor arterials</u> usually carry an even mix of local and through traffic. They link collectors, and sometimes local streets, with principal (major) arterials. Minor arterials are lower service level roadways with partial control of access. Adequate and safe pedestrian and bicycle travel along and across these facilities should be included in the design.

A wide disparity exists in the characteristics of minor arterials found in the county. At one end, Braddock Road, with segments earrying over 70,000 vehicles daily on of six lanes, represents a very high design standard. Conversely, Fox Mill Road, a two-lane rural road, is also a minor arterial because it carries a significant volume of through traffic over a relatively long distance. In an effort to recognize recognizing and accommodating this disparity these differences, minor arterials are divided into two categories in this Plan.

Type A minor arterials are those which perform a particularly significant function in the transportation network due to their length and/or their design. These facilities closely approach principal arterials in terms of their traffic characteristics and role in the network. They include Braddock Road, Old Keene Mill Road-Franconia Road, Centreville Road, and several other roads additional segments. They should be multi-lane divided facilities within a minimum right of way of 122 feet. Parking should not be permitted along the traveled portion of the roadway. Interchanges should be provided at intersections with freeways. Interchanges at other locations should only be provided where the results of a detailed traffic transportation study indicate that an at-grade intersection cannot accommodate the traffic.

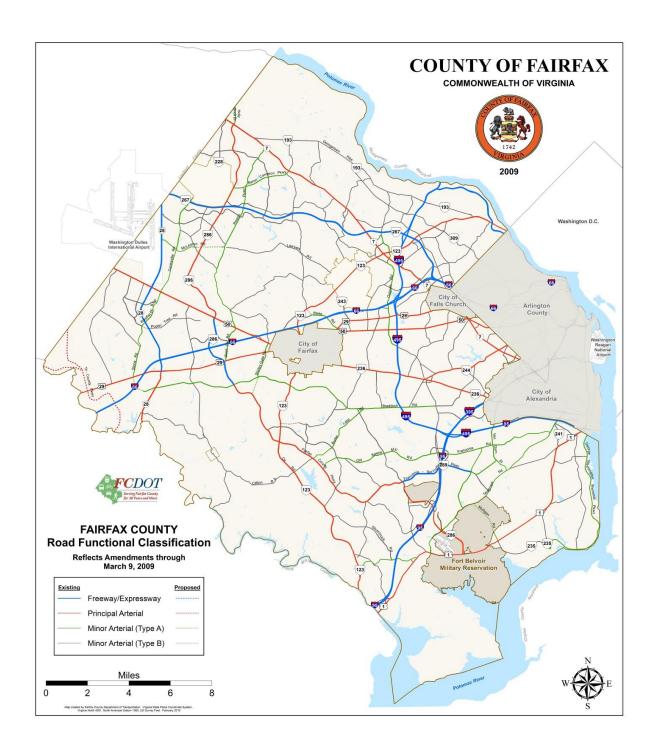
Type B minor arterials represent the remaining minor arterials which are somewhat shorter in length, traverse a less densely developed area, or are located in more mature areas and consequently were built to a somewhat older design standard. Examples include Backlick Road, Annandale Road, and Sherwood Hall Lane. Refer to Table 1 in Appendix 4 for ROW requirements. They can generally be constructed within a 122 foot right-of-way, although in In less developed areas or where additional lanes are needed, additional right-of-way may be necessary. Parking may be permitted, although it should generally be discouraged along the traveled portion of the roadway due to the arterial nature of the road. Interchanges should only be provided with freeways, and then only at selected locations, or where the results of a detailed traffic transportation study indicate that an at-grade intersection cannot accommodate the traffic.

Collector streets provide direct service to and from local areas, routing traffic to the arterial street system. Generally, these roadways are not used for through trips. Collector streets are very important for the collection and distribution functions of transit service. As such, they should be designed in conjunction with the arterial system to permit safe boarding and alighting, and allow buses to safely enter, exit, and turn around if necessary. Medians, access control, and turning lanes are desirable only where the traffic volume is expected to exceed about 5,500 vehicles per day. Parking is optional and can generally be safely accommodated in most sections. Sidewalks and/or trails Active transportation facilities should be provided on both sides of the road. These facilities Collector streets should generally allow for two travel lanes with sufficient pavement width to permit safe bus operations. Where traffic volumes are anticipated to be high due to relatively intense use of the area served, four travel lanes should be provided. Many unimproved rural roads in lower-density areas of the county serve a collector function. They are characterized by narrow pavement, poor horizontal and/or vertical alignment, and a lack of shoulder. These roads should be improved for safety reasons to minimum VDOT geometric standards.

<u>Local streets</u> provide access to properties abutting the roadway and within the immediate vicinity. Traffic speed and volume should be low. Parking should be accommodated and <u>sidewalks and/or trails</u> <u>active transportation facilities</u> should be provided. Right-of-way widths should be in conformance with standards for safe operation and proper maintenance.

The above functional classification system is used to help develop recommendations to facilitate the flow of trips generated in or traveling through the county. Facilities intended to serve a certain type and magnitude of travel will require improvements consistent with such a function. The plan has been developed with heavy emphasis on separating local and non-local facilities by functional classification and maintaining the integrity of local streets by recommending improvements on higher type facilities. The highest three classification categories of the roadway system functional classification are depicted on Figure 4. The following lists the freeway and arterials in the county.





# LISTING OF ROADWAYS BY FUNCTIONAL CLASSIFICATION (Exclusive of Collectors and Local Streets)

	Freeways/Expressways	<u>From</u>	<u>To</u>
1.	Beltway (I-495)	American Legion Memorial Bridge	Alexandria City Line
2.	Dulles Airport Access Road (DAAR) and Dulles Toll Road (DTR)	Loudoun County	I-66
3.	Fairfax County Parkway	Braddock Road	Route 50
4.	Franconia-Springfield Parkway	Fairfax County Parkway	Beulah Street
5.	George Washington Memorial Pkwy	I-495	Arlington County Line
6.	I-66	Prince William County Line	Arlington County Line
7.	Shirley Highway (I-95 & I-395)	Prince William County Line	Alexandria City Line
8.	Route 28	Route 29	Loudoun County Line
	Other Principal Arterials	<u>From</u>	<u>To</u>
1.	Arlington Boulevard (Route 50)	Fairfax City Line	Arlington County Line
2.	Route 28	Route 29	Prince William County Line
3.	Route 123	Fairfax City Line	I-495
4.			
_	Route 123	George Washington Parkway	
5.	Route 123 Columbia Pike	George Washington Parkway Little River Turnpike	
<ol> <li>6.</li> </ol>			Arlington County Line
	Columbia Pike	Little River Turnpike	Arlington County Line Arlington County Line
6.	Columbia Pike Route 123	Little River Turnpike I-495	Arlington County Line Arlington County Line George Washington Parkway

10.	Route 29	Prince William County Line	Fairfax City Line
11.	Route 50	Loudoun County Line	Fairfax City Line
12.	Route 7	Loudoun County Line	Falls Church City Line
13.	Route 7	Falls Church City Line	Alexandria City Line
14.	Little River Turnpike	Fairfax City Line	Alexandria City Line
15.	Route 123	Fairfax City line	Prince William County Line
16.	Route 1	Prince William County Line	Alexandria City Line
17.	Manassas National Battlefield Bypass	Route 29	Prince William County Line
18.	Tri-County Parkway	Prince William County Line	Loudoun County Line
	No.		T
	Minor Arterials (Type A)	<u>From</u>	<u>To</u>
1.	Baron Cameron Avenue	Herndon Town Line	Route 7
2.	Beulah Street	Franconia Road	Telegraph Road
			8 1
3.	Blake Lane	Jermantown Road	Fairfax City Line
<ul><li>3.</li><li>4.</li></ul>			2 2
	Blake Lane	Jermantown Road	Fairfax City Line
4.	Blake Lane Braddock Road	Jermantown Road Backlick Road	Fairfax City Line Union Mill Road
<ul><li>4.</li><li>5.</li></ul>	Blake Lane Braddock Road Burke Lake Road	Jermantown Road  Backlick Road  Fairfax County Parkway	Fairfax City Line Union Mill Road Braddock Road
<ul><li>4.</li><li>5.</li><li>6.</li></ul>	Blake Lane Braddock Road Burke Lake Road Centreville Road	Jermantown Road  Backlick Road  Fairfax County Parkway  Herndon Town Line	Fairfax City Line Union Mill Road Braddock Road Route 50
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li></ul>	Blake Lane Braddock Road Burke Lake Road Centreville Road Franconia Road	Jermantown Road  Backlick Road  Fairfax County Parkway  Herndon Town Line  Backlick Road	Fairfax City Line Union Mill Road Braddock Road Route 50 Telegraph Road
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li><li>8.</li></ul>	Blake Lane Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington	Jermantown Road Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road Route 7	Fairfax City Line Union Mill Road Braddock Road Route 50 Telegraph Road I-495
<ol> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> <li>9.</li> </ol>	Blake Lane Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington Memorial Parkway	Jermantown Road  Backlick Road  Fairfax County Parkway  Herndon Town Line  Backlick Road  Route 7  Mount Vernon Highway	Fairfax City Line Union Mill Road Braddock Road Route 50 Telegraph Road I-495 Alexandria City Line
<ul><li>4.</li><li>5.</li><li>6.</li><li>7.</li><li>8.</li><li>9.</li><li>10.</li></ul>	Blake Lane Braddock Road Burke Lake Road Centreville Road Franconia Road Gallows Road George Washington Memorial Parkway Holly Knoll Drive	Jermantown Road Backlick Road Fairfax County Parkway Herndon Town Line Backlick Road Route 7 Mount Vernon Highway Route 7	Fairfax City Line Union Mill Road Braddock Road Route 50 Telegraph Road I-495 Alexandria City Line Loudon County Line

14.	Lorton Road	Route 1	Route 123
15.	Manchester Boulevard	Beulah Street	Kingstowne Village Parkway
16.	McLearen Road	Route 28	Reston Parkway
17.	New Braddock Road	Union Mill Road	Route 29
18.	Old Keene Mill Road	Backlick Road	Fairfax County Parkway
19.	Poplar Tree Road	Sully Station Drive/ Sequoia Farms Drive	Braddock Road
20.	Reston Parkway	Route 7	Lawyers Road
21.	Shirley Gate Road	Route 29	Fairfax County Parkway
22.	South Van Dorn Street	Alexandria City Line	Telegraph Road
23.	Stone Road	Route 29	Braddock Road
24.	Telegraph Road	Alexandria City Line	Route 1
25.	Walney Road	Route 50	Westfields Boulevard
26.	Waples Mill Road	Route 50	Route 29
27.	West Ox Road	Route 29	Lawyers Road
28.	Westfields Boulevard	Walney Road	Sully Station Drive/ Sequoia Farms Drive
29.	Old Mill Road	Telegraph Road	Route 1
	Minor Arterials (Type B)	<u>From</u>	<u>To</u>
1.	Alban Road	Backlick Road	Rolling Road
2.	Anderson Road	Route 123	Magarity Road
3.	Annandale Road	Little River Turnpike	Falls Church City Limit
4.	Amherst Avenue	Calamo Street	Highland Street
5.	Armisted Road	Lorton Road	Route 1
6.	Backlick Road	Little River Turnpike	Fairfax County Parkway

7.	Beacon Hill Road	Route 1	Fort Hunt Road
8.	Belle View Boulevard	Fort Hunt Road	George Washington Parkway
9.	Beauregard Street	Little River Turnpike	Alexandria City Line
10.	Beulah Road	Route 7	Vienna Town Limits
11.	Braddock Road	Backlick Road	Columbia Pike
12.	Braddock Road	Pleasant Valley Road	Stone Road
13.	Browns Mill Road	Crowell Road	Beulah Road
14.	Burke Center Parkway	Burke Lake Road	Fairfax County Parkway
15.	Burke Lake Road	Fairfax County Parkway	Route 123
16.	Carlyn Springs Road	Seminary Road	Arlington County Line
17.	Cedar Lane	Gallows Road	Route 50
18.	Chain Bridge Road	Anderson Road	Route 123
19.	Clifton Road	Route 29	Route 123
20.	Colvin Run Road	Walker Road	Route 7 East
21.	Commerce Street	Old Keene Mill Road	Franconia Road
22.	Compton Road	Ordway Road	Clifton Road
23.	Crowell Road	Hunter Mill Road	Browns Mill Road
24.	Dranesville Road	Route 7	Herndon Town Limits
25.	Fair Lakes Parkway	West Ox Road	Stringfellow Road
26.	Edsall Road	Backlick Road	Alexandria City Limits
27.	Fort Hunt Road	Route 1	Vernon View Drive
28.	Fox Mill Road	Monroe Street	Reston Parkway
29.	Frying Pan Road	Route 28	Monroe Street
30.	Fullerton Road	Backlick Road	Fairfax County Parkway

31.	Furnace Road	Route 123	Route 1
32.	Gallows Road	I-495	Hummer Road/ Annandale Road
33.	Gallows Road	Annandale Road/ Hummer Road	Columbia Pike
34.	Georgetown Pike	Route 7	Route 123
35.	Glen Carlyn Road	Route 7	Arlington County Line
36.	Gosnell Road	Route 7	Old Courthouse Road
37.	Graham Road	Annandale Road	Route 29
38.	Great Falls Street	Route 123	Falls Church City Line
39.	Guinea Road	Little River Turnpike	Route 123
40.	Haycock Road	Route 7	Westmoreland Street
41.	Hayfield Road	Manchester Boulevard	Telegraph Road
42.	Henderson Road	Old Yates Ford Road	Clifton Road
43.	Hooes Road	Fairfax County Parkway	Route 123
44.	Hummer Road	Little River Turnpike	Gallows Road
45.	Hunter Mill Road	Baron Cameron Avenue	Blake Lane
46.	Huntington Avenue	Fort Hunt Road	Telegraph Road
47.	Idylwood Road	Cedar Lane	Great Falls Street
48.	Lee Road	Route 50	Stonecroft Boulevard
49.	Jermantown Road	Fairfax City Line	Blake Lane
50.	John Marr Drive	Ravensworth Road	Columbia Pike
51.	Kirby Road	Great Falls Street	Route 123
52.	Lawyers Road	Fox Mill Road	Vienna Town Line
53.	Lee Chapel Road	Burke Lake Road	Route 123
54.	Lewinsville Road	Route 7	Route 123

55.	Lincolnia Road	Columbia Pike	Beauregard Street
56.	Loisdale Road	Franconia Road	Newington Road
57.	Magarity Road	Lisle Avenue	Great Falls Street
58.	Monroe Street	West Ox Road	Herndon Town Line
59.	Mount Vernon Highway	Route 1	Mount Vernon Memorial Highway
60.	Mount Vernon Memorial Highway	Route 1	Mount Vernon Highway
61.	Newington Road	Loidale Road	Fairfax County Parkway
62.	North Kings Highway	Route 1	Telegraph Road
63.	Nutley Street	Vienna Town Line	Route 50
64.	Old Courthouse Road	Beulah Road	Gallows Road
65.	Old Dominion Drive	Georgetown Pike	Arlington County Line
66.	Old Yates Ford Road	Prince William County Line	Henderson Road
67.	Ordway Road	Prince William County Line	Compton Road
68.	Park Street	Vienna Town Line	Cedar Lane
69.	Patrick Henry Drive	Route 7	Route 50
70.	Pleasant Valley Road	Route 29	Route 50
71.	Pohick Road	Fairfax County Parkway	Route 1
72.	Poplar Tree Road	Stringfiellow Stringfellow	Westfields Boulevard
73.	Prosperity Avenue	Road Little River Turnpike	Gallows Road
74.	Ravensworth Road	Little River Turnpike	Braddock Road
75.	Roberts Parkway	Fairfax County Parkway	New Guinea Road
76.	Rolling Road	Braddock Road	Franconia-Springfield Parkway
77.	Rolling Road	Fairfax County Parkway	Pohick Road
78.	Seminary Road	Carlyn Springs Road	Alexandria City Limits
79.	Sherwood Hall Lane	Route 1	Fort Hunt Road

80.	Shreve Road	Route 29	Route 7
81.	Silverbrook Road	Route 123	Lorton Road
82.	Sleepy Hollow Road	Columbia Pike	Route 7
83.	South George Mason Drive	Seminary Road	Arlington County Line
84.	South Kings Highway	Telegraph Road	Route 1
85.	Spring Hill Road	Route 7	Georgetown Pike
86.	Springvale Road	Georgetown Pike	Route 7
87.	Stonecroft Boulevard	Route 50	Westfields Boulevard
88.	Stringfellow Road	Route 50	Route 29
89.	Sunrise Valley Drive	Centreville Road	Hunter Mill Road
90.	Sunset Hills Road	Herndon Town Line	Hunter Mill Road
91.	Swinks Mill Road	Georgetown Pike	Lewinsville Road
92.	Sydenstricker Road	Old Keene Mill Road	Fairfax County Parkway
93.	Towlston Road	Old Dominion Drive	Trap Road
94.	Trap Road	Towlston Road	Beulah Road
95.	Twinbrook Road	Braddock Road	Guinea Road
96.	Vale Road	West Ox Road	Vienna Town Line
97.	Vernon View Drive	Fort Hunt Road	George Washington Parkway
98.	Wakefield Chapel Road	Little River Turnpike	Braddock Road
99.	Walker Road	Georgetown Pike	Colvin Run Road
100.	Waples Mill Road	Route 50	West Ox Road
101.	West Ox Road	Centreville Road	Lawyers Road
102.	West Street	Route 29	Falls Church City Limit
103.	Westmoreland Street	Chain Bridge Road	Arlington County Line
104.	Westpark Drive	International Drive	Route 7
105.	Wiehle Avenue	Crestview Drive	Sunrise Valley Drive
106.	Willard Road	Stonecroft Road	Walney Road

107. Wilson Boulevard

Route 7

Arlington County Line



#### **APPENDIX 2**

#### TYPES OF TRANSIT SERVICES AND FACILITIES

The Countywide Transportation Plan map identifies improvements public transportation services and facilities. The Transportation Plan and designates a number of several Enhanced Public Transportation Corridors (EPTC) and facility types. The EPTC notes where major transit services will be provided in corridors that carry higher volumes of inter-county and/or intra-county local and regional vehicular traffic. The Plan also maps out This map provides approximate locations for supporting facilities of the existing and planned transit services for the purpose of reserving right-of-way required by the facility development. Final locations of component facilities are subject to completion of area plans or appropriate studies. This document appendix outlines the types of transit services and facilities based on comprehensive consideration of transit modes, technologies, rights-of-way, capacities, and service and operational characteristics.

#### **Transit Services**

Public transportation services can be generally categorized into three major types: rail transit, bus transit and paratransit.

**Rail Transit** is a mass transit service using rail technology and occupying a separate right-of-way. Heavy rail, commuter rail and light rail are the common rail transit services.

**Heavy rail transit (HRT)** is an electric railway with the capacity for carrying a heavy volume of urban passenger traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating in multi-car trains on fixed rails, separate rights-of-way from which all other vehicular, and foot and bicycle traffic are excluded, and high platform loading. Most passengers access heavy rail services by walking, bicycle, riding feeder bus services, ride-share services, or using park-and-ride facilities near suburban stations. The heavy rail transit service in the Washington DC region is referred to as Metrorail.

Commuter rail (CR) is a type of passenger train service that utilizes diesel-electric or electrically propelled trains and operate over existing railway track on the same rights-of-way used by intercity railway freight and passenger trains. Services are operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas, or between urbanized areas and outlying areas. The Virginia Railway Express (VRE) is a commuter rail service that provides service between Virginia suburbs, including outlying counties, and downtown Washington DC.

**Light rail transit (LRT)** is essentially an improved and modernized version of the old streetcars and electric interurban railways that were common in the United States from the 1890s through the World War II. It utilizes electrically propelled passenger cars operating on fixed rails in rights-of-way that may or may not be separated from other traffic for much of the way. Light rail vehicles typically operate at surface level with power drawn from—an overhead <u>electric lines via</u> trolley <u>polewires</u>. Light rail serves passenger trips within the densely developed urban and suburban areas. A modern streetcar is a form of light rail that has less capacity.

Automated guideway transit (AGT) (or people mover,) is an electric railway of guided transit vehicles, operating singly or in multi-car trains, without an onboard

crew. AGT systems provide short-distance collection and distribution service, usually in major activity centers. Service may be on a fixed schedule or in response to a passenger activated button. AGT systems are located in several U.S. cities but are more commonly found in downtown areas and at airports and amusement parks.

**Monorail** is a form of guided transit where the vehicles are supported by or suspended from a guideway formed by a single beam, rail or tube, usually elevated. If the trains do not have an onboard crew, they are considered automated guideways.

**Bus Transit** utilizes rubber-tired vehicles operating on fixed routes with fixed schedules on roadways. Bus transit can be further classified in the following types.

**Local bus service** is the most common type of bus service. Buses may stop every block or two along a route several miles long and serve a destination end or traffic generator, for example, a shopping mall or a hospital, for example.

When limited to a small geographic area or to short-distance trips, local service is often called feeder, circulator, or shuttle service. Such routes may operate in a loop and connect, often at a <u>transit station</u>, <u>transfer center</u> or rail station, to major routes for travel to more destinations. Most Fairfax Connector bus routes are categorized as local bus service.

**Express service** is a high-speed limited-stop service generally operating within transportation corridors oriented to a principal destination. It consists of longer trips, especially to major activity centers during peak commuting hours, and operates long distances without stopping. Examples include services accessing freeways, and services on major streets that operate local service on the outlying portions of a route until a certain point and then operate non-stop to activity centers. Reverse commute is a type of express service transporting passengers from residential locations in urban core areas to employment centers in the outlying areas. It is operated in the opposite direction of the peak direction of travel.

**Bus rapid transit (BRT)** is a flexible, rubber-tired, rapid-transit mode that mostly operates in a dedicated right-of-way with at-grade intersections. Limited sections are in mixed traffic. BRT is an integrated system of facilities, services, and amenities that collectively improves the speed, reliability, and identity of bus transit. Distinguishing features may include:

- Distinctive and clearly designated stops/stations with unique passenger amenities at regularly spaced stations;
- Standard or extended sized buses with distinct appearance, high quality passenger comfort, low floor or high platform, and multiple doors for easy and fast boarding/alighting at stops/stations;
- Frequent service headways throughout the day;
- Off-board fare collection;
- Well organized movement of buses along the line, including optimized signal timing and intersection treatments, dispatching at stops; and
- Passenger information controlled by various Intelligent Transportation Systems (ITS) measures to provide reliability.

Microtransit is a flexible, on demand, dynamic service that operates similarly to traditional public transit but with more adaptability to individual needs using smaller vehicles including, but not limited to, vans, shuttles, or minibuses. This service often

bridges the gap between existing transit options and SOV use, providing a viable alternative where the transportation network is inadequate.

**Paratransit** is a demand-responsive shared-ride transportation service without a fixed route. In practice, paratransit covers two broad areas: ADA paratransit and other paratransit.

**ADA paratransit**, in compliance with the Americans with Disabilities Act (ADA) and other rulings, transports people individuals with disabilities who are unable to travel alone on fixed route system. MetroAccess is the ADA paratransit service for the Washington DC metropolitan area.

Other paratransit services can transport individuals to a destination ("many to one") or to several destinations ("many to many"). There are several forms including shared-ride taxi, general public dial-a-ride (typically used in areas of low transit demand), human service agency transportation, and ridesharing including vanpools. Vanpools, comprised of vans operating as a ridesharing arrangement, provide service to a group of individuals traveling directly between their homes and a regular destination within the same geographical area.

#### **Transit Facilities**

Transit facilities provide access and modal transfer for users of public transportation services.

**Bus stop** is where one or multiple bus routes pick up passengers. A bus stop should have minimum amenities such as schedule and route information displays, <u>accessible via active transportation</u>, <u>sidewalks or trails accessing the stop</u>, benches and/or shelters. The provision of benches and shelters should take into consideration daily passenger boarding levels and adjacent land use characteristics.

**Transit transfer center station** (T) is a passenger loading and waiting area where a number of bus routes and/or other transportation modes converge. A transit transfer center station should have good access to nearby arterials and/or freeways in order to minimize transit travel times. It could be a free-standing individual facility or could easily be integrated with the design of a building. A transit transfer center station typically has significant infrastructure such as a waiting room, benches, areas with seating, restrooms, sales outlet, ticketing or pass vending machines, convenient fare collection areas, and/or other services. In some instances, a timed-transfer system is used and buses converge on the transit station center at a specific time to exchange passengers. Parking typically is not provided at these locations, although the transit transfer center station could be co-located with a rail station parking facility or park-and-ride lot.

**Rail Station (R)** is defined as a location where a rail rapid transit service picks up and drops off passengers. A rail station typically has a bus transit waiting area, kiss-and-ride, bicycle parking and other amenities listed under transit transfer centers station. It may or may not be accompanied by vehicle parking areas, depending on the nature of the station area.

Commuter Rail Station (C) is defined as a location where commuter rail service is provided. It has passenger amenities similar to those provided for a rail station.

Park-and-Ride (P) is a parking garage and/or surface lot used for parking passengers'

vehicles, either free or for a fee, while they use public transportation facilities or vanpools. Park-and-ride facilities are generally established as collector sites for multiple bus routes, rail service, and high-occupancy-vehicle (HOV) lane access, and may also serve as collector sites for vanpools, and carpools, shared ride services and bike share stations. They may have amenities similar to transit transfer centers stations.

**Kiss-and-Ride** is a location where passengers in non-transit vehicles are dropped off to board public transportation vehicles. Kiss-and-Ride areas could be located at transit transfer centers stations, rail stations, commuter rail stations, and park-and-ride facilities.

Operations, Maintenance and Administrative Facilities are combined transit facilities housing administrative functions, such as executive management, accounting, safety, and scheduling, as well as private vehicle parking for administrative staff and vehicle operators. These facilities also include dedicated areas for vehicle maintenance, where mechanics, machinists, and maintenance personnel conduct preventive maintenance, daily inspections, and corrective maintenance to keep revenue vehicles operational. Typical features include maintenance bays with in-ground or portable lifts, bus and chassis wash systems, parts storage, fuel tanks and pumps, and depot electric plug-in charging stations. Revenue vehicles may also be stored at these facilities overnight or between periods of service.

On-route chargers are infrastructure systems co-located with bus stops, providing charging for electric buses outside of Operating and Maintenance Facilities. These chargers are important for longer bus blocks, which may sometimes require more energy than an electric bus battery can store. They are typically installed at busy stops or clusters of stops where multiple bus routes have layovers.

#### **APPENDIX 3**

#### BICYCLE AND TRAIL CLASSIFICATION AND DEFINITIONS

#### **COUNTYWIDE TRAILS PLAN MAP**

Major Regional Trail: Includes the Interstate Route One Bikeway US Bicycle Route 1, Gerry Connolly Cross County Trail, and trails along I-495, I-66, Dulles Airport Access Road, Fairfax County Parkway, Franconia-Springfield Parkway, Norfolk Southern Railway, George Washington Memorial Parkway, Washington and Old Dominion Regional Park, Bull Run, Occoquan River and Potomac River. Most of the trails designated in this category are paved trails, 8 feet or more in width. However, surface materials vary from paved, natural surfaces and stonedust stone dust for the Interstate Route One Bikeway US Bicycle Route 1, South County East-West trail, Gerry Connolly Cross County Trail and those trails along the Bull Run, Occoquan River, and Potomac River.

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

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

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

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

**Stream Valley Trail:** Trails along stream<u>ways</u> as determined by Fairfax County Park Authority Staff.

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

# **COUNTYWIDE BICYCLE NETWORK MAP(S)**

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

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

- Shared Roadways with Safety Treatment: is a recommendation for generally narrow, hilly, and winding two-lane roads. Improvements can include: signs such as "BIKES MAY USE FULL LANE" additional shoulder pavement, and/or pavement markings.
- Shared Lane Markings: (sharrows) are used on roadways where bicyclists and motor vehicles must share the same travel lane. The shared lane marking helps position bicyclists in the most appropriate location to ride, while also providing a visual cue to motorists that bicyclists have a right to use the street. Refer to the the Virginia Department of Transportation (VDOT) policy for guidance on the proper use of Shared Lane Markings.
- Striped Shoulder: provides space for bicycle travel to the right of the travel lanes. Paved shoulders serve a variety of transportation purposes in addition to providing a benefit for cyclists, including serving as a breakdown lane, contributing to overall pavement integrity, and providing a place for pedestrian travel where there are no sidewalks. A shoulder designated for bicycles should be no less than four feet in width.
- **Bike Lane:** is an area of roadway pavement designated for the preferential or exclusive use by bicycles. The lane is normally 4 6 feet in width and marked with a longitudinal white line and bicycle symbols Refer to the VDOT Bicycle Design Standards for guidance on bike lanes and bicycle pavement markings.
- Climbing Lane: when insufficient width exists to accommodate bike lanes in both directions and the roadway features a vertical grade, a climbing lane is considered. A bike lane (climbing lane) is provided in the uphill direction to accommodate slow moving bicyclists and a shared lane marking is provided in the downhill direction, where bicyclists can typically travel at speeds closer to motor vehicle speeds.
- **Buffered Bike Lanes:** created by striping a buffer zone (three feet in width or greater) between a bike lane and the adjacent travel lane.
- Cycletrack: is a bicycle facility for cyclists only that is physically separated from both the roadway and the sidewalk. A cycletrack may be constructed at the roadway level using roadway space, or at the sidewalk level using space adjacent to the road. Cycletracks can be provided in either one way or two way configurations.
- Shared-Use Path (trail): is an off-street multi-use facility that is physically separated from motor vehicle traffic. Trails are often located in independent right-of-way (e.g. a park, stream valley greenway, a utility corridor, or an abandoned railroad corridor) or located adjacent to the roadway within roadway rights of way. It is intended for use by bicyclists and pedestrians and normally is designed to accommodate two-way traffic
- **Policy Roads:** are multi-lane highways (functionally classified as principal arterials) that carry large volumes of traffic and/or have relatively high posted speeds (40mph or greater). These roads traverse a wide variety of land uses. Specific bicycle facility recommendations must be made in conjunction with other transportation and land use planning efforts.

The bicycle network maps also define recommended spot improvements:

- **Bicycle Access Links and Crossings** indicate locations where there are opportunities to improve neighborhood connectivity, for example by connecting cul\_de\_sacs, enhancing mid-block and trail/shared-use path crossings and by improving access to existing trails.
- **Interchange Improvements** represent locations where free flowing entrance and exit ramps create difficult conditions for bicyclists traveling along the road.
- Transit Station Improvements signify locations where existing and planned transit stations (Metro and VRE) create especially high demand for bicycle travel and need for bicycle accommodations. Appropriate accommodations may include bicycle racks, covered bicycle parking, high security parking, facilities on station access roads, curb ramps, crossing improvements or paths that provide safe and convenient station access.
- Stream Crossings are recommended in locations where linear barriers to bicycle travel exist at the crossings of streams. These bridge crossings will be designed for bicycle and pedestrian transportation.
- **Road Crossings** are recommended in locations where linear barriers to bicycle travel exist at the crossings of major highways. These crossings can be standalone bicycle and pedestrian bridges or bike lanes and shared use paths as part of a bridge that also serves motor vehicles.

#### **APPENDIX 4**

# ROADWAY RIGHT-OF-WAY REQUIREMENTS

In an effort to Fairfax County preserves land for roadway improvements, to decrease delays in land acquisition, and to obtain land before land values increase with developed properties. The requirements guidelines are hereby set forth regarding described by the right-of-way requirements for roadways shown on the transportation plan.

The rights-of-way specified herein should be obtained through the development approval process (e.g. rezoning, special exception, site plan, etc.) as applications are submitted to the county. Theis provision of these rights of way will allow for future road improvements to be constructed with adequate ancillary features such as turning lanes, sidewalks, trails, bicycle facilities, and buffering, while minimizing impacts on properties which are subsequently developed.

It should be stressed, however, that the uUltimate roadway designs will recognize available right-of-way to the extent possible; the intent of these requirements is not to impose rigid right-of-way standards through areas or mature neighborhoods, but rather to secure additional right-of-way needed for road improvements as development or redevelopment occurs.

# Freeways/Expressways

Right-of-way needs along freeway facilities can be variable and extensive. The right-of-way may need to accommodate HOV/HOT lanes, and rail transit, adjacent protected shared use paths, as well as and roadway configurations such as with interchanges, ramps, and collector-distributor lanes. The rights-of-way requirements for freeway facilities should be based on studies for each facility. These could include the detailed corridor analyses, feasibility studies, interchange modification reports, location and design studies and/or environment impact studies.

#### **Arterials**

Right-of-way requirements for arterials should be similar throughout the county. Table 1 summarizes the right-of-way requirements for arterial roadways based upon the number of lanes and the type of edge treatment: 'curb and gutter' or 'shoulder'. The number of lanes refers to the designation on the transportation plan. The edge treatment will vary by location within the county as follows:

- (1). In the Low Density Residential Areas low density residential areas of the county, right-of-way should be provided as described for a 'shoulder' edge treatment. The provision of sufficient right-of-way to accommodate shoulders will allow for the ultimate typical section to be determined at the time detailed design is initiated. It is anticipated that this decision will be made based on a number of several factors, including cost, clearing and grading requirements, the presence of storm sewer lines in the area, aesthetics, and other concerns. However, it is recognized that in all other areas of the county, curb-and-gutter treatments having less right-of-way requirements will normally be appropriate.
- (2). The 'shoulder' edge treatment is optional in suburban neighborhoods.
- (3). Additional right-of-way requirements for items such as turn lanes, service drives, parking lanes and on-road bike lanes are noted on Table 1.

When highway projects have approved designs or are in active stages of design, the strict application of these right-of-way requirements, shown in Table 1, could result in inconsistencies with such plans. To avoid this situation, approved or active designs should be utilized to determine right-of-way requirements on those projects where no change is envisioned in the Plan designation for number of lanes. However, where the new Plan recommendation provides for more lanes than were previously shown on the Plan, or where there are no design plans, right-of-way should be provided in accordance with Table 1.

The cross-section illustrations in Figure 5 and Figure 6 correspond to the measurements provided in Table 1. These cross-sections represent the typical right-of-way needed and can serve as guidelines in the development of roadway plans.

# **Other Considerations**

Additional right-of-way might be required to support traffic operations, <u>bus rapid transit</u> (<u>BRT</u>), and facilitate <u>non-motorized</u> active and <u>micromobility</u> transportation. Table 1 includes the required rights-of-way for turn lanes, <u>service parking and on-road bike lanes</u>, etc. Provision of such facilities should be determined on a case-by-case basis, taking into consideration community development characteristics, land use types and density, traffic volume and turning movements, transit service, and <u>non-motorized</u> active transportation and supporting facilities <u>users</u>.

#### TABLE 1

Minimum Right-of-Way Requirements for Roads Shown on Transportation Plan Map Where No Plans Exist <sup>1,2</sup> (Measurement in Feet for the Entire Cross Section)

	Typical Curb and Gutter Section 1.3	Typical Shoulder Section 2.3
Lanes	Feet	Feet
2-lane	<u> </u>	<del>87</del> <u>92</u>
4-lane	<del>119</del> <u>90</u>	<del>161</del> <u>134</u>
6-lane	<del>143</del> <u>114</u>	<del>185</del> <u>158</u>
8-lane	<del>167</del> <u>138</u>	<del>209</del> <u>182</u>

Add XX feet of right-of-way for each of the following special circumstances:

Dual Left Turn Lanes at Major <sup>3</sup>	Feet
Intersections on All Legs	12
Right Turn Lanes at Major <sup>3</sup>	
Intersections on All Approaches	12
Enhanced Improved Median Treatments <sup>4</sup>	4
Service Drives <sup>5</sup>	92
Parking Lanes <sup>6</sup>	<u>98</u>
On-Road Bike Route 7 4	4 <u>5</u>

Add 15 feet in ancillary easements. Add supplemental right-of-way with transitions to avoid special features (e.g., historic properties, parks, cemeteries, wetlands, landfills, sewage and water treatment facilities, existing buildings, etc.) and/or to improve horizontal alignment. Add 40 feet radius at intersections dedicated to the chord of the radius curve.

<sup>1</sup> Minimum section with 2-lanes includes through lanes, curb and gutter, landscape buffer, sidewalk, and maintenance strip. Section with 4-lanes and higher includes median/center turn lane, through lanes, curb and gutter, landscape buffer, sidewalk and maintenance strip. Landscape buffer width may increase if street trees are included.

<sup>2</sup> Minimum section with 2-lanes includes through lanes, shoulder, ditch, landscape buffer, sidewalk and maintenance strip. Section with 4-lanes and higher includes median/center turn lane, through lanes, landscape buffer, sidewalk, and maintenance strip. Landscape buffer width may increase if street trees are included.

<sup>4 3</sup> Where design plans consistent with the Comprehensive Plan and providing all anticipated future turn-lane requirements are developed to a sufficient level of detail and approval, right-of-way and easement dedication requirements should be based upon them.

<sup>2—</sup>Where a substitute trail is to be provided in easements within the development site, the right-of-way requirements can be reduced in an amount to be determined by VDOT and DPWES; however, adequate right-of-way must be retained to meet VDOT clear zone requirements.

- 3 Within 500 feet of intersections of arterial roads with collectors or with other arterials unless specifically determined by a traffic study to not be needed. The use of dual turn lanes requires a width of 30 feet on the receiving road.
- 4 Commercial revitalization areas or other special areas where pedestrian refuge, landscaping or special design features are desired within the median. The additional median width allows for landscaping, trees and/or special paving.
- 5 Primary Highways, dimension includes both sides of the road, except where waived.
- 6 On side(s) of road where residences front on the road or service drive. Does not apply to shoulder sections
- 7 On road bike route is a designated lane or signed route to accommodate bicycle users. Design features should be determined on a case by case basis, as either a marked bike lane, wide shoulder lane, or paved shoulder. 6 The preferred bicycle route is an off-road bicycle facility, such as a shared-use path.

FIGURE 5

Cross Section Illustration of a Typical Curb and Gutter Section (Measurement in Feet)

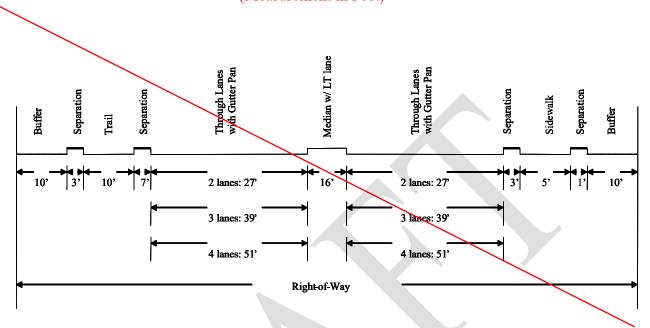
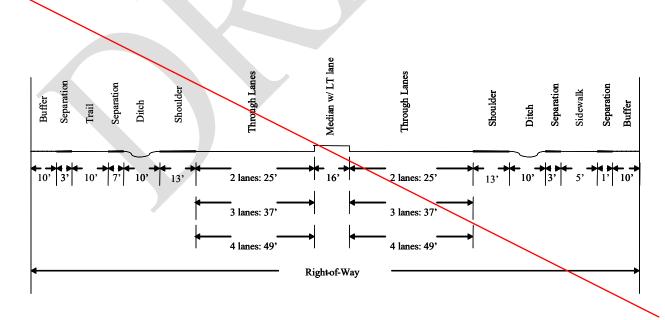


FIGURE 6

Cross Section Illustration of a Typical Shoulder Section (Measurement in Feet)



Shared Use Path Shared Use Shared Use Shared Use Path Shared Use Shared Use With Curb and Gutter Shared Use With Curb and Gutter Shared Use With Curb and Gutter Shared Use Shared Use Path Shared Use Path Shared Use Shared U

Right-of-Way

Figure 5: Cross Section Illustration of a Typical Curb and Gutter Section (Measured in Feet)

Not to Scale

Figure 6: Cross Section Illustration of a Typical Shoulder Section (Measured in Feet)

Not to Scale

Shared Use Path Path Ditch Shoulder With Shoulder and Ditch Shoulder and Ditch Path Ditch Path Ditch Path Ditch Path Ditch Shoulder and Ditch Shoulder and Ditch Shoulder and Ditch Path Ditch Path

#### **Roads in Revitalization Areas**

The right-of-way requirements outlined above (Figure 5 and Figure 6) are generally applicable for improvements in a typical suburban setting, as shown in Figure 5 and Figure 6. The county is comprised of diverse communities and development patterns, some of which have more urban features, higher land use densities, and more pedestrian active transportation activities and transit and microtransit services. To preserve communities' characteristics and support economic vitality, this This Policy Plan allows flexibility and variation in right-of-way requirements for the planned arterial improvements. The planning and design of individual roadways need to fit with the surrounding land use and community, while enhancing mobility and safety for all road users multimodal transportation uses.

The county has designated several Revitalization Districts and Areas to encourage economic development in the older commercial and residential areas. Special incentives and policies are provided for these areas, such as flexibility within certain zoning regulations and urban design measures. The Plan emphasizes that Road improvement policies improvements that are within the Revitalization Districts and Areas should be in concert with the adopted land use, urban design and economic and administrative policies formulated to foster a sense of place and to support successful revitalization. Additionally, it is important to recognize that land use, transit and right-of-way for multimodal transportation and for travel patterns differ among these areas. Area Plans of the Comprehensive Plan provide specific guidelines for right-of-way requirements and cross-sections in the Revitalization Districts and Areas.

# **APPENDIX 5**

# FAIRFAX COUNTY BICYCLE MASTER PLAN

Appendix 5 was comprised of Chapters 1 through 4 of the *Bicycle Master Plan*. Chapter 5, Bicycle Program Recommendations and Chapter 6, Implementation, were adopted by reference only, and can be viewed by contacting the Fairfax County Department of Transportation.

