Bicycle and Pedestrian Plan for the National Capital Region

October 2010

National Capital Region Transportation Planning Board

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AGENCY:

The Metropolitan Washington Council of Governments (COG) is the regional organization of the Washington area's major local governments and their governing officials. COG works toward solutions to such regional problems as growth, transportation, the environment, economic development, and public safety. The National Capital Region Transportation Planning Board (TPB) conducts the continuing, comprehensive transportation planning process for the National Capital Region under the authority of the Federal-Aid Highway Act of 1962, as amended, in cooperation with the states and local governments.

ABSTRACT:

This document is an update to the Bicycle and Pedestrian Plan for the National Capital Region (July 2006). It examines the status of bicycling and walking in the National Capital Region, including existing facilities, programs, mode share, and current policies and planning, in the context and supportive of the adopted Vision (1998) of the National Capital Region Transportation Planning Board and Region Forward (2010), the vision plan of the Council of Governments. It adopts the goals and indicators for walking and bicycling from the Vision and Region Forward, as well as identifying supporting performance indicators and relevant baseline conditions.

The Plan includes a list of major bicycle and pedestrian projects, drawn from local, state, and agency plans, which the region would like to carry out by the year 2040. This list contains both funded and unfunded projects. The Plan also describes the progress on completing the projects from the July 2006 Plan. Lastly, the Plan identifies a set of best practices for walking and bicycling programs.

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ABSTRACT

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

INTRODUCTION

A. The *Vision* and *Region Forward* i-1
B. Bicycling and Walking in the National Capital Region i-2
C. Plan Development and Organization i-4

1. PLANNING CONTEXT

A. Overview 1-1
B. Transportation Vision of the Transportation Planning Board 1-1
C. Region Forward 2050 1-5
D. Constrained Long-Range Plan 1-5
E. Transportation Improvement Program 1-5
F. Priority Unfunded Bicycle and Pedestrian Projects 1-6
G. Encouraging Walking and Bicycling 1-7
H. Federal Policies 1-8
   i. Americans with Disabilities Act 1-8
   ii. SAFETEA-LU 1-9
   iii. Safe Routes to School 1-10
   iv. American Recovery and Reinvestment Act 1-10
I. State Policies 1-11
   i. District of Columbia 1-11
   ii. Maryland 1-12
   iii. Virginia 1-13
J. Complete Streets 1-14
K. Local Bicycle and Pedestrian Plans 1-16
L. Local Bicycle and Pedestrian Staffing 1-17
M. Regional Bicycle and Pedestrian Planning 1-19
   i. Precursors to the Current Plan 1-19
   ii. Sources of the Regional Plan Projects 1-19
N. Outlook 1-20

2. BICYCLING AND WALKING IN THE WASHINGTON REGION

A. Overview 2-1

B. COG/TPB Household Travel Survey 2-3
i. Mode Share Trends 2-5
ii. Walk and Bike Mode Share by Jurisdiction 2-6
iii. Trip Lengths by Purpose 2-9
iv. Trip Lengths by Mode 2-10
v. Walking and Bicycling by Time of Day 2-14
C. Walking and Bicycling According to the US Census 2-16
D. Bicycling in the Metro Core 2-23
E. Demographics of Pedestrian and Bicycle Commuters 2-25
F. Commute Trip Distances 2-29
G. Walking and Bicycling to Transit 2-31
H. Outlook 2-33
I. Data Sources 2-35

3. PEDESTRIAN AND BICYCLE SAFETY

A. Overview 3-1
B. Scope of the Problem 3-1
C. Distribution of Fatalities and Injuries by Jurisdiction 3-3
D. Factors Contributing to Pedestrian and Bicycle Crashes 3-5
E. Legal Status of Pedestrians and Bicyclists 3-7
F. Street Smart Pedestrian and Bicycle Safety Campaign 3-11
i. Evaluation Results 3-11
G. Outlook 3-11

4. EXISTING FACILITIES FOR BICYCLISTS AND PEDESTRIANS

A. Overview 4-1
B. Shared-Use Paths 4-1
C. Side-Paths 4-2
D. Bicycle Lanes 4-3
E. Cycle Tracks 4-4
F. Dual Facilities 4-5
G. Signed Bicycle Routes 4-6
H. Long-distance Bicycle Routes 4-6
I. Exclusive Bus/Bike Lanes 4-6
J. Bridges 4-6
K. On-line Bicycle and Pedestrian Routing 4-7
L. Bicycles and Public Transit 4-8
M. Pedestrian Access to Transit 4-9
N. Bike Parking 4-10
O. Bike Sharing 4-11
P. Outlook 4-12

5. GOALS AND INDICATORS

A. Goals from the Vision and Region Forward 5-1
B. Targets, Indicators, and Baseline Conditions 5-3

6. BEST PRACTICES

A. Adopt "Complete Streets" Policies 6-1
B. Adopt Consistent Design, Construction & Maintenance Guidelines. 6-4
C. Minimize Curb Radii and Crossing Distance 6-6
D. Set Target Speeds Appropriate to Surrounding Land Use 6-6
E. Prioritize Urban Core and Activity Centers 6-6
F. Integrate Walking and Bicycling into Public Transit 6-7
G. Provide Adequate Bicycle Support Facilities 6-8
H. Build a Regional Bike Sharing Program 6-9
I. Carry out Safety and Education Programs 6-9
J. Encourage Walking and Bicycling 6-11
K. Carry out High Visibility Demonstration Projects 6-12
L. Designate a Bicycle and Pedestrian Coordinator at Each Agency .. 6-13

7. THE 2040 BICYCLE AND PEDESTRIAN NETWORK

A. Regional Bicycle and Pedestrian Network in 2040 7-1
B. Progress Since 2006 7-1
C. Funding and Cost Estimates 7-2
D. Explanation of Project Listings 7-3
E. Table of Mapped Bicycle and Pedestrian Projects 7-4
F. Map of Major Bicycle and Pedestrian Projects 7-11

APPENDICES:

A. 2010 Plan Bicycle and Pedestrian Projects

B. Project Database Data Dictionary and Sample Database Entry Form

C. Completed projects from the 2006 Bicycle and Pedestrian Plan

D. Metro Core Cordon Counts

E. Metrorail Stations Sorted by All Day Walk Mode of Access

F. Metrorail Stations Sorted by All Day Bike Mode of Access

G. Links and Resources

H. Glossary

I. Glossary of Acronyms

J. Bibliography

Executive Summary

Bicycle and Pedestrian Plan for the National Capital Region — Executive Summary

Overview

This *Bicycle and Pedestrian Plan for the National Capital Region* identifies the capital improvements, studies, actions, and strategies that the region proposes to carry out by 2040 for major bicycle and pedestrian facilities. This plan is an update to the 2006 *Bicycle and Pedestrian Plan for the National Capital Region*, which was the first all-new regional plan specifically for bicycle facilities since 1995, and the first-ever regional pedestrian facilities plan.

The National Capital Region Transportation Planning Board (TPB), composed of governments and agencies from around metropolitan Washington, has developed this plan with the support of its Bicycle and Pedestrian Subcommittee. The plan incorporates the goals, targets, and performance indicators for walking and bicycling from the *TPB Vision* (1998) and the Council of Governments' *Region Forward 2050* (2010) plans.

In addition to building upon the *TPB Vision*, the *Bicycle and Pedestrian Plan for the National Capital Region* draws on and has been shaped by a number of regional, state, and local policy statements, plans, and studies. These include the TPB's regularly updated Constrained Long Range Plan (CLRP) and Transportation Improvement Program (TIP); federal and state guidance on bicycle and pedestrian facilities; and a wealth of state and local bicycle and pedestrian plans from around the region.

The *Bicycle and Pedestrian Plan for the National Capital Region* is intended to be advisory to the CLRP and TIP, and to stand as a resource for planners and the public. In contrast to the CLRP, the *Bicycle and Pedestrian Pla*n includes both funded and unfunded projects – projects in this plan may not yet have funding identified to support their implementation.

Planning Context

A number of federal, state, and local activities, as noted above, provide the planning context (Chapter 1) for this document. At all levels the trend is to require or strongly encourage the routine inclusion of pedestrian and bicycle facilities in all transportation, a policy sometimes known as "complete streets".

Jurisdictions and agencies around the region maintain active bicycle and pedestrian planning and coordination programs. Within this context, the TPB incorporates bicycle and pedestrian considerations into overall regional transportation planning, bike-to-work components of the Commuter Connections program, the Transportation-Land Use Connections program, and the region's Access for All Committee concerning minority, low-income, and disabled communities. The Transportation Planning Board and the

Council of Governments support bicycling and walking and their health, community, pollution reduction, and congestion reduction benefits for the region.

Bicycling and Walking in the National Capital Region

The state of bicycling and walking in the Washington region (Chapter 2) includes success stories, challenges, and opportunities for improvement. Data from the 2007/2008 Household Travel Survey, the U.S. Census, surveys, and other sources provide an understanding of where bicycling and walking are found throughout the region, as well as who is walking and bicycling. These data may point to opportunities for increasing these activities, and support the need to consider bicycling and walking in overall roadway and transit planning and engineering.

Safety

Bicycle and pedestrian safety (Chapter 3) is a key challenge for the region. The plan describes the scope of the safety problem, its geographic and demographic distribution across the region, and the legal rights and responsibilities of drivers, pedestrians, and bicyclists. Unfortunately, bicycle and pedestrian safety issues are found throughout the region. The region and member agencies are actively pursuing a number of engineering, enforcement, and educational strategies to reduce deaths and injuries.

Existing Facilities

The Washington region benefits from a number of popular bicycle and pedestrian facilities in place in our communities (Chapter 4). The region's transit agencies have also worked to provide access and accommodation of bicycling and walking to and on their systems. A goal of this plan is to complement and augment the existing system of facilities.

Goals and Indicators

Region Forward 2050 and the TPB's *Vision* of 1998 both encourage walking and bicycling. *Region Forward 2050* calls for more rapid implementation of the projects in this plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities, as well as setting targets and indicators which will measure progress towards the regional goals. It also calls for specific targets and indicators which will measure progress towards the plan goals. Chapter 5 incorporates the goals in the *Vision* and *Region Forward 2050* relevant to walking and bicycling, as well as the corresponding targets and indicators from *Region Forward.* It also suggests additional indicators which could be used to measure progress.

Best Practices

Convenient and safe bicycle and pedestrian access is a key goal of the TPB's *Vision* and the Council of Governments' *Region Forward 2050* plans. To help achieve this, the Bicycle and Pedestrian Subcommittee developed a set of recommended best practices (Chapter 6) for the design and implementation of bicycle and pedestrian facilities, as well as for the incorporation of bicycling and walking considerations into overall roadway and transit design. Best practices are based upon national and state laws and guidelines.

Planned Bicycle and Pedestrian Facilities and Improvements

Improvements included on the plan's list of regional bicycle and pedestrian projects (overview in Chapter 7 and the full listing in Appendix A) were identified, submitted and reviewed by agency staffs of TPB member jurisdictions**.** The plan includes 336 bicycle and pedestrian facility improvement projects from across the region.

If every project in the plan were implemented, in 2040 the region will have added over 450 miles of bicycle lanes, over 630 miles of shared-use paths, hundreds of miles of signed bicycle routes (signage without additional construction), more than 80 pedestrian intersection improvements, and ten pedestrian/bicycle bridges or tunnels. A new bicycle and pedestrian crossing over the Potomac would be created, at the American Legion Bridge, and bridges over the Anacostia River would be improved for pedestrians and bicyclists. In addition, 21 major streetscaping projects would improve pedestrian and bicycle access and amenities in DC, Ballston-Rosslyn, Columbia Pike, Tysons Corner and other locations.

If it implements the projects in this plan, by 2040 the region will have over 1700 miles of bike lanes and multi-use paths, more than three times the current total.

Progress since the 2006 Bicycle and Pedestrian Plan

Seventy-three projects from the 2006 Bicycle and Pedestrian Plan have been completed, including the Woodrow Wilson Bridge Trail, the DC Bike Station at Union Station, and the College Park Trolley trail. The region added 53 miles of multiuse path, and 35 miles of bike lane. This does not include projects that have been partially completed, or any privately provided facilities, or projects such as sidewalk retrofits that were too small to be included in a regional plan.

The Washington region has become a national leader in innovative policies and designs, especially bike sharing (public self-service bicycle rental). In August 2008, the District of Columbia implemented a small 100-bike pilot bike-sharing system that was the first of

its kind in the United States. In September 2010, the District of Columbia and Arlington County launched a regional bike sharing system, Capital Bikeshare, with over 1,100 bikes available at 114 locations. A federal grant application recently submitted by the TPB will, if successful, fund a major expansion of the system, to 3,578 bikes at 431 stations in the District of Columbia, Arlington, Alexandria, Fairfax County, Montgomery County, and the City of College Park.

Costs

Total estimated cost of projects in the draft plan is about $1 billion (2010 dollars). For projects without an agency-submitted estimate, or in which the project appeared to be part of a larger transportation project, cost was imputed on a mileage and project type basis. Cost estimates should be considered as order-of-magnitude and in most cases do not reflect engineering-level estimates.

On-Line Resources

Development of the *Bicycle and Pedestrian Plan for the National Capital Region* has benefited from an on-line plan project database, a resource separate from the printed document. Bicycle and Pedestrian Subcommittee members were able to view, enter, and edit their project listings on-line. This on-line database will facilitate keeping the regional list accurate and up-to-date, and will facilitate integration of information from this plan into the region's *Constrained Long-Range Plan* and Transportation Improvement Program as necessary. A public access version of this on-line version of this database can be found at http://www.mwcog.org/bikepedplan/.

Outlook

The TPB's *Vision* and the Council of Governments' *Region Forward 2050* plans call for convenient, safe bicycle and pedestrian access, walkability in regional activity centers and the urban core, reduced reliance on the automobile, increased walking and bicycling overall, inclusion of bicycle and pedestrian facilities in new transportation projects and improvements, and implementation of a regional bicycle and pedestrian plan. The *Bicycle and Pedestrian Plan for the National Capital Region* provides a blueprint for making the region a better place for bicycling and walking.

Introduction

Bicycling, Walking and the Vision of the Transportation Planning Board

Figure 1: DC Bike Lane

The National Capital Region Transportation Planning Board has long recognized the benefits of bicycling and walking in the region's multi-modal transportation system. The Transportation Planning Board's *Transportation Vision for the 21st Century*, adopted in 1998, emphasizes bicycles and pedestrians in its goals, objectives and strategies. A key part of the *Vision* is a strong urban core and a set of regional activity centers, which will provide for mixed uses in a walkable environment and reduced reliance on the automobile. The *Vision* also calls for the implementation of a regional bicycle and pedestrian plan. Recommendations in this plan will help realize the *Vision*.

The Urban Core has a Growing Network of Bicycle Lanes

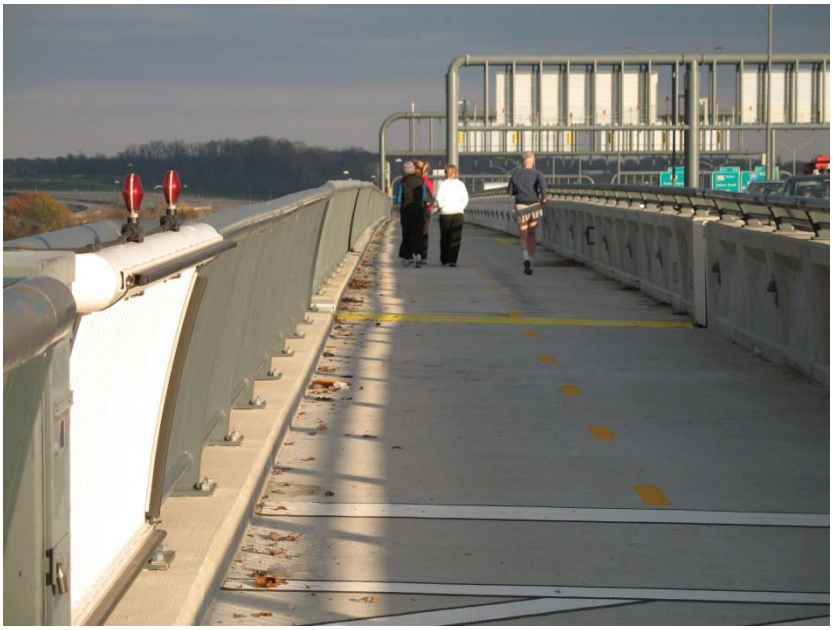


Figure 2: Woodrow Wilson Bridge Trail

The Woodrow Wilson Bridge Trail opened in 2009

Region Forward 2050

The Council of Governments recently completed *Region Forward*, a vision for the National Capital region in 2050. *Region Forward* builds on the TPB *Vision*, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities.

This plan incorporates the goals, targets, and indicators from *Region Forward* which relate to walking and bicycling, as well as some additional indicators which will help show how well those goals are being met.

Bicycling and Walking in the National Capital Region

The Washington region is nationally known for the quality, beauty, and extent of its bicycle paths. Its walkable core neighborhoods attract residents and visitors alike. The region has a strong foundation of walking and bicycling facilities to build upon.[1]

Walking and Bicycling account for 9% of all trips in the region

Taken together, bicycling and walking are a significant and growing mode of transportation in the Washington region. According to the Metropolitan Washington Council of Governments' 2008 Household Travel Survey walking and bicycling account for 9% of all trips in the Washington region, up from 8.3% in 1994.

Recent years have seen progress for bicyclists and pedestrians. Several major new trails and bridges have opened, and most local governments have adopted bicycle, pedestrian, and/or trail plans. Most of the transit agencies in the region,have added bike racks to their buses, Bicycle or pedestrian coordinators and trail planners are now found at most levels of government. In accordance with federal guidance and new state policies, pedestrian and bicycle facilities are increasingly being provided as part of larger transportation projects. Employers are investing in bike facilities at work sites, and developers are including paths in new construction.[2] A pilot bike sharing program, *Smartbike*, the first such program in the United States, has been implemented in the District of Columbia, and a large-scale regional bike sharing program, *Capital Bikeshare*,

One fourth of all driver trips in the Washington Region are less than 1½ miles long

[1] DC Bicycle Lane Photo: COG/TPB /Michael Farrell
[2] Woodrow Wilson Bridge Trail Photo: COG/TPB / Michael Farrell

is in the planning phases.

Bicycling and walking could reach a greater potential in the Washington region, however. Many trips currently taken by automobile could be taken by bicycle. The average work trip length for all modes in the Washington Metropolitan Statistical Area is 16.2 miles.[3] But 17% of commute trips are less than five miles, a distance most people can cover by bicycle.

Many people who live far from their jobs, but closer to transit or a carpool location could walk or bike to transit or the carpool instead of driving. The average trip distance to transit or carpool is only 3.1 miles.[4] Only 15% of transit riders and carpoolers travel more than five miles to the transit or carpool location.[5]

The potential for shifting non-work trips to bicycling or walking is even greater than for work trips. The average non-work trip is a little more than five miles, and nearly 3/4 of all trips are non-work trips.[6] The median auto driver trip in the Washington region, according to the 2008 COG Household Travel Survey, is four miles. The median trip for an auto passenger is only 2.8 miles. One fourth of all auto trips are less than 1½ miles in length. Destinations such as schools, shopping, and recreational facilities are often close enough to walk or bicycle. Bicycling and walking have considerable potential to displace automobile trips if suitable transportation, design, safety, parking, school siting, and land development policies are followed.

The New York Avenue Metro Station Incorporates a Shared-Use Path and Bicycle Parking

Figure 3: New York Avenue Metro Station and Metropolitan Branch Trail

[3] National Capital Region Transportation Planning Board, *2004 State of the Commute Survey Report*, November, 2004, p. 22.
[4] Ibid, p. 27.
[5] Ibid, p. 27.
[6] National Capital Regional Transportation Planning Board, *1994COG/TPB Household Travel Survey: Summary of Major Findings*, January, 1998. Page 5.

Plan Development and Organization

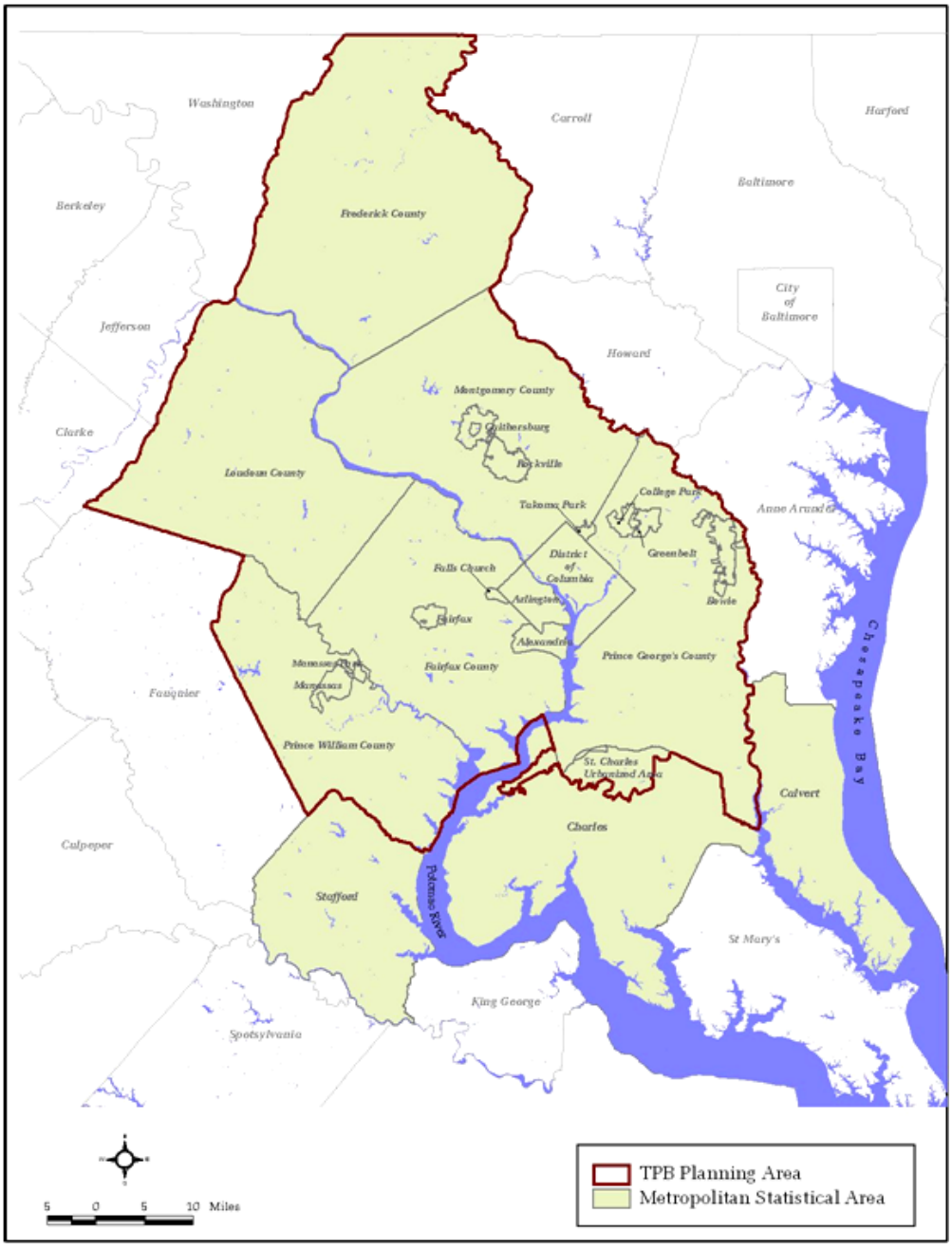
This plan has been prepared by the National Capital Region Transportation Planning Board, the federally designated Metropolitan Planning Organization (MPO) for the Washington region. The TPB is made up of representatives of 20 local governments, the departments of transportation of Maryland, Virginia, and the District of Columbia, the state legislatures, and the Washington Metropolitan Area Transit Authority (WMATA). Member jurisdictions are shown in Figure i-A on page i-5. The area of the TPB members plus Calvert County in Maryland and Stafford County in Virginia comprises the Washington, DC-MD-VA Metropolitan Statistical Area (MSA).

This document presents the long-range Bicycle and Pedestrian Plan for the Washington Region through the year 2040. The plan is a list of regional projects identified by the TPB member jurisdictions, accompanied by recommended best practices and a description of existing facilities and regional trends for bicycling and walking. This plan includes both funded and unfunded projects. It does not specify design guidelines, but refers instead to state and national guidelines for bicycle and pedestrian facilities.

This update of the *Bicycle and Pedestrian Plan for the National Capital Region* seeks to reflect the goals, objectives and strategies of the 1998 *TPB Vision* and *Region Forward 2050* while building on information from previous bicycle plans. It includes performance measures that will show progress towards the *Vision* and *Region Forward* goals.

Pedestrian access and safety receives increased attention in this update, reflecting increased attention to pedestrian issues by the TPB member governments and agencies. . Pedestrian planning is most needed at the county, city and neighborhood level. There is, however, a role for regional pedestrian planning, especially in the area of educating the public.

Figure i-A
TPB Planning Area, Washington DC-MD-VA Metropolitan Statistical Area (MSA)



Chapter 1
Planning Context

Overview

This *Bicycle and Pedestrian Plan for the National Capital Region* draws on and has been shaped by a number of regional, state, and local policy statements, plans, and studies, including the *Vision* of the Transportation Planning Board, the *Region Forward 2050* vision of the Council of Governments, federal and state guidance on provision of bicycle and pedestrian facilities, the Constrained Long Range Plan and Transportation Improvement Program, and state and local bicycle and pedestrian plans.

This plan is intended to help fulfill the goals of the *TPB Vision* and *Region Forward 2050* for bicyclists and pedestrians. It includes performance measures that will show progress towards the *Vision* and *Region Forward* goals.

I. Regional Planning

The Vision of the Transportation Planning Board

The National Capital Region Transportation Planning Board is the Metropolitan Planning Organization for the Washington region. It brings key decision-makers together to coordinate planning and funding for the region's transportation system.

The Vision of the TPB calls for more Walking and Biking

The TPB's official vision statement for the region, the *Transportation Vision for the 21st Century*, adopted in 1998, is meant to guide regional transportation investments into the new century. The *Vision* is not a plan with a map or specific lists of projects. It lays out eight broad goals, with associated objectives and strategies that will help the region reach its goals.

The *Vision* is supportive of pedestrians and bicyclists. It calls for:

- Convenient, safe bicycle and pedestrian access
- Walkable regional activity centers and urban core
- Reduced reliance on the automobile
- Increased walk and bike mode share
- Including bicycle and pedestrian facilities in new transportation projects and improvements
- Implementation of a regional bicycle and pedestrian plan

Other goals of the *Vision* affect bicyclists and pedestrians, such as: maintaining the existing transportation system, reducing the per capita vehicle miles traveled, linking land use and transportation planning, and achieving enhanced funding for transportation priorities. Sections of the *Vision* relating to bicycle and pedestrian goals are highlighted in Table 1-1.

Table 1-1: Bicycle and Pedestrian Provisions of the Transportation Vision

Goal 1. The Washington metropolitan region's transportation system will provide reasonable access at reasonable cost to everyone in the region.

Objective 4: Convenient **bicycle and pedestrian** access.

Strategy 3: Make the region's transportation facilities safer, more accessible and less intimidating for **pedestrians, bicyclists**, and persons with special needs.

Goal 2. The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy through the entire region, including a healthy regional core and dynamic region activity center with a mix of jobs, housing, and services **in a walkable environment**.

Objective 2: Economically strong regional activity centers with a mix of jobs, housing, services, and recreation **in a walkable environment.**

Objective 4: Improved internal mobility with reduced **reliance on the automobile** within the regional core and within regional activity centers.

Goal 5. The Washington metropolitan region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities.

Objective 3: Increased transit, ridesharing, **bicycling and walking** mode shares.

Strategy 7: Implement a regional **bicycle/trail/pedestrian plan** and include **bicycle and pedestrian facilities** in new transportation projects and improvements.

Accompanying the *Vision* is a shorter action agenda with elements to be included in the year 2000 long range transportation plan for the region. Item four on the action agenda calls for a regional congestion management system to achieve significant reduction in single occupant vehicles (SOVs) entering the regional core and regional activity centers by:

- designing and developing circulation systems that maximize the use of transit (rail, monorail, bus, jitney, etc.) and **pedestrian and bicycle** facilities

Region Forward 2050

The Council of Governments is a regional organization of Washington area local governments. COG is comprised of 21 local governments surrounding our nation's capital, plus area members of the Maryland and Virginia legislatures, the U.S. Senate, and the U.S. House of Representatives.

Region Forward 2050 Calls for Faster Construction of the projects in the Bicycle and Pedestrian Plan

COG provides a focus for action and develops sound regional responses to such issues as the environment, affordable housing, economic development, health and family concerns, human services, population growth, public safety, and transportation.

In January 2010 the Council of Governments adopted *Region Forward*, a vision for the National Capital region in 2050. The goals of *Region Forward* are broader than those of the TPB *Vision*, encompassing areas such as public safety, land use, economic development, housing, and the environment. For transportation, *Region Forward* builds on the TPB *Vision*, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities.

Provisions of *Region Forward* relating to bicycling and walking are summarized in Table 1-2.

Table 1-2: Bicycle and Pedestrian Provisions of Region Forward 2050

Goals:

- Transit-oriented, compact, **walkable mixed-use communities** emerging in Regional Activity Centers that will capture new employment and household growth.
- A transportation system than maximizes **community connectivity** and **walkability,** and minimizes ecological harm to the region and the world beyond.
- A broad range of public and private transportation choices for our Region which maximizes accessibility and affordability to everyone and **minimizes reliance upon single occupancy use of the automobile**.
- Safe and healthy communities

Targets:

Reduce daily vehicle miles traveled (VMT) per capita.

Increase the rate of construction of bike and pedestrian facilities from the Transportation Planning Board's (bicycle and pedestrian) plan.

Prioritize walking and biking options by **improving pedestrian and bicycle networks**, especially in the regional activity centers. Planning and street improvements will focus on:

- Wide sidewalks
- Street trees
- Mixed-use development
- Pedestrian-friendly public spaces
- Bike stations near transit hubs
- Bike lanes
- Bike sharing

Increase the share of **walk, bike** and transit trips

- Give people options to meet everyday needs locally by building mixed-use developments

Reduce pedestrian and bicyclist fatalities

- Build sidewalks, bike lanes, and other improvements
- Narrower local streets
- Better crossings
- Lower speeds for vehicles on local streets and arterials
- More education and enforcement

Indicators:

- Transit, bicycle and walk share in Regional Activity Centers
- Street/node ratio for Regional Activity Centers
- Square feet of mixed-use development
- Reduced pedestrian and bicyclist fatalities

Constrained Long-Range Plan

The financially Constrained Long-Range Transportation Plan (CLRP) is a comprehensive plan of transportation projects and strategies that the TPB realistically anticipates can be implemented over the next 20 years. The CLRP identifies all regionally significant transportation projects and programs that are planned in the Washington metropolitan area between 2009 and 2030. Over 750 projects are included, ranging from simple highway landscaping to billion-dollar highway and transit projects. Some of the projects will be completed in the near future, while others are only in the initial planning stage.

The projects and programs that go into the CLRP are developed cooperatively by governmental bodies and agencies represented on the National Capital Region Transportation Planning Board (TPB). The TPB Vision, the policy framework adopted by the TPB in 1998, serves as the regional guide for project development.

Federal law requires that the CLRP be updated every four years; the most recent version was adopted in 2010. To receive federal funding, a transportation project in metropolitan Washington must be included in the CLRP. Because funds must be reasonably anticipated to be available for all the projects in the CLRP, the CLRP is realistic plan based upon available resources.

Historically, less than 1% of the capital funding in the CLRP has been specifically for stand-alone bicycle and pedestrian projects. However, since bicycle and pedestrian projects are usually small projects, they are often added to the plan later than the major highway and transit projects. Moreover, much pedestrian and bicycle spending is subsumed within larger highway or transit projects, and thus is not reflected in the amount programmed for bicycle and pedestrian projects. Therefore, the CLRP may under-estimate the amount of bicycle and pedestrian spending that will occur over the next 20 years. State Departments of Transportation may also increase funding levels in the future as they implement policies to routinely accommodate pedestrians and bicyclists in all new transportation projects.

Transportation Improvement Program

The Transportation Improvement Program (TIP) provides detailed information showing which projects in the CLRP will be completed over the next six-year period. The TIP is updated every year. Like the CLRP, the TIP is subject to federal review. Many projects in the TIP are staged, so a single CLRP project could end being split into multiple TIP projects.

The Transportation Improvement Program includes $124 million for pedestrian and bicycle projects

Bicycle and pedestrian projects, and transportation projects that include bicycle and pedestrian accommodation, are tracked in TIP.

For example, the Fiscal Year 2010-2015 TIP includes $124 million for bicycle and pedestrian projects. Of that, $23 million is programmed for FY 2010, which is less than one percent of the total capital funds for all transportation projects programmed for FY 2010. As with the CLRP, funds spent on bicycle and pedestrian accommodations as part of a larger highway or transit project are often subsumed in budget of the larger project.

Top Priority Unfunded Bicycle and Pedestrian Projects

The Bicycle and Pedestrian Subcommittee of the TPB Technical Committee advises the TPB, TPB Technical Committee, and other TPB committees on bicycle and pedestrian considerations in overall regional transportation planning.

The Subcommittee periodically selects a short list of priority unfunded bicycle and pedestrian projects, which it recommends for inclusion in the TIP. These projects are selected from the regional bicycle plan, and from state and local plans. The subcommittee has compiled and forwarded lists to TPB regularly since 1995, to be included in the solicitation document for the TIP/CLRP. In essence, the TPB urges the jurisdictions to consider funding these projects, which the Bicycle and Pedestrian Subcommittee has judged to be regionally significant, within six years.

The following selection criteria are used:

- **Bicycle Network Connectivity:** priority is given to projects that enhanced connectivity of facilities on the regional bicycle facilities network.
- **Pedestrian Safety:** priority is given to projects that promoted pedestrian safety, especially in areas with documented pedestrian safety problems and no pending road project that could address them.
- **Access to Transit:** priority is given to projects that enhanced access to Metrorail stations and other major transit stops or facilities.
- **Time Frame:** all projects should be able to be completed by 2016, the end of the TIP time frame.
- **Local Support:** the project is a priority for the jurisdiction or jurisdictions in which it is located.
- **Still seeking funding:** the project does not yet have full construction funding committed to it.
- **Reasonable Cost:** the total cost of the list should be a reasonable fraction of the total spending in the region on highways and bridges.

While considerable weight is given to the preference of the representative of the jurisdiction, subcommittee members are urged to think in terms of the regional selection criteria when nominating projects.

Projects are dropped from the list when they receive funding, or if the subcommittee and nominating jurisdiction decide that priorities have changed.

Five projects on the November 2008 list received partial funding, totaling $2,023,000.

Projects funded since 1995 include:

- The Metropolitan Branch Trail in Washington, D.C.
- The Holmes Run Pedestrian/Bicycle crossing in Alexandria
- Pedestrian and Bicycle Safety Improvements on Route 1 in Fairfax County
- The Dumfries Road (Route 234) Bike Path in Prince William County
- The Rosslyn Circle Crossing in Arlington County
- The Eisenhower Trail in Alexandria
- The Matthew Henson Trail in Montgomery County
- The Falls Road Shared-Use Path in Montgomery County
- The Henson Creek Trail in Prince George's County
- The Millennium Trail in Rockville

Bicycling, Walking, and the Regional Transportation Model

Data relevant to walking and bicycling are gathered as part of the regional household travel survey, and are incorporated into regional transportation modeling and forecasting.

Encouraging Bicycling and Walking:
Bike to Work Day, the Bike to Work Guide, and Guaranteed Ride Home

To help realize the *TPB Vision* and reduce congestion, air pollution, and single occupant vehicle traffic, the TPB has developed several programs to encourage bicycling and walking in the Washington region. As part of its Commuter Connections program, every year on the third Friday in May the TPB sponsors a regional Bike to Work Day. This event has grown into one of the largest of its kind in the country, attracting over eight thousand riders to thirty five "pit stops" or rallying points around the region. The event is meant to encourage first-time riders to try bicycling to work.

The Commuter Connections program also supports publication of *Biking to Work in the Washington Area: A Guide for Employers and A Guide for Employees,* which provides tips for employees and employers. For employees, there are tips on safe cycling, laws, equipment and clothing, and transit connections. For employers, the guide explains the benefits of bicycling to the employer, the types of bicycle parking, and the ways an employer can encourage an employee to bike to work.

Commuter Connections also makes available on-line a regional map of existing bicycle facilities, park and ride lots with bicycle parking, transit, and HOV lanes. The Bicycle

and Pedestrian Subcommittee publishes a map of regional bicycle facilities in cooperation with the ADC Map Company. Maps can be ordered at www.adcmap.com. Regional bike routing is available at www.ridethecity.com, and Google maps offers both pedestrian and bicycle routing.

People sometimes drive to work because they need to be able to get home quickly in an emergency. To meet that need and help get more people out of their cars, the Commuter Connections program offers a free taxi ride home in an emergency for commuters who regularly (twice a week) carpool, vanpool, bike, walk or take transit to work. Commuters who sign up for the Guaranteed Ride Home program may use it up to four times per year.

Encouraging Walkable Development: the Transportation-Land Use Connections Program

The Transportation Land Use Connections (TLC) Program provides support to local governments in the Metropolitan Washington region as they work to improve transportation and land use coordination. Through the program, the TPB provides communities with technical assistance to catalyze or enhance planning efforts for planning for transit and pedestrian access. Since 2007 dozens of pedestrian and transit access planning projects have been funded through the TLC program. Community response has been enthusiastic, and competition for the grants has been stiff.

II. Federal Policies

Routine Accommodation of Walking and Bicycling

U.S. Department of Transportation guidance issued in 2000 calls for bicycling and walking facilities to be incorporated into all transportation projects unless exceptional circumstances exist. Further guidance issued in March 2010 urged agencies to go beyond the minimum standards to provide safe and convenient facilities for pedestrians and bicyclists, set mode share targets, and collect data on walk and bike trips. Bicycling and walking are to have equal importance to other transportation modes. Transportation projects using federal funds may not sever an existing bicycle or pedestrian route, unless an alternate route exists or is provided.

The US DOT headquarters in Washington, D.C. sets an example for other employers by encouraging employee bicycling.

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) is a federal civil rights statute that prohibits discrimination against people who have disabilities. Under the ADA, designing and

constructing facilities that are not usable by people with disabilities constitutes discrimination. Public rights of way, including pedestrian facilities, are required by federal law to be accessible to people with disabilities.

The ADA Requires that all New and Altered Pedestrian Facilities be made Accessible to the Handicapped

Both new and altered pedestrian facilities must be made accessible to persons with disabilities, including those who are blind or visually impaired. The courts have held that if a street is to be altered to make it more usable by the general public, it must also be made more usable for those with disabilities.

Government facilities which were in existence prior to the effective dates of the ADA and which have not been altered are not required to be in full compliance with facility standards developed for new construction and alterations. However, they must achieve 'program access.' That is, the program must, when viewed in its entirety, not deny people with disabilities access to government programs and services. For example, curb ramps may not be required at every existing walkway if a basic level of access to the pedestrian network can be achieved by other means, e.g., the use of a slightly longer route. Municipalities should develop plans for the installation of curb ramps and accessible signals such that pedestrian routes are, when viewed in their entirety, accessible to people who are blind or visually impaired within reasonable travel time limits. [1]

Design standards for the disabled, such as smoother surfaces, adequate width, and limits on cross-slope, are also beneficial for the non-disabled pedestrian. Good design for persons with disabilities is good design for all. For more information on the Americans with Disabilities Act, contact the US Access Board.

SAFETEA-LU

All Federal Transportation Funds may be used for Bicycle and Pedestrian Projects

Under the SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users) federal transportation bill signed in August 2005, bicycle and pedestrian projects remain broadly eligible for nearly all funding categories, either for projects incorporated into something larger, or for stand-alone bicycle and pedestrian projects. The bill authorized $286 billion for highways and transit from 2005 through 2009, a 22% increase over the previous federal transportation bill, TEA-21. SAFETEA-LU was scheduled for a full re-authorization in 2009, but is currently being extended with little substantive change in its provisions.

[1] American Council for the Blind, *Pedestrian Safety Handbook: A Handbook for Advocates.* www.acb.org

Transportation Enhancements, half of which historically have been spent on bicycle or pedestrian projects, was funded nationally at a level of $3.25 billion over five years. The Recreational Trails Program set aside $110 million for non-motorized trails. SAFETEA-LU also contained a number of high priority projects, sometimes known as legislative earmarks, many of which are bicycle or pedestrian projects.[2] Pedestrian and bicycle projects are *not*, however, limited to set-aside programs and high priority projects. They are broadly eligible for funding from highway and transit funds.

Under SAFETEA-LU bicyclists, pedestrians, and people with disabilities are explicitly required to be given an opportunity to comment on metropolitan transportation plans.

Safe Routes to School

Aside from the general increase in funding under SAFETEA-LU, the most important new set-aside for bicyclists and pedestrians was the Safe Routes to School (SRTS) Program. The goals of the program are to enable and encourage children to walk and bike to school, improve safety, and reduce traffic and air pollution near schools. Eligible activities include both infrastructure and non-infrastructure projects. Infrastructure projects include bicycle parking, crosswalks, sidewalks, traffic calming, on and off-street bicycle facilities, etc. on any public road or trail in the vicinity of a school. Non-infrastructure projects include public awareness and outreach to encourage walking and bicycling to school, traffic education and enforcement near schools, student sessions, training, SRTS program managers, and a State Coordinator. Not less than 10% or more than 30% of SRTS funds must be set aside for non-infrastructure projects.

Funds are administered by State Departments of Transportation, with 100% federal share – no local match required. Each state is to receive funds in proportion to K-8 school enrollment, but not less than $1 million. The budget grew from $54 million in 2005 to $183 million in 2009.

As this program has developed, interest, and applications for funding have varied greatly between different schools and school districts. Some school districts have embraced the program, while others have maintained bus and drive-only policies. Urban school districts have been more receptive to the program. Growing emphasis on fighting childhood obesity has helped build support.

The District of Columbia spent nearly half its stimulus funds on pedestrians and bicyclists

American Recovery and Reinvestment Act

Signed into law on February 17, 2009, the American Recovery and Reinvestment Act of 2009 (ARRA) provided over $48 billion for transportation, including $27.5 billion for highway infrastructure investment, $8.4 billion for transit capital

[2] See www.bikeleague.org for further information on the Bicycle and Pedestrian provisions of SAFETEA-LU.

assistance, $8 billion for high speed rail, $1.5 billion for a competitive grant program for surface transportation, and $1.3 billion for Amtrak.

The District of Columbia was allocated $123.5 million, Maryland $431 million ($129 million sub-allocated to urban areas) and Virginia $694.5 million ($208 million sub-allocated to urban areas) in highway formula funds.

ARRA is a one time, "stimulus" bill, intended to promote recovery from the economic recession. Projects funded through ARRA are supposed to be capable of implementation within a relatively short time frame, which has in practice caused funds to be directed to those projects for which design was already complete, and which did not need additional right of way.

The District of Columbia spent nearly half its $123.5 million allocation on bicycle and pedestrian projects. Over $50 million will be spent on streetscaping and sidewalk construction, $4 million for Safe Routes to School, and a $3 million on an expanded bike sharing program. In addition bridge reconstruction projects will include upgraded sidewalks. Since projects are bid as a whole, the cost of the pedestrian portion of a project is not estimated separately.

Apart from $4.6 million for ADA improvements, Maryland had no identifiable pedestrian or bicyclist projects funded under ARRA. Maryland stimulus funds largely went to resurfacing and bridge rehabilitation projects, often on limited-access highways. Out of $160 million programmed so far in Northern Virginia, $10 million has been allocated to identifiable pedestrian and bicycle projects, such as pedestrian bridges and underpasses, trail reconstruction, streetscaping, and traffic calming.

The degree to which pedestrians and bicyclists benefit from the Act depends to a great degree on the extent to which the Departments of Transportation have included pedestrian and bicycle facilities in their project planning and design. An effective "routine accommodation" or "complete streets" policy is critical.

III. State Policies

District of Columbia

Reflecting its urban character, the District of Columbia is doing more to encourage walking or bicycling than is currently envisioned in Maryland or Virginia. District of Columbia Department of Transportation intends to create a "walk-centric, bike-centric" city. DDOT's two-year "Action Agenda" calls for safety, sustainability, and increasing livability and prosperity by creating great spaces that are the "living room" of the city.

Streetscaping projects and traffic calming projects are a high priority. By providing pedestrians with plenty of well-designed, safe, and comfortable space, the city hopes to increase retail sales and property values. Business Improvement Districts are to have considerable input into transportation projects.

Pedestrian and bicyclist injuries are to be reduced by 10% per year. To reduce pedestrian injuries, the "Action Agenda" calls for traffic calming, traffic enforcement, speed and red light cameras, speed limits lower than 25 mph, lead pedestrian intervals at crosswalks, and reconstruction of high-crash intersections.

The District of Columbia is to become a "walk-centric, bike-centric" city.

Due to the built-up character of the District of Columbia, DDOT rejects road widening as a means of increasing transportation capacity. Instead, DDOT aims to shift travel from less space-efficient modes, such as single occupant driving, to more space efficient modes, such as walking, bicycling, and public transportation.

DDOT's strategy for shifting auto trips to transit, walk, and bike trips encompasses both transportation and land development elements. The District of Columbia will encourage mixed use development projects that promote and support non-auto mobility. Reduced auto parking, increased bike parking, on-site car and bike sharing, and transportation demand management plans will reduce auto trips generated by new development.

On a citywide basis there is to be car sharing, bike sharing, new transit service, streetcars, reduced off-street parking requirements, required off-street bike parking, and rapid construction of new pedestrian and bicyclist infrastructure. The current Bicycle Master Plan (2005) is to be updated and expanded to reflect changed priorities.

Strategies to address congestion directly include congestion pricing, variable pricing for on-street parking, and double-parking and loading zone enforcement. Nearly all the proposed congestion reduction measures will increase the monetary cost of driving. None involve allocating additional space for travel lanes.

Maryland

Maryland will "strive" to provide bicycle and pedestrian facilities "wherever possible"

The State of Maryland's Bicycle and Pedestrian Access Act provides that "Access to and use of transportation facilities by pedestrians and bicycle riders shall be considered in all phases of transportation planning, including highway design, construction, reconstruction, and repair."[3] The Maryland Department of Transportation is to "work to ensure" that transportation options for pedestrians and

[3] Maryland Department of Transportation, *Twenty Year Bicycle and Pedestrian Access Master Plan*, October, 2002. Pp. 13, 32.

bicycle riders will be enhanced and not negatively impacted by a project or improvement. The Twenty Year Bicycle and Pedestrian Access Master Plan (2002) calls for MDOT to "strive" to integrate bicycle and pedestrian facilities into routine roadway development "wherever possible". SHA's Bicycle and Pedestrian Design Guidelines (2007) declare an intent to provide bicycle and pedestrian facilities as part of all transportation projects, but allows design waivers for such things as "impacts to right of way, utilities, structures (such as bridges or drainage structures), cost and environmentally or historically sensitive areas", and the "need to provide safety or capacity improvements to the roadway".[4]

MDSHA's design waiver guidelines appear to be less stringent than those most commonly used in "Complete Streets" policies requiring bicycle and pedestrian accommodation. These policies typically allow exemptions where 1) non-motorized use is prohibited, such as interstate freeways; 2) cost of accommodation is excessively disproportionate to the need or probable use; or 3) a documented absence of current or future need.

A Bicycle and Pedestrian Advisory Committee advises State government agencies on issues directly related to bicycling and pedestrian activity including funding, public awareness, safety and education. MDOT has published pedestrian design guidelines, accessibility guidelines for pedestrian facilities, a bicyclist education video, and other materials designed to share information on best practices with respect to the engineering, education, and enforcement aspects of walking and bicycling.

Overall Maryland's policies to promote walking and bicycling appear to be less ambitious than the District of Columbia's. Provision of accommodations for pedestrians and bicyclists in transportation projects is strongly encouraged but not mandatory.

Virginia

Virginia requires "routine accommodation" of pedestrians and bicyclists in transportation projects

In 2004, the Virginia Department of Transportation released its policy for bicycle and pedestrian accommodation, which commits VDOT to routinely accommodating pedestrians and bicyclists as part of all new construction and reconstruction projects, unless exceptional circumstances exist.[5]

Since 2004 VDOT has developed a process to ensure that bicycle and pedestrian accommodations are provided in accordance with the policy. The Bicycle and Pedestrian Accommodations Decision Process gives designers a step by step process to determine if bicycle / pedestrian accommodations are appropriate for the characteristics of a particular roadway, and a

[4] Maryland State Highway Administration, *Bicycle and Pedestrian Design Guidelines.* May 2007. Page 1-3.
[5] www.virginiadot.org

Bicycle and Pedestrian Accommodations list and a design guide provides project managers with a menu of possible accommodations. A series of implementation guidance documents for localities have also been developed to improve communication between agencies regarding planning and accommodation of pedestrians and cyclists under terms of the 2004 policy.

VDOT maintains all roads in Virginia outside of urban areas, including thousands of miles of residential streets originally built by developers. In view of the importance of secondary streets for vehicular, pedestrian, and bicycle movement, VDOT has revised its Secondary Street Acceptance Requirements (SSAR) to mandate higher levels of street connectivity in urban areas, as well as adequate pedestrian accommodation. New streets and developments are required to connect to the surrounding streets and future developments in a way that adds to the capacity of the transportation network.

Virginia requires new developments to connect with the surrounding streets

The policy divides Virginia into "compact", surburban, and rural areas, with graduated connectivity requirements for each. Narrower streets, traffic calming and "context-sensitive" design are encouraged where appropriate.

New development proposals initially submitted to counties and VDOT after June 30, 2009, must comply with the requirements of the SSAR.

Cul-de-sac development patterns have long been an obstacle to walking or bicycling in suburban areas. More direct, traffic-calmed secondary streets will allow more people to walk or bike to local destinations.

Virginia has adopted a fairly stringent set of requirements mandating accommodation of pedestrians and bicyclists on both public roads and private developments which are accepted by State for maintenance, which in Virginia means almost all development. As the economy recovers, and new development applications fall under the new rules, we will be able to see the results of the new policies.

Virginia State Bicycle Policy Plan

VDOT completed a State Bicycle Policy Plan in April, 2010, which incorporates the policies discussed above, as well as the most recent federal guidance. The plan calls for bicycling for increased bicycling for all trip purposes, and a transportation system that "accommodates and encourages" bicycling by providing facilities for bicyclists of all ages and abilities. It also calls for better data gathering and benchmarking of bicycling, coordination with various stakeholders, and recommends a number of strategies to improve implementation of VDOT's 2004 policy for bicycle and pedestrian accommodation.

The plan provides some guidance on bicycle facilities to be used. Bicycle lanes and paved shoulders are recommended over other bicycle facilities. Restriping travel lanes, or "road diets" are recommended as a way to provide bicycle lanes within the current right of way. Actuated traffic signals should be able to detect bicycles, and bicycle compatible drain grates should be used on all roads where bicycles are permitted. A signed bike route should have at least a bicycle level of service "C".

Subsequent plans are to address pedestrians.

"Complete Streets"

Routine accommodation policies are sometimes known as "complete streets" policies.[6] "Complete streets" are defined as streets that are designed and operated to enable safe access for all users, including motorists, pedestrians, bicyclists, and transit users, as well as senior citizens, children, and persons with disabilities. The District of Columbia, Virginia, Arlington, Alexandria, and a number of other jurisdictions have adopted or are moving towards complete streets policies.

Federal and State policies have evolved, from not requiring (or in some cases prohibiting) the use of transportation funds for pedestrian or bicycle facilities, towards requiring the provision of such facilities. These federal and state guidelines and policies have lead to an increase in the number of pedestrian and bicycle facilities provided, with more facilities provided as part of larger transportation projects rather than as stand-alone projects.

Federal and State policies are also evolving away from encouraging single-use cul-de-sac development patterns typical of the last half of the 20th century, to encouraging mixed use development and a connected street grid that is far more accessible to pedestrians and bicyclists.

IV: Local Bicycle and Pedestrian Planning

Nearly every jurisdiction in the region has completed a bicycle or pedestrian plan, and most have at least part time bicycle or pedestrian planner. Table 1-2 shows local and state plans and studies and the year published. Jurisdictions and agencies drew projects from these individual plans and submitted them for incorporation into the Regional Bicycle and Pedestrian Plan. Local plans may include unfunded projects.

[6] www.completestreets.org

Table 1-2:
Major Bicycle and Pedestrian Plans and Studies
Of the Washington Region

Jurisdiction/ Agency	**Plan/Study**	**Year**
Arlington County	Pedestrian Transportation Plan, Bicycle Transportation Plan, Bike Lane Plan Arlington Master Plan - Pedestrian Element	1997, 1994 2001, 2008
City of Alexandria	Pedestrian and Bicycle Mobility Plan	2008
District of Columbia	District of Columbia Bicycle Master Plan, District of Columbia Pedestrian Master Plan	2005, 2009
Fairfax County	Countywide Trails Plan, County Bicycle Map	2002, 2009
Frederick County	Frederick County Bikeways and Trails Plan	1999
City of Gaithersburg	Bikeways and Pedestrian Plan	1999
City of Laurel, Maryland	Bikeway Master Plan	2009
Loudoun County	Loudoun County Bicycle and Pedestrian Master Plan	2003
Maryland Department of Transportation	Twenty Year Bicycle and Pedestrian Access Master Plan	2002
MNCPPC – Prince George's County	Transportation Priority List (Joint Signature Letter) Countywide Master Plan of Transportation	1999 2009
Montgomery County	Countywide Bikeways Functional Master Plan	2005
National Capital Planning Commission	Comprehensive Plan for the National Capital	2004

National Capital Region Transportation Planning Board	Priorities 2000: Metropolitan Washington Greenways & Circulation Systems, Bicycle and Pedestrian Plan for the National Capital Region	2001, 2006, 2010
National Park Service	Paved Recreation Trails Plan	1990
Prince William County	Thoroughfares Plan (part of Comprehensive Plan), Greenways and Trails Plan	1998, 1993
City of Rockville	Bikeway Master Plan	2004
Virginia Department of Transportation	Virginia Department of Transportation State Bicycle Policy Plan	2010
Virginia Department of Transportation, Northern Virginia Office	Northern Virginia Regional Bikeway and Trail Network Study	2003
WMATA	Metrorail Bicycle & Pedestrian Facilities Planning Study.	2010
Jurisdiction/ Agency	**Plan/Study**	**Year**

Table 1-3 shows the approximate number of full-time planners each agency has working on bicycle, pedestrian, and trails planning.

Table 1-3:
Agency Bicycle/Pedestrian Planning Staff
Full-Time Equivalents (FTE's)

Jurisdiction/ Agency	**Bicycle Planner FTE's**	**Pedestrian Planner FTE's**	**Trails Planner FTE's**
Arlington County	1	1	1
City of Gaithersburg	0.5		
City of Alexandria	0.5	0.5	

Jurisdiction/ Agency	Bicycle Planner FTE's	Pedestrian Planner FTE's	Trails Planner FTE's
City of College Park	0.5		
City of Frederick	0.5	0.5	
City of Rockville	0.5	0.5	
District of Columbia	2	1	1
Fairfax County	1	1	2
Frederick County	0.25	0.25	
Loudoun County	0.5		
Maryland Department of Transportation	1	2	1
MNCPPC – Montgomery County	0.33	0.33	1
MNCPPC – Prince George's County			1
Montgomery County	1	1	1
National Capital Region Transportation Planning Board	0.5	0.5	
National Park Service			1
Prince William County			0.5
WMATA	0.5	0.5	

Virginia Department of Transportation, Northern Virginia Office	1	1	

V: Regional Bicycle and Pedestrian Planning

Precursors to the Current Plan

The Washington region completed its first major bicycle study, the *Washington Regional Bikeways Study* in 1977. This study, created under the supervision of the Regional Bikeways Technical Subcommittee of the Transportation Planning Board Technical Committee, provided an overview of bicycling characteristics and the potential market for bicycle commuting.

In 1988 the Bicycle Technical Subcommittee began work on a bicycle element for incorporation into the region's transportation plan. The plan identified the extent to which bicycle facilities and planning processes already existed in the region, highlighted areas of concern for the future, and drafted a set of policy principles to be applied by the region's jurisdictions in updating their own transportation plans, as well as a list of recommended bicycle projects. The *Bicycle Element* was adopted by the Transportation Planning Board as part of the region's Constrained Long-Range Plan in November 1991.

In 1995, the Transportation Planning Board adopted an update to the 1991 *Bicycle Element*, the Bicycle Plan for the National Capital Region, as an amendment to the Constrained Long-Range Plan. The revised plan emphasized bicycling for transportation and recommended project lists and policy principles produced by the Bicycle Technical Subcommittee.

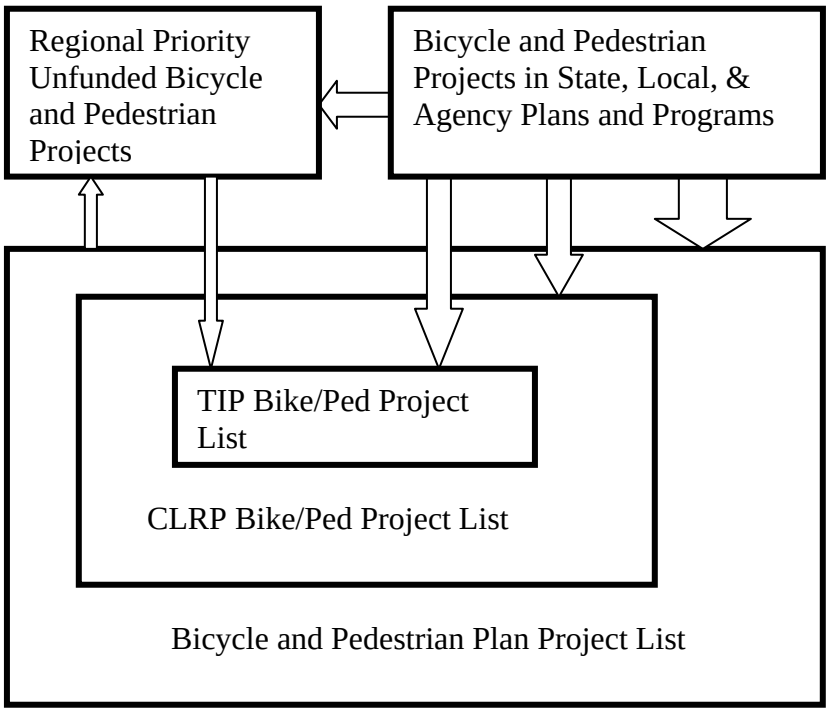
In February 2001, the TPB completed the *Priorities 2000: Greenways* and *Circulation Systems* reports, which identified greenway and pedestrian circulation systems priorities.

Except for the *Priorities 2000* reports, predecessors to the 2006 *Bicycle and Pedestrian Plan for the National Capital Region* were "bicycle" plans. The 2006 plan fully incorporated pedestrian elements for the first time. This plan is an update to the 2006 plan.

Sources of the Regional Plan Projects

State, local, and agency bicycle and pedestrian plans are the source of the projects in this plan. All bicycle and pedestrian projects that are programmed in the TIP are also in the CLRP and in this plan. The plan, however, includes many projects that are not in the TIP or the CLRP. Figure 1-1 illustrates the relationships between the various project lists.

Figure 1-1



Outlook

The Transportation Planning Board and the Council of Governments have a continuing and growing commitment to walking, bicycling, and the concentration of future growth in walkable, mixed-use activity centers. COG's *Region Forward 2050* shares the goals of the TPB's *Vision* and proposes specific performance indicators and a schedule for reporting progress. Increasing the rate at which projects in this plan are constructed is an explicit goal of the Council of Governments' *Region Forward 2050* vision.

The Federal, State, and local policy environment has been changing in ways that make it more likely that goals of the regional plans will be met. Complete Streets policies are being adopted, strengthened and implemented. Pedestrian and bicycle facilities in most jurisdictions will no longer be "amenities" which agencies will consider providing, but facilities that they will routinely provide as part of every project. At the same time, land use, parking, and urban design policies are changing in ways that will make walking and bicycling a viable choice for more trips.

As the economy recovers and development restarts, the effects of the policy changes of the last few years will become evident in the way people live, work, and travel in our region.

Chapter 2

Bicycling and Walking in the Washington Region

Overview

Residents of the Washington region walk and bicycle at about the same rate as the nation as a whole. Tables 2-1 and 2-2 show the share of walking and bicycling trips to work for the ten largest metropolitan areas.

	Table 2-1 Pedestrian Commuting in the Ten Largest Metropolitan Areas[1]	% Walk to Work 2000 Census	% Walk to Work 2006-2008
1	New York	5.55%	6.2%
2	Boston	4.12%	4.8%
3	San Francisco	3.25%	4.2%
4	Philadelphia	3.88%	3.7%
5	Washington	3.10%	3.0%
6	Chicago	3.13%	2.9%
7	Los Angeles	2.56%	2.6%
8	Detroit	1.83%	1.5%
9	Houston	1.62%	1.5%
10	Dallas-Fort Worth	1.48%	1.3%
	United States	2.93%	2.8%

Nationally, 10% of all urban area trips are made on foot or by bike

Throughout the second half of the 20th Century, driving increased, while walking, bicycling, and public transportation declined. In 2000 2.93% of Americans walked to work, and 0.38% bicycled. By comparison, in 1960 9.9% of workers walked to work.[2] The number of people driving alone rose from 73.2% in 1990 to 75.7% in 2000, while use of public transportation fell by 0.5%.

	Table 2-2: Bicycle Commuting in the Ten Largest Metropolitan Areas	% Bike to Work 2000	% Bike to Work 2006-2008
1	San Francisco	1.12%	1.4%
2	Los Angeles	0.63%	0.7%
3	Boston	0.38%	0.7%
4	Philadelphia	0.33%	0.5%
5	Chicago	0.31%	0.5%
6	Washington	0.30%	0.5%
7	New York	0.30%	0.4%
8	Houston	0.30%	0.3%
9	Detroit	0.18%	0.2%
10	Dallas--Fort Worth	0.14%	0.2%
	United States	0.38%	0.5%

Trips in the Urban Core are Usually Short Enough to Walk or Bike

In the first decade of the 21st Century, growth in solo driving share appears to have stopped, and transit, walking and bicycling mode shares have stabilized. 75.8% of workers drove alone in 2006-2008, which is essentially the same as in 2000, and public transportation grew from 4.7% to 4.9%.

The walk and bike modes are more common than the census commute mode numbers would lead one to believe. Work trips account for less than 20% of all trips, and walking and biking are more common for other

1 2000 US Census, 2006-2008 American Community Survey
2 1960 Census of Population, Characteristics of Population, United States Summary

purposes. Nationally, 9.5% of all urban area trips were made on foot, and 0.9% by bicycle in 2001. In the Mid-Atlantic region, 15.8% of all trips are made on foot, and 0.8% by bicycle.[3]

Regionally, bicycling and walking are concentrated in the core neighborhoods of the Washington region, especially areas near downtown D.C. and certain Metro stations, as well as college campuses and military bases.

In the past decade walk mode shares for all trips have grown, while bike mode shares have stabilized. Walking and bicycling have grown in the core. Bicycling, however, suffered a steep decline in the outer jurisdictions, resulting in no net increase between 1994 and 2007/2008.

Ethnicity, geography, age, and car ownership affect the decision to walk or bicycle. People under the age of 44 are more likely to walk or bicycle than people older than age 44, and people over age 65 have the lowest rates of walking and bicycling. People living in households without cars are more likely to walk or bicycle than those that have one, and those living in households with only one car are more likely to walk or bicycle than those owning two. Middle-income groups are slightly less likely to walk or bicycle than either low-income or high-income groups. Whites are more likely to bicycle.

Distance is a major barrier to commuter cycling, along with absence of safe routes, and lack of end-of-trip facilities such as showers and lockers.[4] Trips in the outer suburbs are usually farther than most people are willing to walk or bicycle. However, most commute trips that are short enough to be bikable or walkable are still taken by car. The average trip distance to transit or carpool is very short.

Transit and walking are interdependent, with 80% of bus and 60% of Metrorail access trips on foot. Mode of access varies tremendously by Metro station. Bicycling to transit is less common and varies greatly by Metro station, with the lowest rates of bicycle access found east of the Anacostia river.

3 Pucher, John, "Socioeconomics of Urban Travel: Evidence from the 2001 NHTS". *Transportation Quarterly*, Vol. 57, No. 3, Summer 2003 (49-77). Page 54.

4 Metropolitan Washington Council of Governments, *2004 Bike to Work Day Survey- Summary of Results*, June, 2005. Page 6.

Walking and Bicycling According to the COG/TPB Household Travel Survey

The household travel survey is a roughly once in a decade survey of households in the greater Washington region. The survey was done in 1994, and again in 2007-2008. It is the best available source of information on travel mode shares in the Washington region.

For the most recent survey, 11,000 randomly selected households in TPB Region and adjacent areas (+3,500 in the Baltimore Region) were surveyed. Higher numbers of samples were taken in higher density, mixed use urban areas, and regional activity centers. The sample was address-based. Interviews were conducted between February 2007 and March 2008. Travel is weekday travel only; week-end travel was not counted.

Comparing the results of the 1994 and the 2007/2008 surveys, walk commuting has fallen from 3% to 2.7%, but bicycle commuting has increased slightly, from 0.7% to 1%. Bicycling grew by the same amount as walking declined. Auto commute trips remained stable, while auto passenger (carpooling) declined steeply, and transit use grew.

These results are generally consistent with the 2000 US Census and 2006-2008 American Community Survey results for the Washington region, which also show walk commuting decreasing and bicycle commuting increasing.

Chart 2-1: Change in Commuting Mode Shares 1994-2007/2008

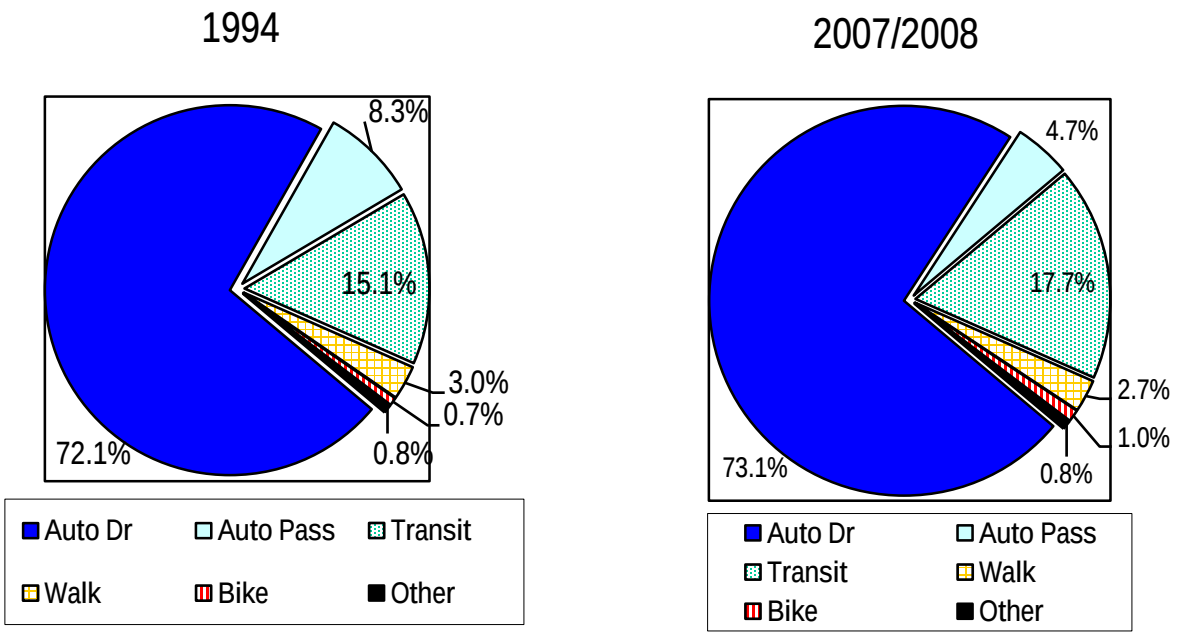


Chart 2-2: Walk Commute Share by Jurisdiction

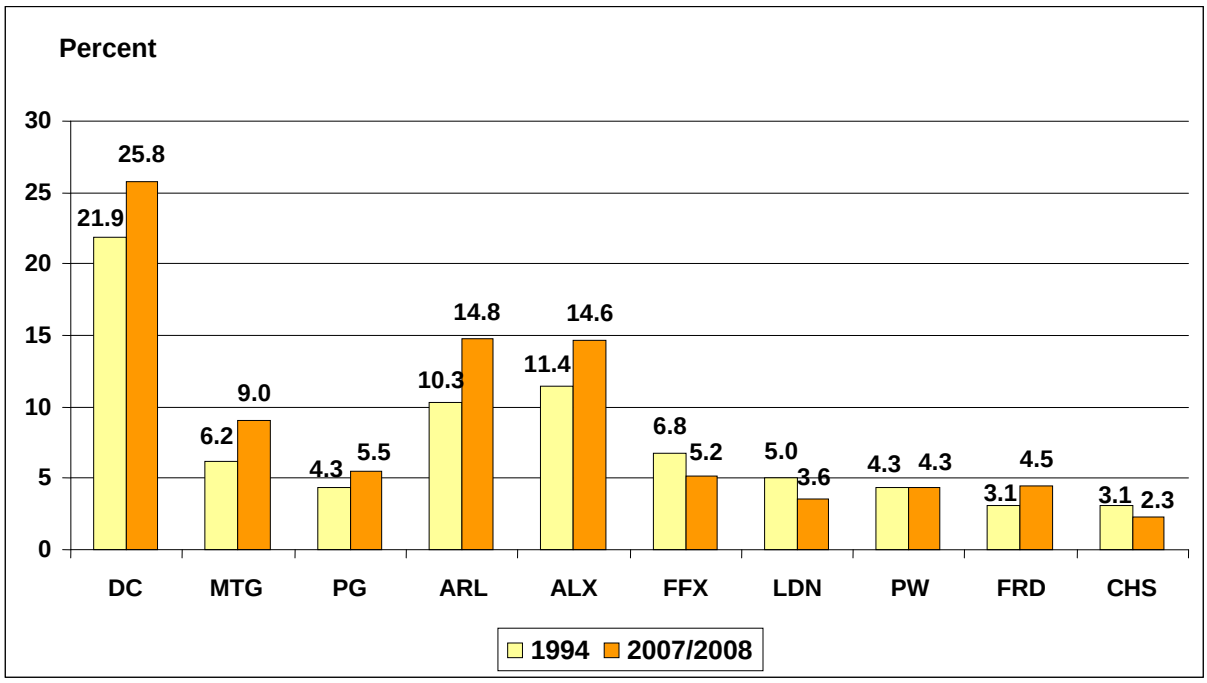
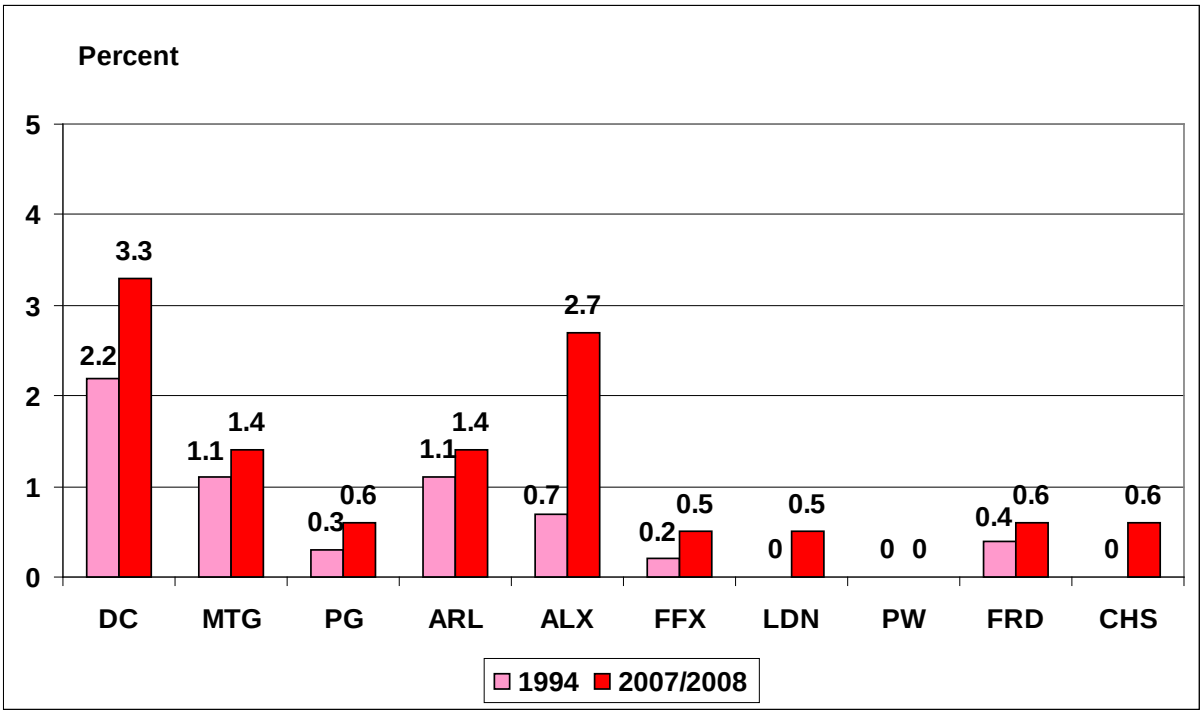


Chart 2-3: Bike Commute Mode Share by Jurisdiction



Walk commuting grew in urban core, and in Montgomery and Frederick Counties, but fell in other suburban areas, notably Fairfax and Loudoun Counties, which experienced considerable auto-oriented suburban growth.

Bike commuting grew in most jurisdictions from a low base, with the biggest increases in the District of Columbia and Alexandria.

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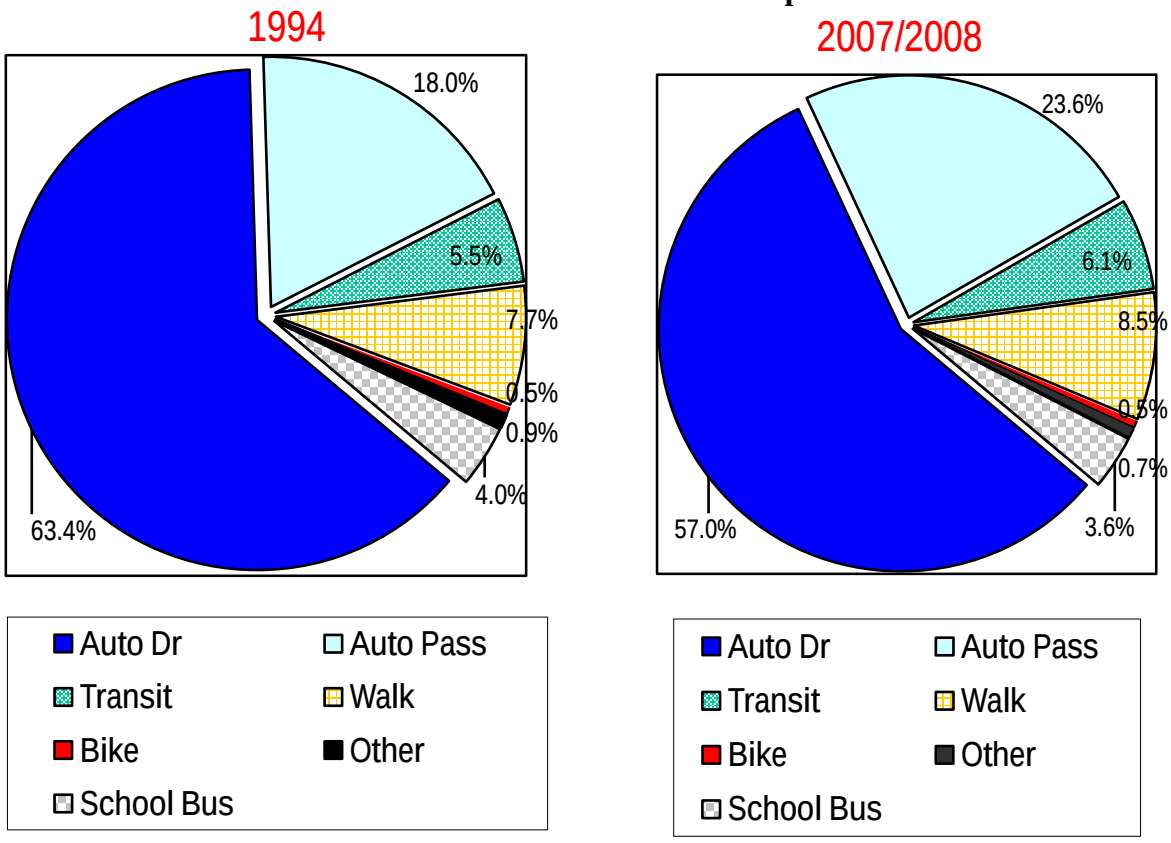
Mode Share Trends for All Trips in the Washington Region

Commute trips, while they get a lot of attention, account for less than 20% of all trips in the Washington region. Nonwork trips have different characteristics than work trips, and overall trends in mode share are different from trends in commuter mode share.

Solo driving declined significantly in the Washington region between 1994 and 2007/8, while auto passenger, transit, and walk modes increased. Bicycling remained stable at the regional level.

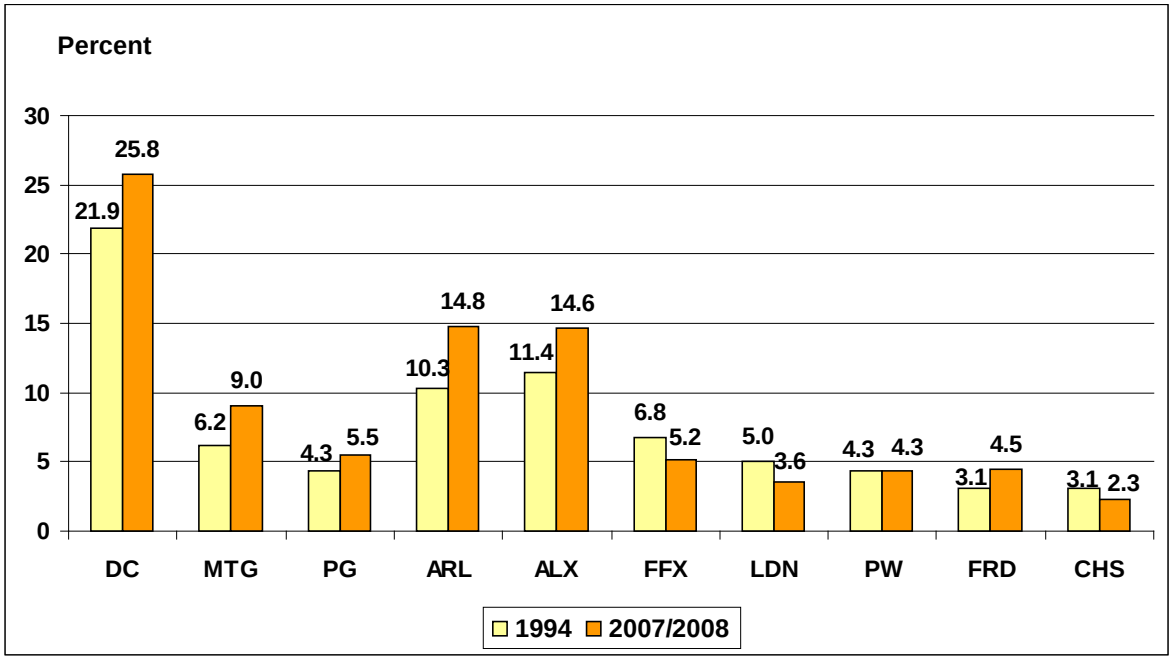
Chart 2-4: Mode Share for All Trips



Walk and Bike Mode Share by Jurisdiction

Walking has increased most jurisdictions, with the notable exceptions of declines in Fairfax and Loudoun Counties. The biggest increases were in the urban core and in Montgomery County.

Chart 2-5: Daily Walk Trip Share by Jurisdiction of Residence (1994 – 2007/2008)



Bike mode share grew in the urban core, but fell steeply from low starting levels in the outer surburban counties. .Growth in bicycling in the core has been offset by an equal decline in the outer suburbs, adding up to zero growth at the metropolitan level. The outer counties have experienced greatly increased auto traffic, much of it on narrow country roads without bike lanes or other accommodation. Fear of traffic is a commonly cited reason in surveys for not riding.

Alexandria had the largest increase at .5% followed by Arlington at .3%.

Chart 2-6: Daily Bike Trip Share by Jurisdiction of Residence (1994 – 2007/2008)

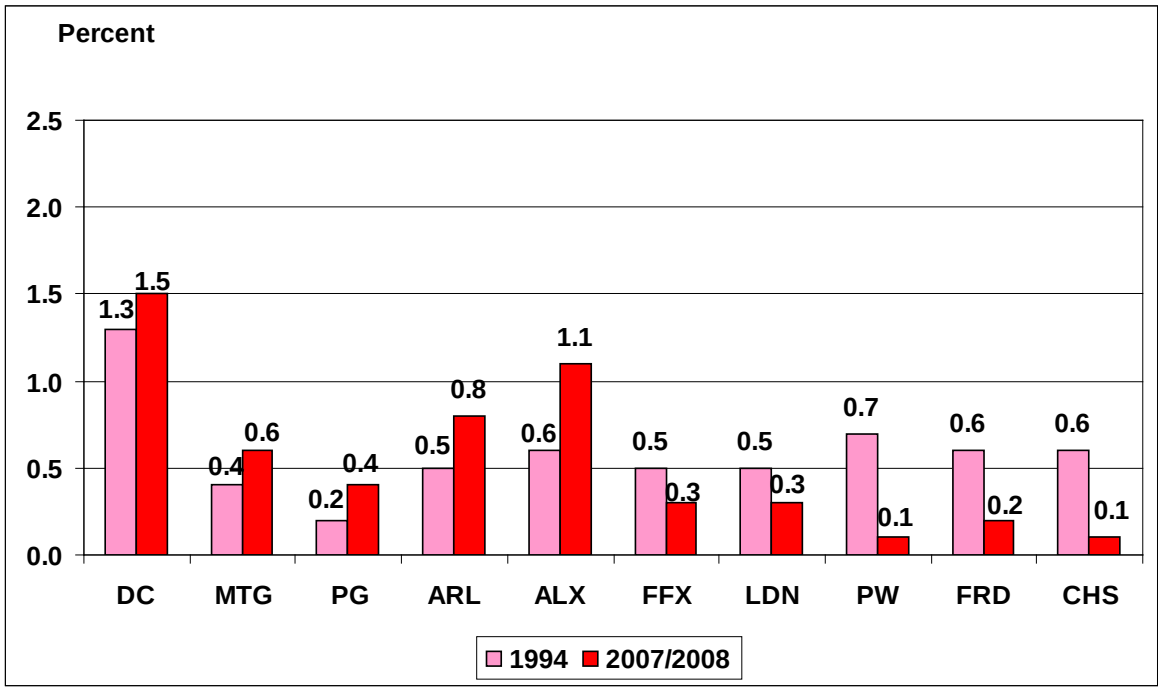
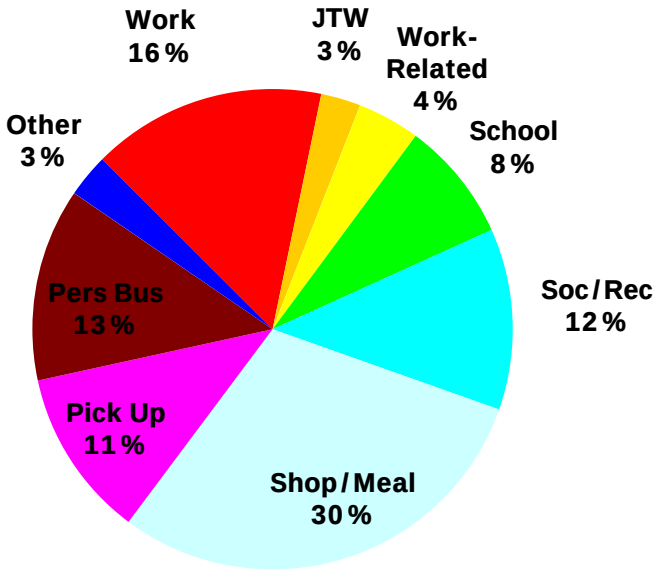


Chart 2-7: Daily Trips by Trip Purpose

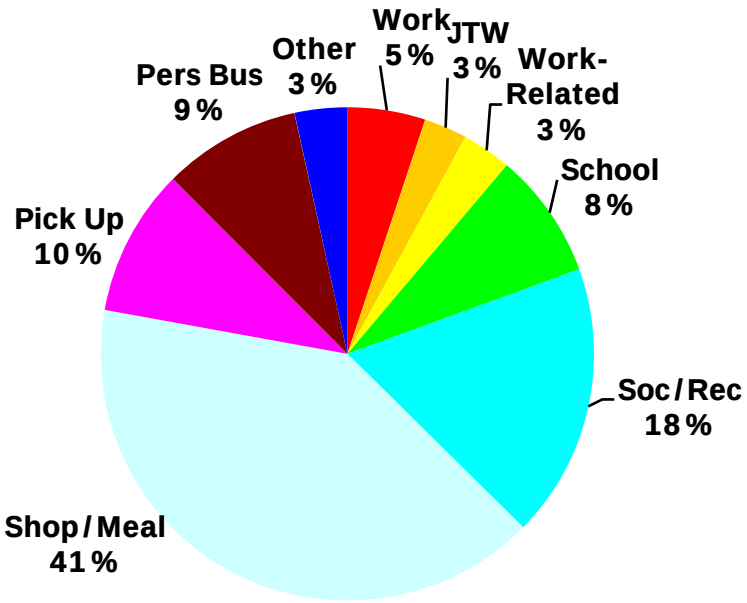


Daily Trips by Trip Purpose in the Washington Region

Commute trips account for less than 20% of total daily trips in the Washington region, but have average trip lengths 3 times the distance of other trips for non-work purposes. Commute trips also

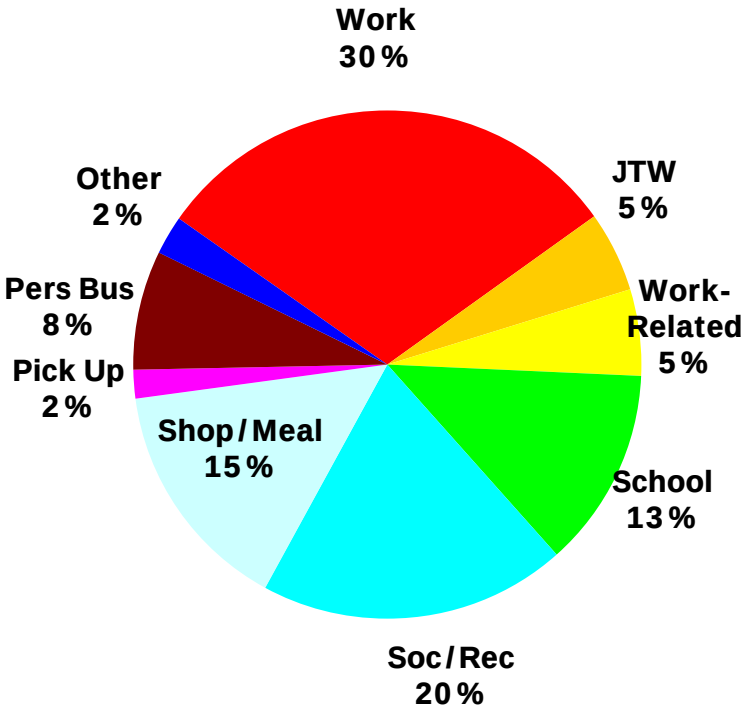
have the highest median trip length, at 9.3 miles.

Chart 2-8: Walk Trips by Purpose



The vast majority of walking trips are for shopping, meals, recreation, or social visits. Compared to all trips, pedestrians are more likely to be doing a shopping, dining, or social/recreational trip, and less likely to be going to work.

Chart 2-9: Bike Trips by Purpose



Bicyclists are more likely to be going to work or school than either "all trips" or "walk trips", and are less likely to be on shopping, dining, or social/recreational trips. This is the opposite of what one might expect based on median trip lengths. A possible explanation is that most bicyclists now live in walkable urban areas and have

short, but not quite walkable commutes, so they will commute to work by bicycle but are more likely to walk for other purposes.

Alternately, it may be that bicyclists, while few in number, tend to stick with their chosen mode for all types of trips (like car drivers). Walking is more conducive to being an access mode or being used for only some legs of a trip chain.

Trip Lengths by Purpose

Based on trip lengths and number of trips shown below, school, shopping/meal, social/recreational, and personal business trips might be more susceptible to being shifted to walk or bike modes than commute trips.

Table 2-1: Trip Length Distribution by Purpose (Distance in Miles, 2007/2008 Household Travel Survey)

Purpose	25%	Median	75%	90%
Work	4.3	9.3	17.1	25.8
To Work after other stop (JTW)	1.5	4.8	12.9	22.1
Work-Related	1.8	5.6	13.4	24.8
School	0.9	2.1	4.7	9.3
Social/Recreational	1.0	2.9	6.7	13.7
Shop/Meal	0.7	2.1	5.4	12.0
Pick-Up	0.8	2.2	5.2	11.2
Personal Business	1.4	3.5	7.5	14.9
Other	0.8	1.5	4.1	7.3

Trip Lengths by Mode

The median auto trip length in the Washington region is only four miles, and 25% of auto trips are 1.5 miles or less. The median auto passenger trip, which includes many child passengers, is only 2.2 miles, with 25% of auto passenger miles being 1.5 miles or less.

The median walk distance of 0.3 miles is consistent with most estimates of people's willingness to walk. The median bike trip distance of 1.5 miles is brought down in the household travel survey by some short trips that are part of trip chains. Other sources show typical bike trip lengths as being five miles or less.

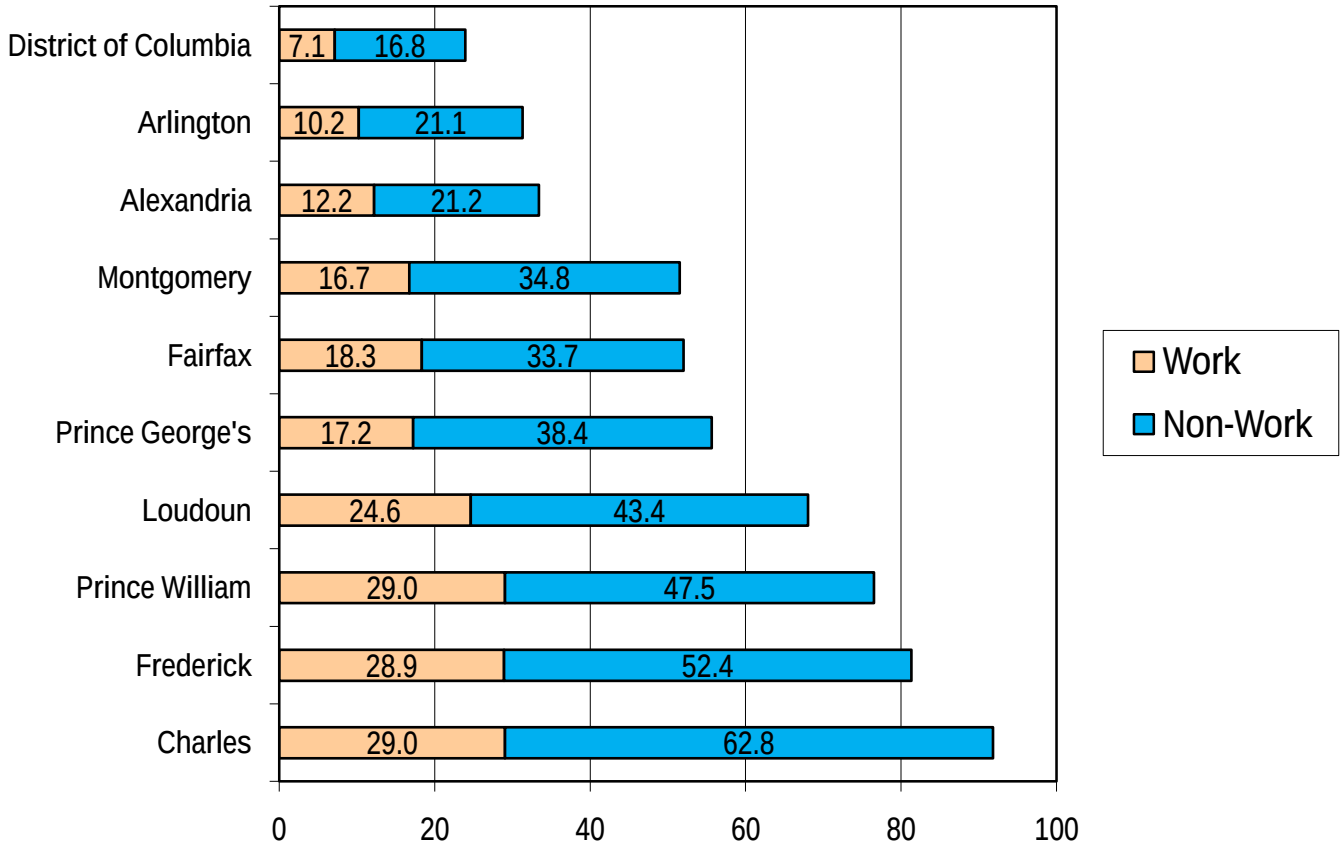
Table 2-2: Trip Length Distribution by Mode
(Distance in Miles)

Mode	25%	Median	75%	90%
Auto Driver	1.5	4.0	9.7	18.7
Auto Passenger	1.2	2.8	6.4	12.9
Transit	3.5	6.9	14.1	23.4
School Bus	1.2	2.3	4.6	8.2
Walk	0.1	0.3	0.5	0.9
Bike	0.8	1.5	4.1	7.3

Average Daily Miles Traveled By Jurisdiction

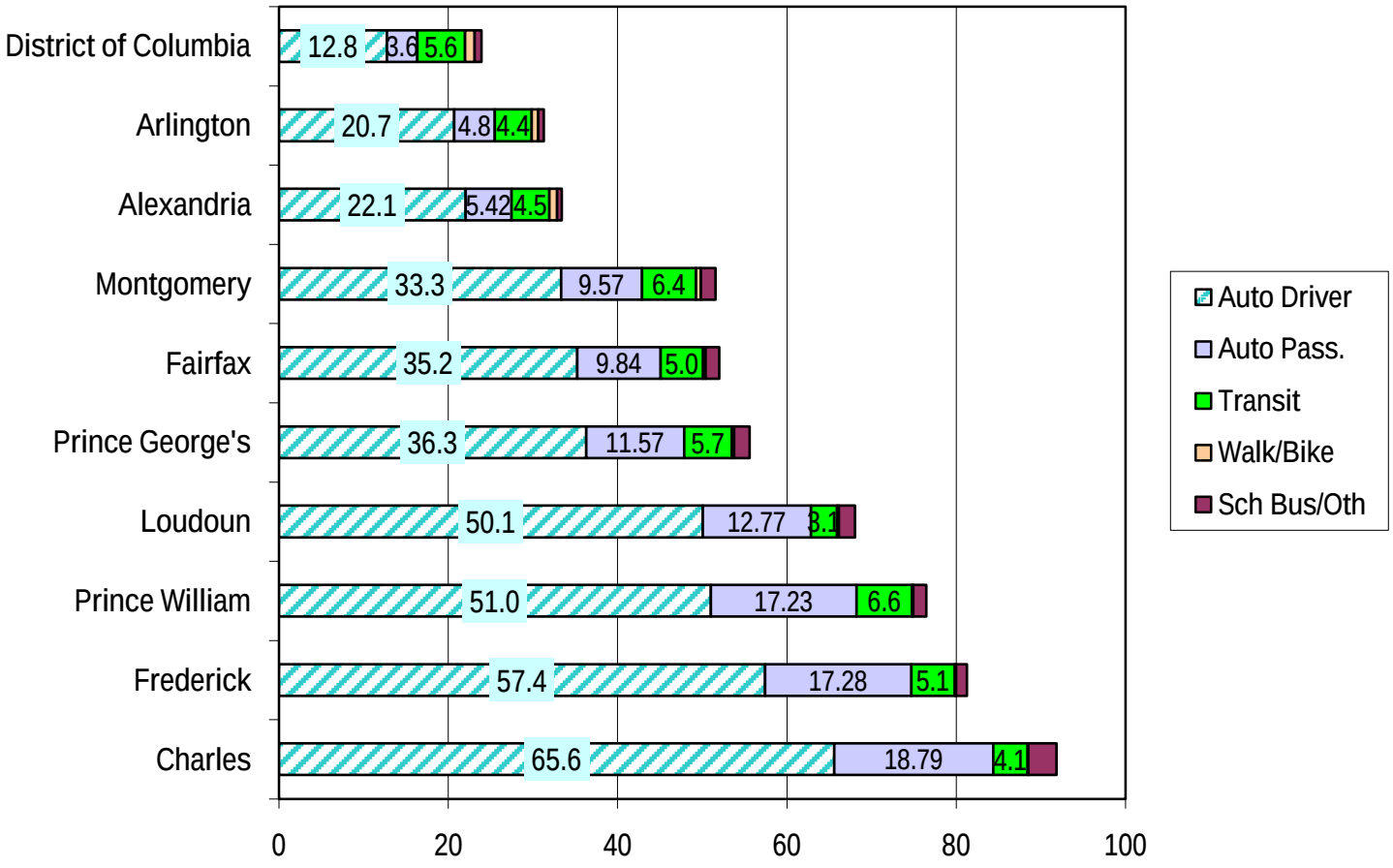
Households in the urban core make slightly fewer trips per day, anbd travel far fewer miles per day than households in the outer jurisdictions. The average DC household makes seven trips per day and travels 23.9 miles, while the average Charles County household makes nine trips per day, and travels 91.8 miles, or nearly four times as far.

Chart 2-10: Average Daily Miles Traveled Per Household by Jurisdiction and Purpose



Nor are all the long trips in the outer suburbs commute trips; outer suburban households travel three to four times as many non-work miles as DC households. Low-density development patterns in the outer suburbs appear to be generating trip distances which are significantly longer than what most people are willing to walk or bicycle.

Chart 2-11: Average Daily Miles Traveled Per Household by Jurisdiction and Mode



DC residents use an automobile for about half the miles they travel, while more than 90% of outer suburban residents' travel mileage is in a car, with transit and school buses accounting for the rest.

Table 2-3: Total Weekday Walk and Bike Trips by Type in the Washington Region (in Thousands)

Type of Trip	Walk	Bike
Primary Travel Mode	1,370.0	87.5
"Loop" Trips	123.8	6.9
Metrorail Access	464.3	4.3
Metrorail Egress	469.0	4.0
Total	2,427.1	102.7

Access to transit accounts for a high proportion of the walk trips in the region, especially in the urban core.

Chart 2-12: Weekday Walk Trips by Jurisdiction of Residence and Type Per 1,000 Population in Households

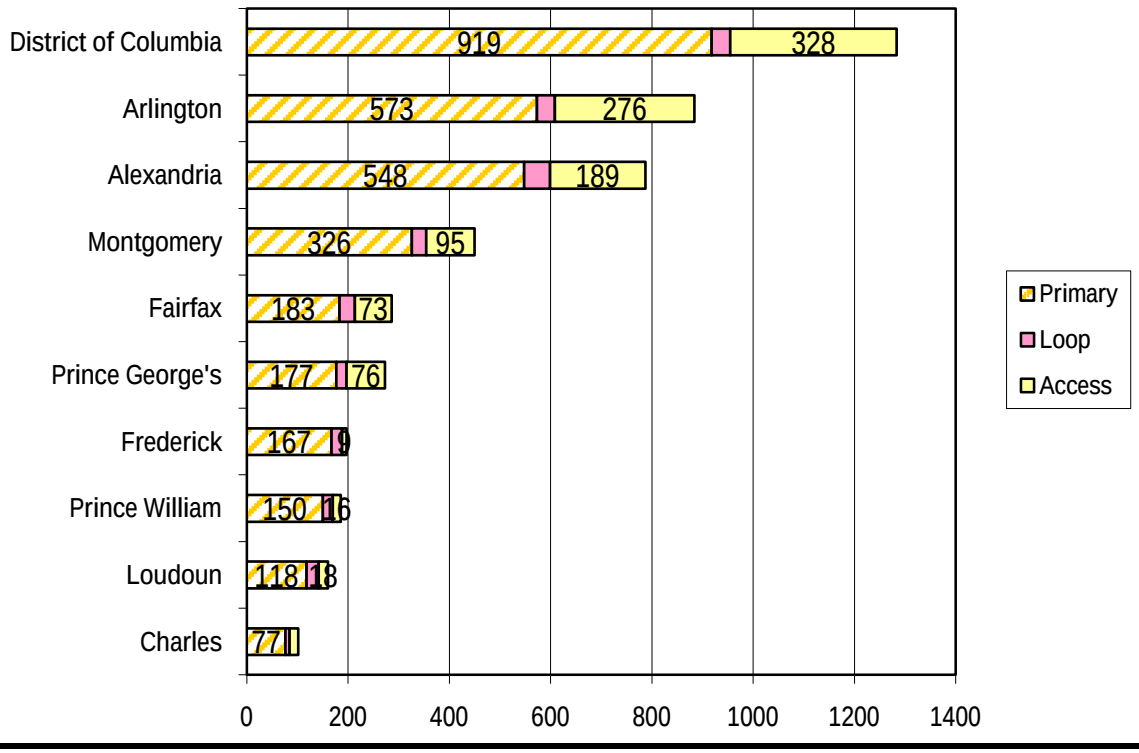
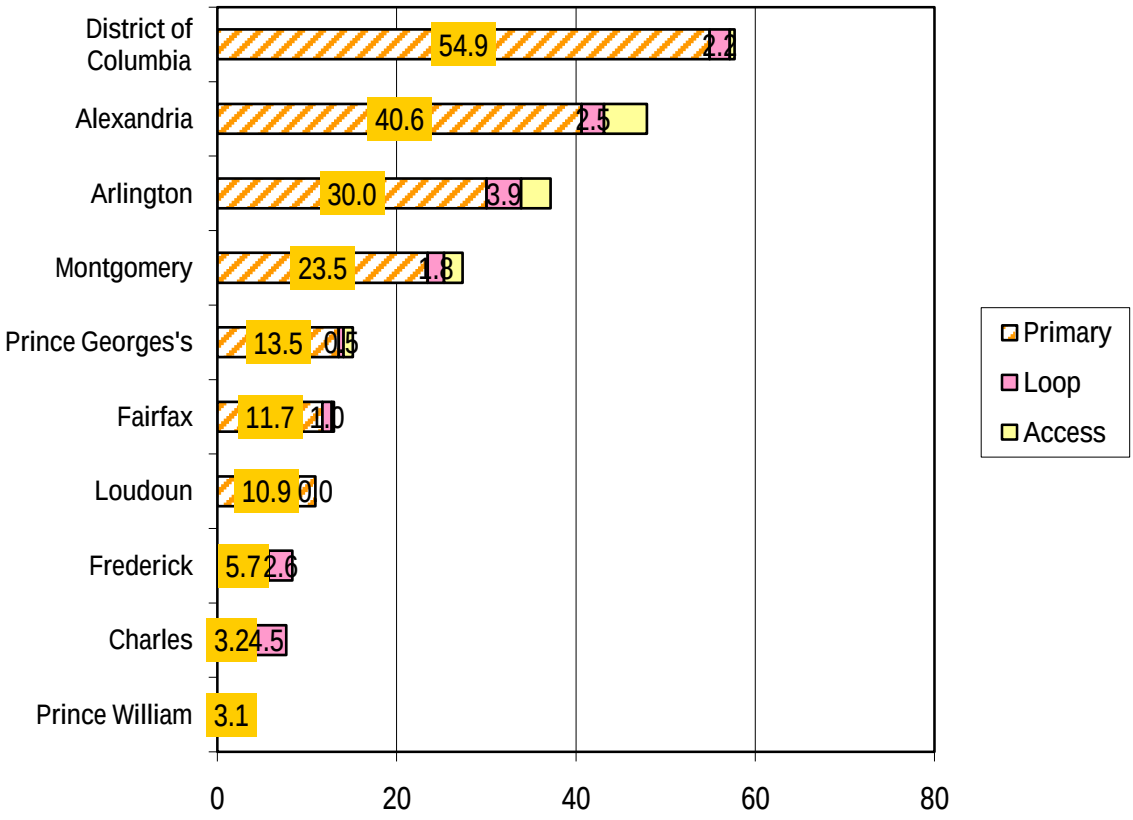


Chart 2-13: Weekday Bike Trips by Jurisdiction of Residence and Type Per 1,000 Population in Households



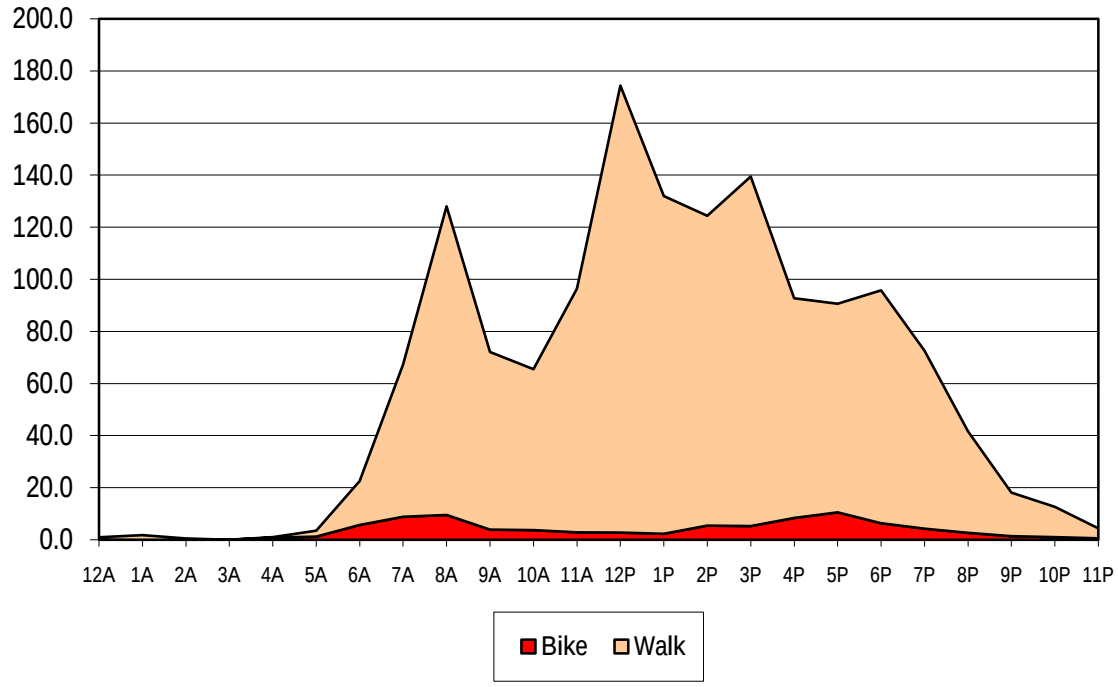
While DC residents are most likely to bicycle, Alexandria and Arlington are most likely to use bicycle to access Metrorail. Charles County has the highest rate of "loop" bicycle trips.

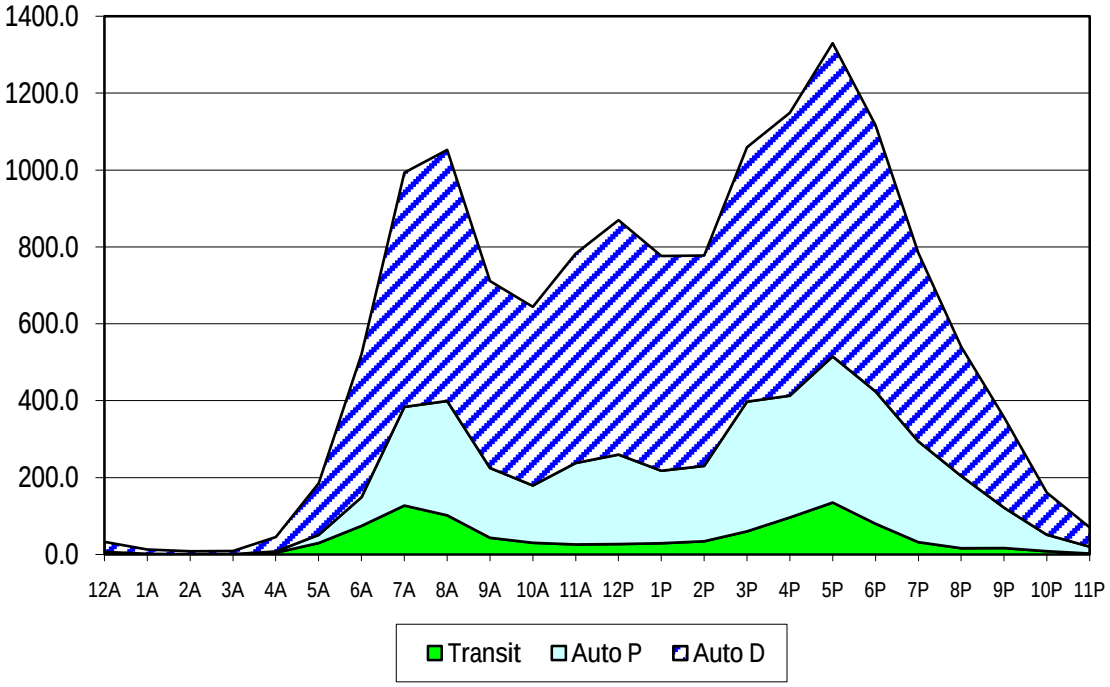
Walking and Bicycling by Time of Day

Walk trips peak at lunch hour, then around 3 p.m. when school lets out, and then during the morning rush hour just before 8 a.m. This is different from auto, auto passenger, and transit modes, which are highest at 5 p.m, and next highest at 8 a.m.

Bike trips are much more evenly distributed throughout the day than other modes. Bike trips peak at the evening and morning rush.

Chart 2-14: Walking and Bicycling by Time of Day





Walking and Bicycling Trends According to the US Census

The last United States census was the 2000 census. The Census contains no information on travel in general, but does gather data on journey to work. The main thing the census can offer which the COG/Household Travel Survey does not is accurate information on journey work as the census tract level. Since bicycling and walking vary a lot by neighborhood, even block to block, this kind of fine-grained information is useful. However, at this point the 2000 census information is somewhat dated.

The 2010 census form will be shortened, and the decennial census will no longer provide information on journey to work. In place of the long form, the census bureau carries out an annual survey, the American Community Survey (ACS), which contains information on journey to work. However, the ACS sample is too small to be reliable on a census tract level. Currently a three-year rolling average of data is available. When five-year averages become available, in about a year, it will be possible to say something about bike and mode share at the census tract level.

The 20th Century trend towards less walking and bicycling also held for the Washington Metropolitan Statistical Area. In 1990, 6,633 people (0.3 %) biked to work on an average day in the Washington area and 85,292 (3.9 %) walked. In 2000, 7,532 people (0.3%) biked to work and 72,700 (3.1%) walked. It should be noted that the census numbers tend to undercount pedestrian trips, since a walk trip to transit is counted as a transit trip, not as a walk trip. Charts 2-15 and 2-16 below show the changes in walking and biking to work by jurisdiction.

Chart 2-15: Percentage of Workers Walking to Work

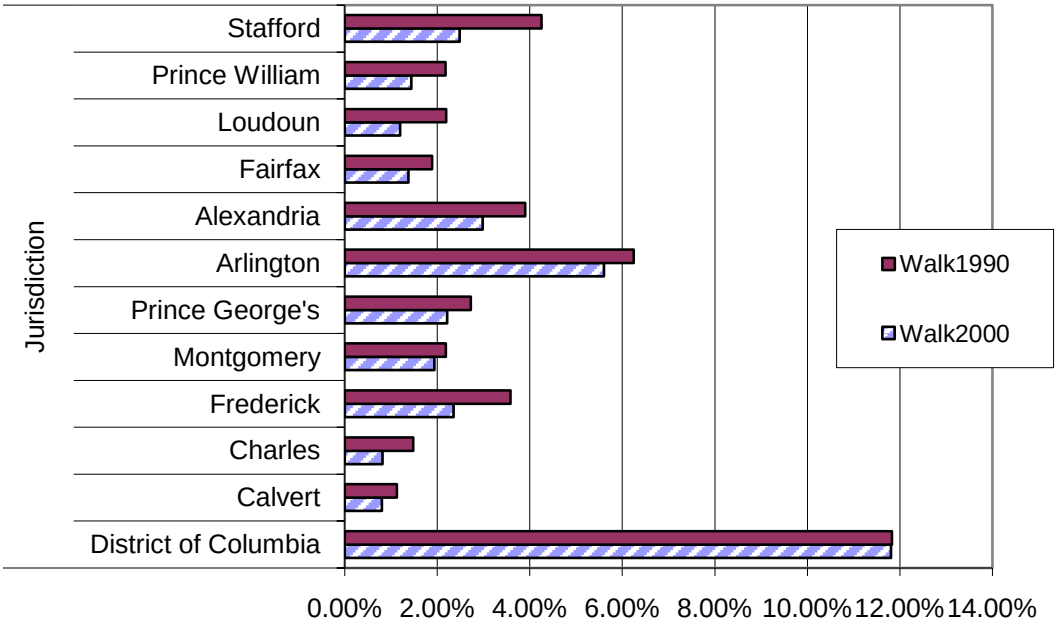
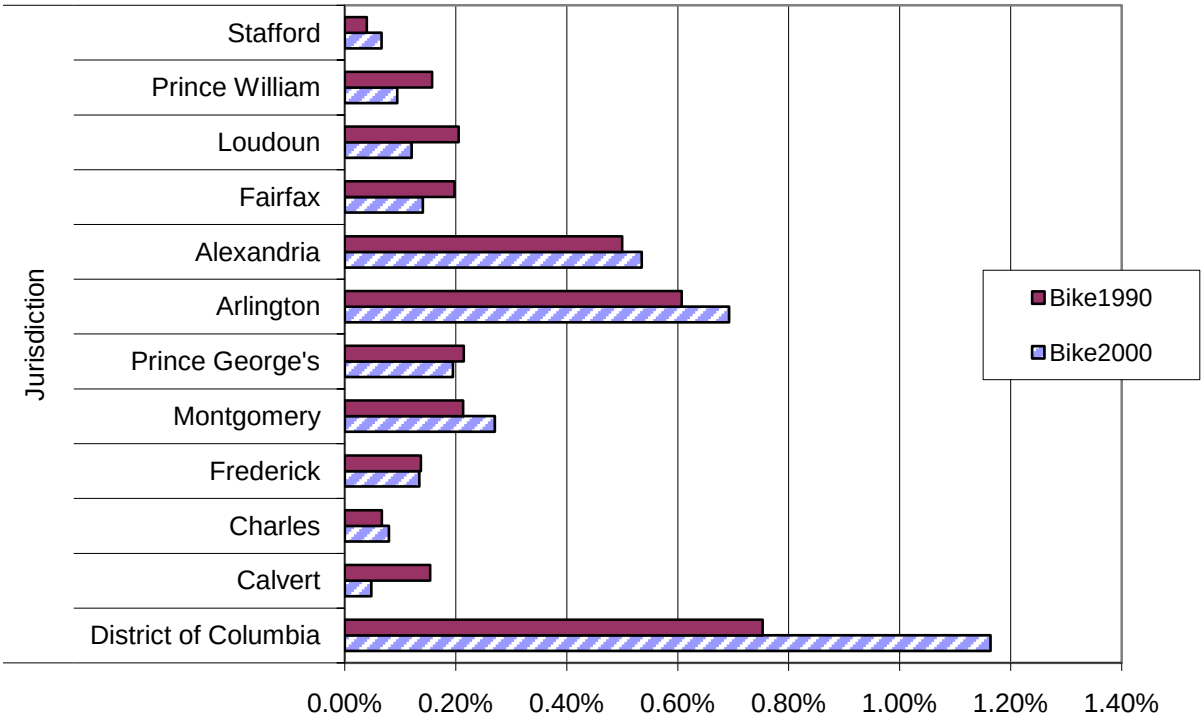


Chart 2-16: Percentage of Workers Biking to Work



Generally, the urban core of the Washington region, consisting of the District of Columbia, Arlington, and Alexandria, has experienced modest losses in pedestrian mode share and considerable gains in bicycling. The District of Columbia has maintained its pedestrian mode share for the journey to work, while increasing its bicycle mode share considerably. The outer suburban jurisdictions had relatively few people bicycling or walking to work in 1990, and that number fell further during the decade that followed.

Mode Share by Census Tract

Figure 2-1 shows the percentage of home-based work trips by bicycle for each census tract within the TPB member jurisdictions. Figure 2-3 shows the percentage of home-based work trips by foot. Figures 2-2 and 2-4 show bicycle and walk work trips respectively for the area served by Metrorail. The maps show that bicycling and walking are concentrated in the neighborhoods surrounding downtown D.C., Capitol Hill, and North Arlington. The neighborhoods closest to downtown show the highest walk mode shares, while those a little further out have the highest bike mode shares. Census tracts abutting major facilities such as the W&OD, the C&O, and the Mt. Vernon Trails tend to show higher levels of bicycling. College campuses and military bases such as University of Maryland, Ft. Meyers, Bolling Air Force Base, the National Institute of Health, Walter Reed, Howard, Georgetown and Gallaudet all have high walk or bike mode share.

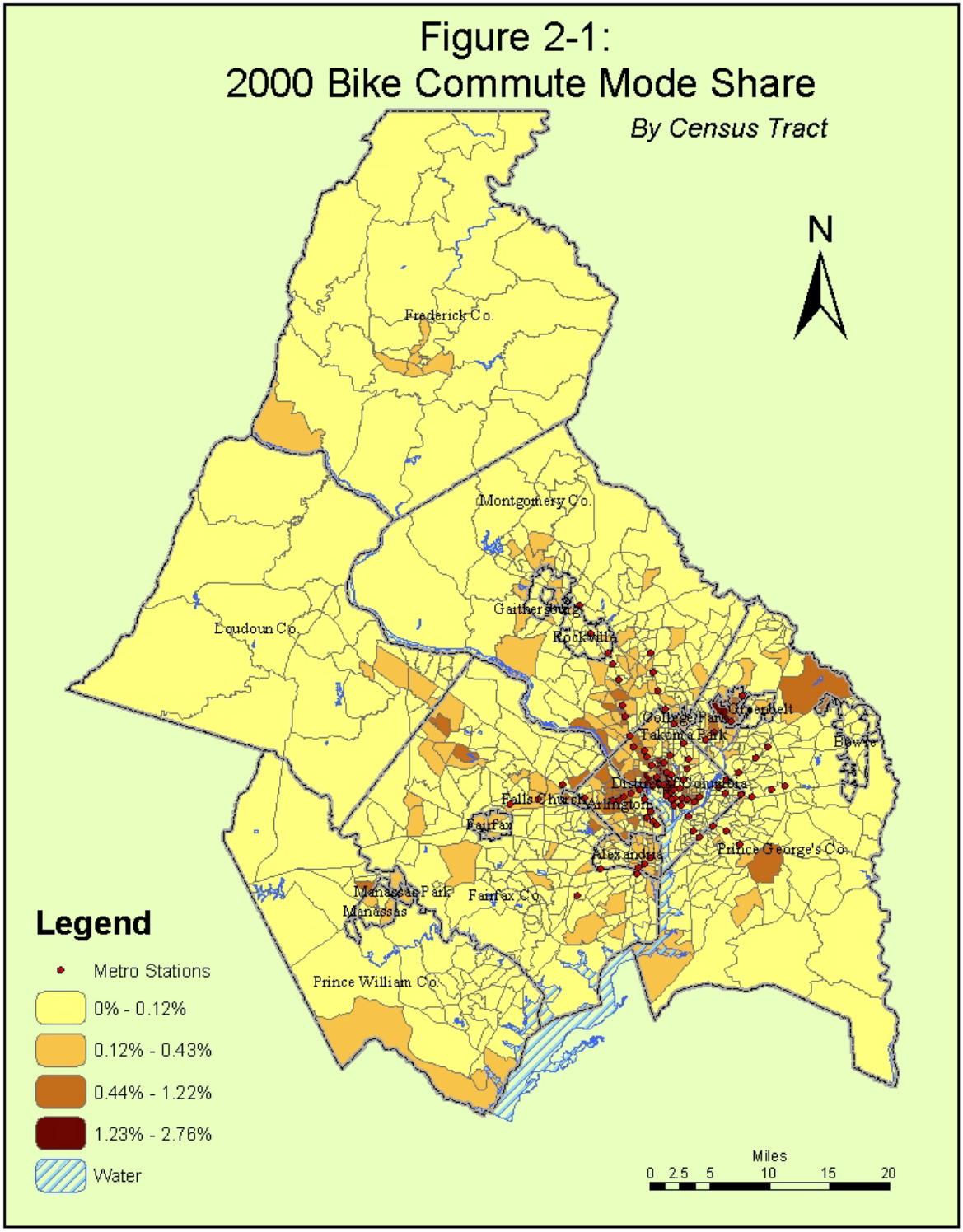


Figure 2-1:
2000 Bike Commute Mode Share
By Census Tract
N
Frederick Co.
Montgomery Co.
Loudoun Co.
Gaithersburg
Rockville
College Park
Greenbelt
Takoma Park
Bowie
Falls Church
Arlington
Fairfax
Alexandria
Prince George's Co.
Manassas Park
Manassas
Fairfax Co.
Prince William Co.
Legend
Metro Stations
0% - 0.12%
0.12% - 0.43%
0.44% - 1.22%
1.23% - 2.76%
Water
Miles
0 2.5 5 10 15 20

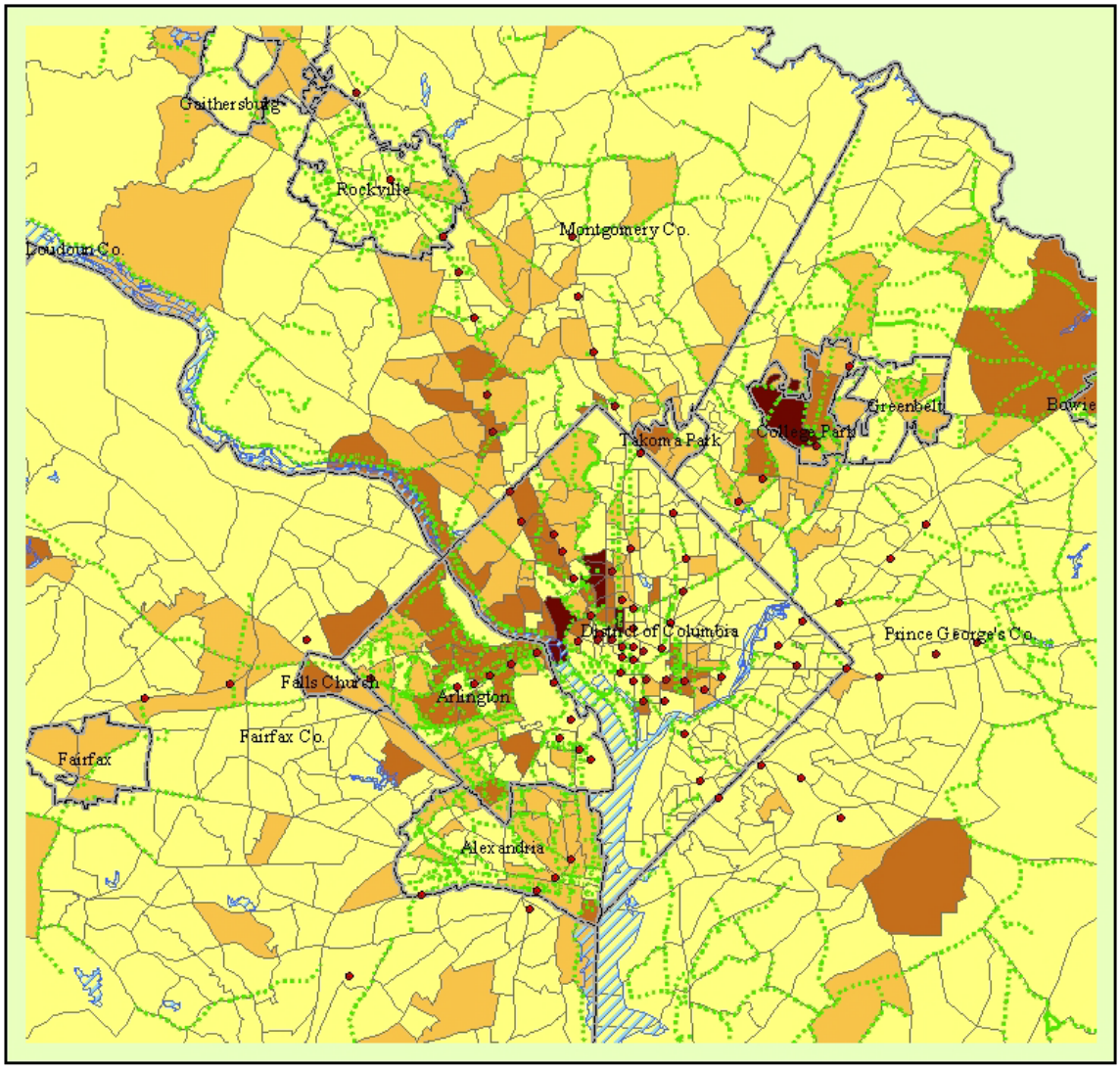


Figure 2-2:
2000 Bike Commute Mode Share
By Census Tract

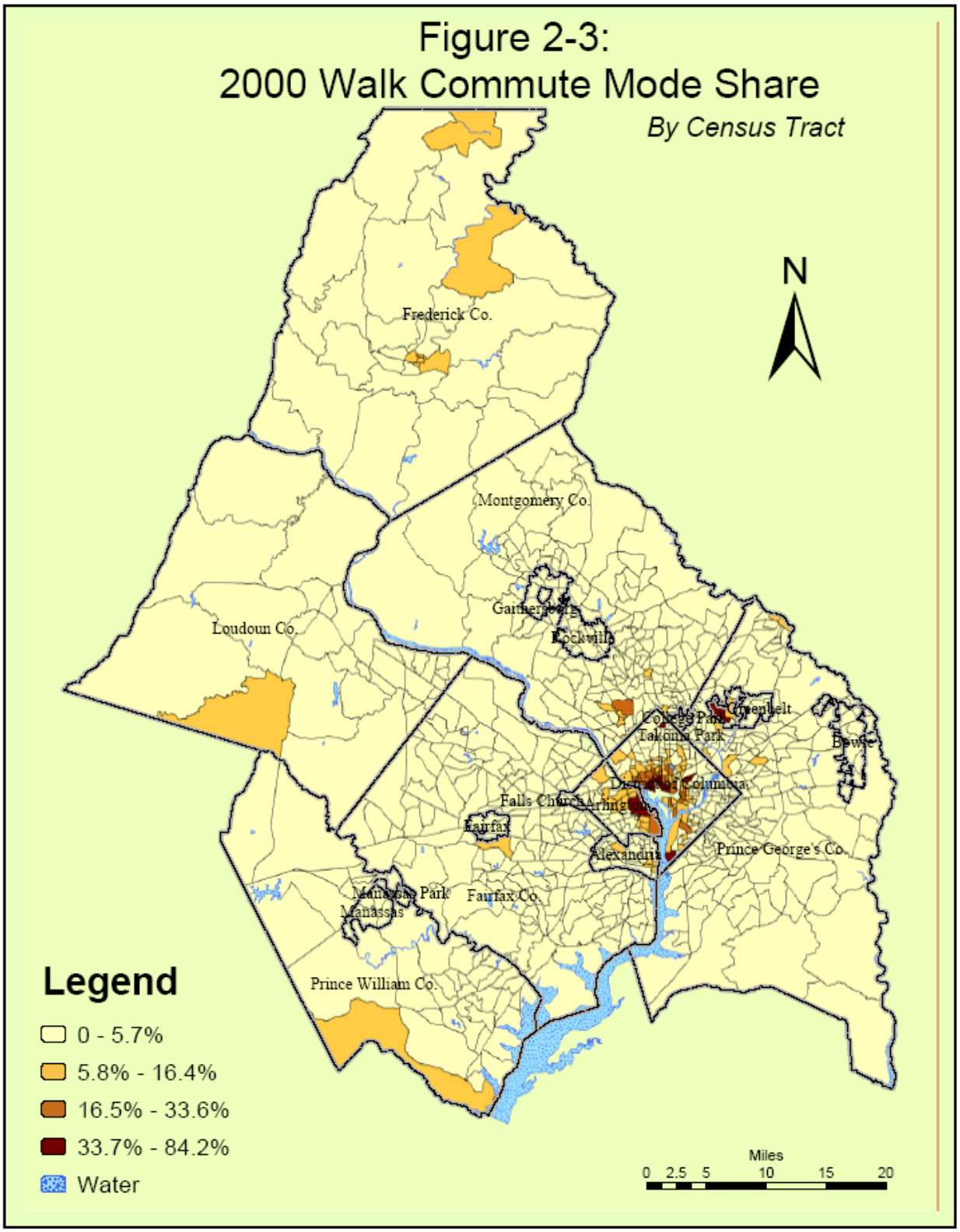


Figure 2-3:
2000 Walk Commute Mode Share
By Census Tract
N
Frederick Co.
Montgomery Co.
Loudoun Co.
Gaithersburg
Rockville
College Park
Takoma Park
Greenbelt
Bowie
Falls Church
Arlington
Fairfax
Alexandria
Prince George's Co.
Manassas Park
Manassas
Fairfax Co.
Prince William Co.
Legend
0 - 5.7%
5.8% - 16.4%
16.5% - 33.6%
33.7% - 84.2%
Water
Miles
0 2.5 5 10 15 20

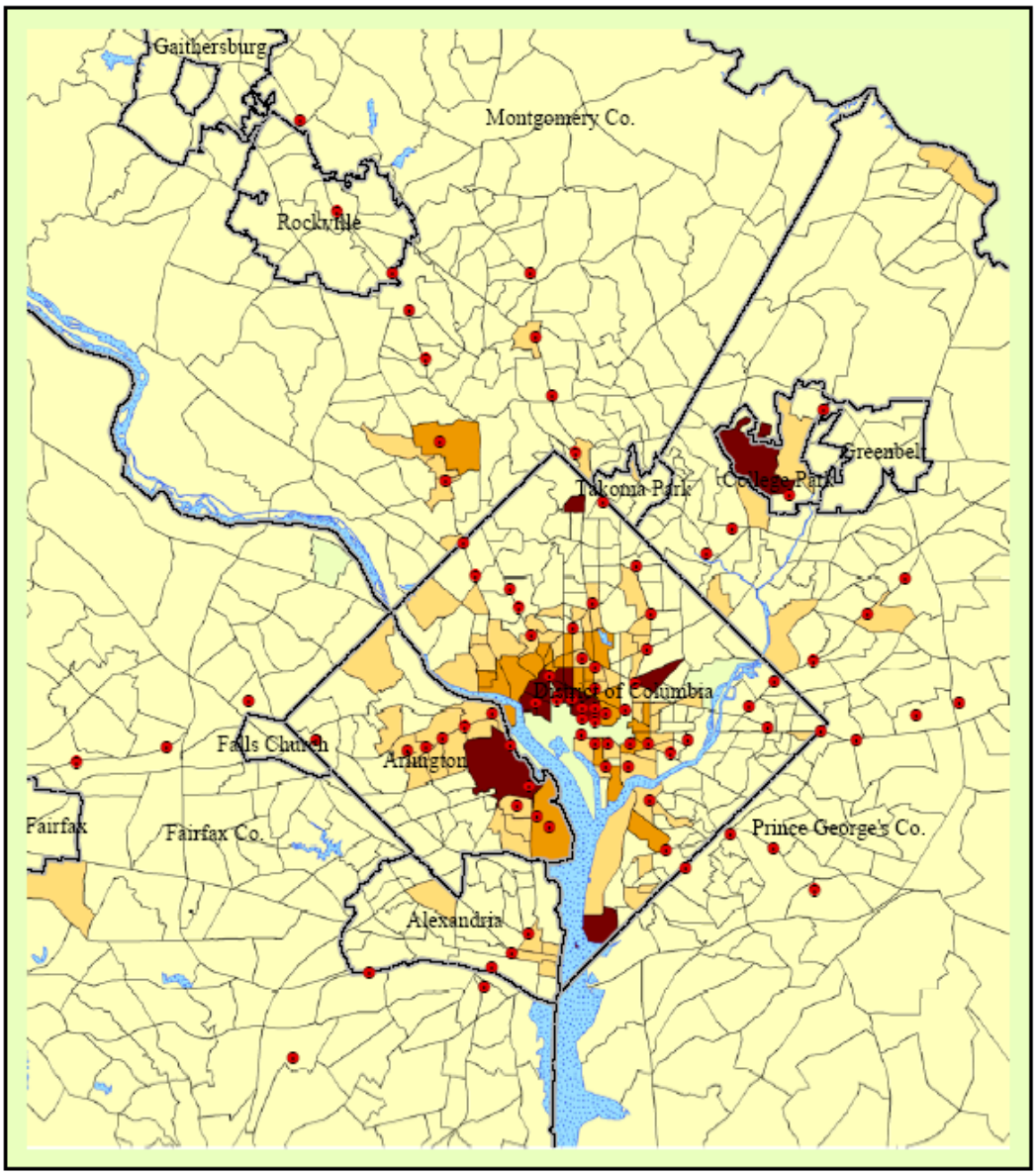


Figure 2-4:
2000 Walk Commute Mode Share
By Census Tract

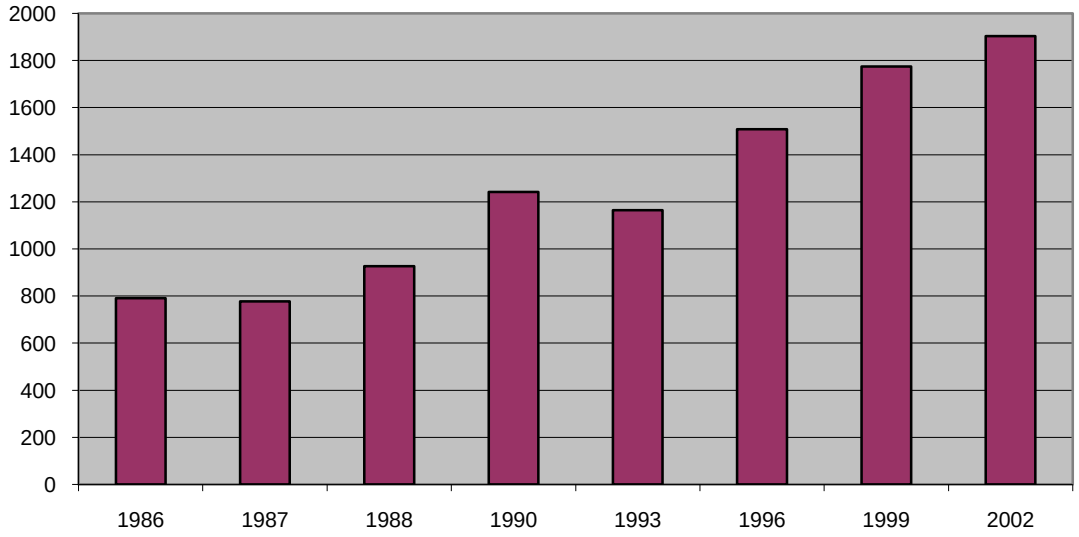
Bicycling in the Metro Core

COG/TPB periodically takes a count of vehicular traffic, including bicycle traffic but excluding pedestrian traffic, entering downtown D.C. and Arlington, as well as traffic crossing the beltway. Cordon counts are not done in other parts of the region. COG/TPB's cordon counts confirm the census data indicating a concentration of bicycling in the neighborhoods close to downtown D.C., Arlington, and Alexandria.

Bicycling is Growing Rapidly in Downtown D.C. and North Arlington

The counts show that bicycle traffic into the downtown Metro core is growing rapidly, with bicycle traffic into the D.C. section of the Metro core more than doubling from 1986 to 2002. The number of bicyclists entering the Metro core within the District of Columbia has grown steadily from 474 in 1986 to 1,379 in 2002. The number of cyclists crossing the Potomac bridges grew from 317 in 1986 to 525 in 2002. Bicycle traffic into the Arlington section of the Metro core increased from 409 to 645 bicyclists between 1999 and 2002, while Potomac bridge traffic declined slightly over the same period, indicating that more people are bicycling to destinations, probably employment, within Arlington in the morning. Chart 2-17 shows the number of bicycles entering the D.C. section of the Metro core from 1986 to 2002.

Chart 2-17:
Bicycles Entering D.C. Section of the Metro Core



Bicycle traffic is also counted on the beltway cordon, including traffic on shared-use paths, but the a.m. volumes recorded are a fraction of the numbers entering the Metro core.

District of Columbia Bicycle Counts

The Distict of Columbia Department of Transportation has an annual bicycle count program since 2004, which in 2008 and 2009 was performed under contract by COG/TPB. Counts are taken at selected locations in the District Columbia, and on the bridges entering the District of Columbia. Numbers varied a lot by location; bridge locations and some central locations had hundreds of bicyclists per hour, others, in the outer wards, had few or none.

Figure 2-5: DC Bicycle Count Locations

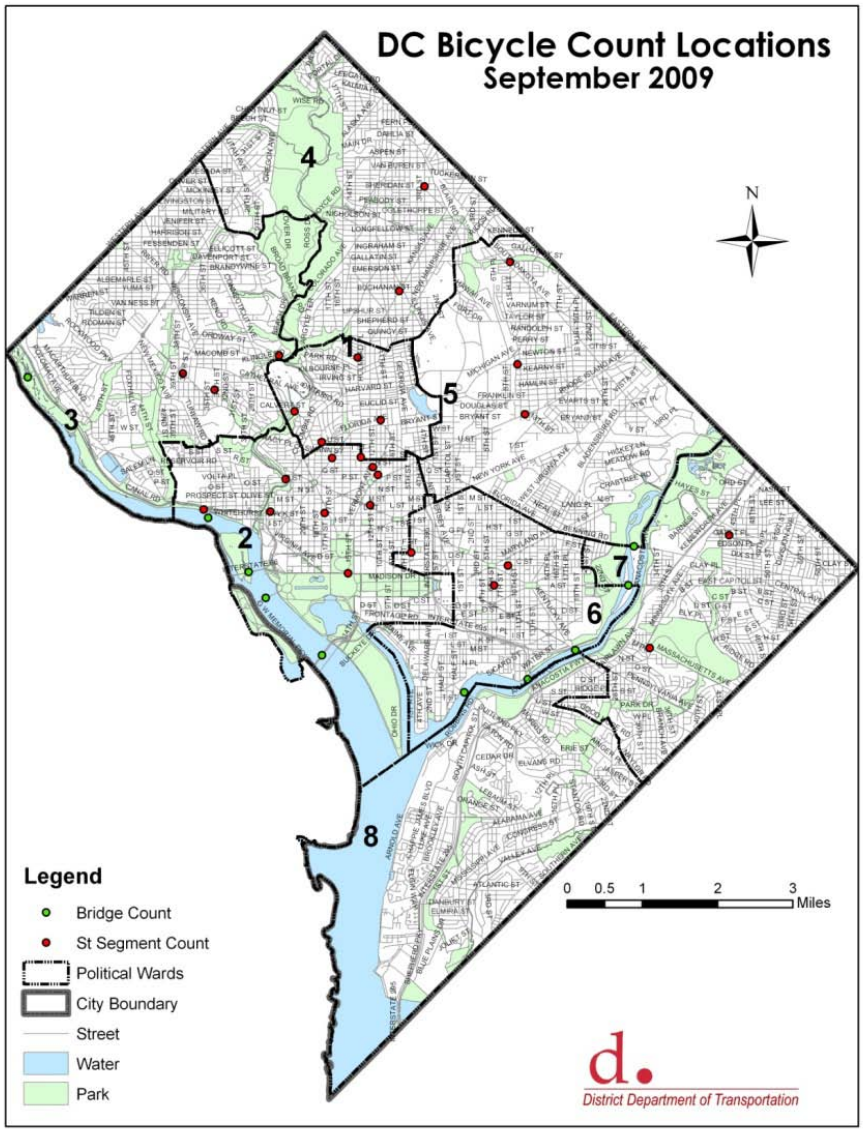
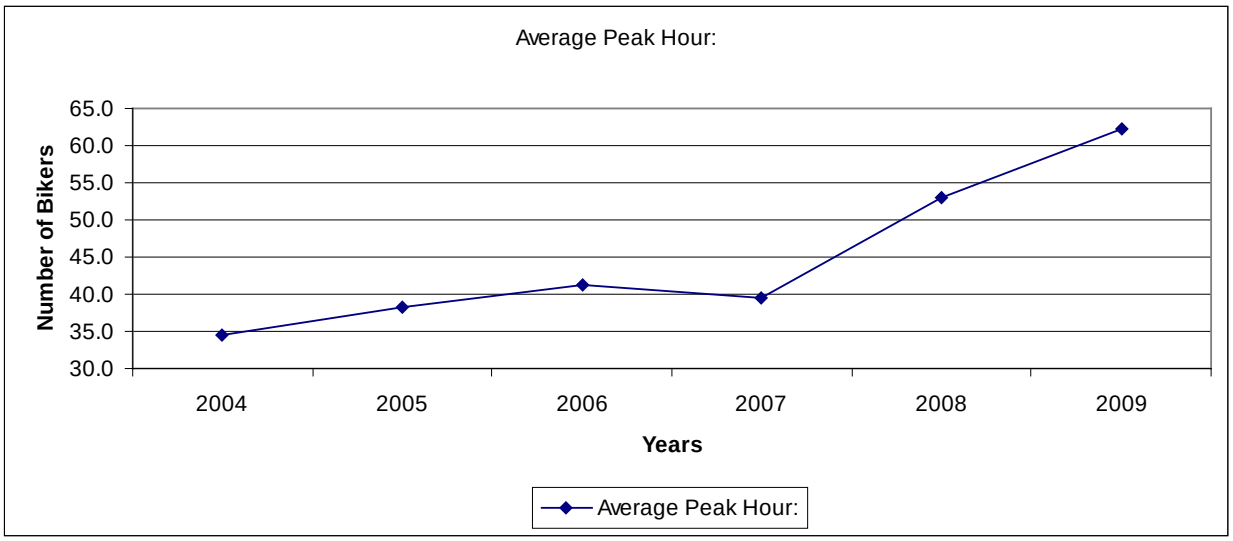


Chart 2-18: Average Peak Hour Bike Counts in DC



Overall, peak hour bicycle counts have increased 84% since 2004. The period since 2007 has seen the most rapid growth.

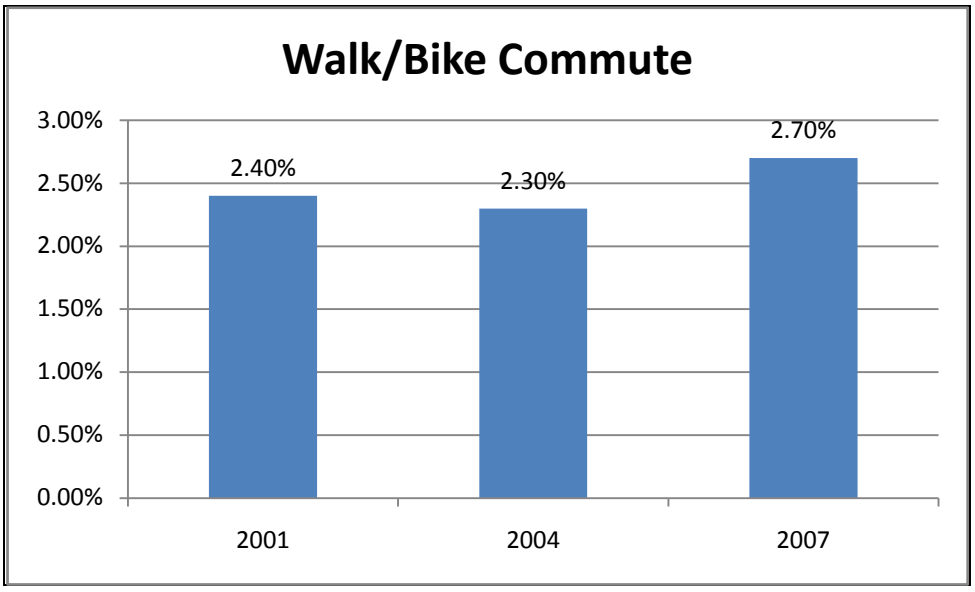
Demographic Characteristics of Pedestrians and Bicyclists

Ethnicity, geography, income, age, and car ownership affect the decision to walk or bicycle to work. The best recent source of this demographic information on pedestrian and bicycle commuters in the Washington region is the 2007 Commuter Connections *State of the Commute Survey*. However, the *State of the Commute Survey* and the US Census both measure work trips only, and the conclusions in terms of both the prevalence and distribution of walking and bicycling can be quite different for all trips than for work trips. Nationally, the 2001 *National Household Personal Transportation Survey* is the best source of demographic data on pedestrians and bicyclists for all types of trips.

All data in the following tables comes from the 2007 *State of the Commute Survey* unless otherwise noted. Walking and bicycling were not calculated separately in the *State of the Commute Survey* for the subcategories of ethnicity, income, age, and state of residence due to sample size issues. All mode shares are for primary commute mode, 3+ days per week. Walk/bike mode share varies by household income, state of residence, number of vehicles in the household, ethnicity, and age.

The 2007 *State of the Commute* shows a modest increase in walking and bicycling, from 2.4% in 2001 to 2.7% in 2007. *State of the Commute Surveys* show lower mode share for walking and bicycling than does the 2000 Census, a discrepancy probably explained by differing methodologies.

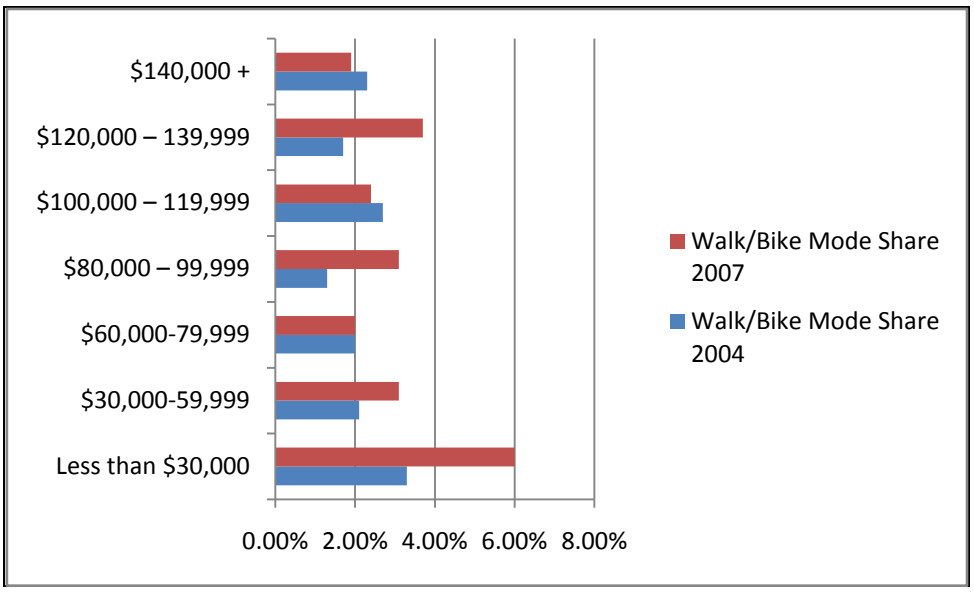
Chart 2-19: Walk/Bike Commute Mode Share



A. Household Income

Chart 2-4 shows walking and bicycling commute mode share by income. Walking and bicycling to work are somewhat more prevalent among the low-income (less than $30,000 household income per year) than among the very high-income (more than $140,000 per year). Bicycling and walking are slightly more common at the top and the bottom of the income distribution than in the middle. This is roughly consistent with the national data for all trips.

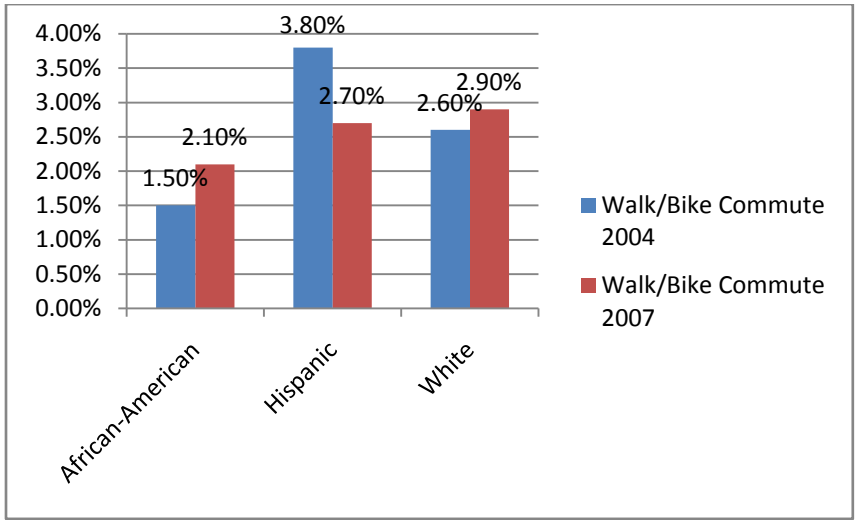
Chart 2-20: Walk/Bike Mode Share by Income



B. Ethnicity

Walk/bike commute mode share differs more by ethnicity than by income. Whites have the highest walk/bike mode share at 2.9%, African-Americans the lowest at 2.1%.

Chart 2-21: Walk/Bike Commute Mode Share by Ethnicity

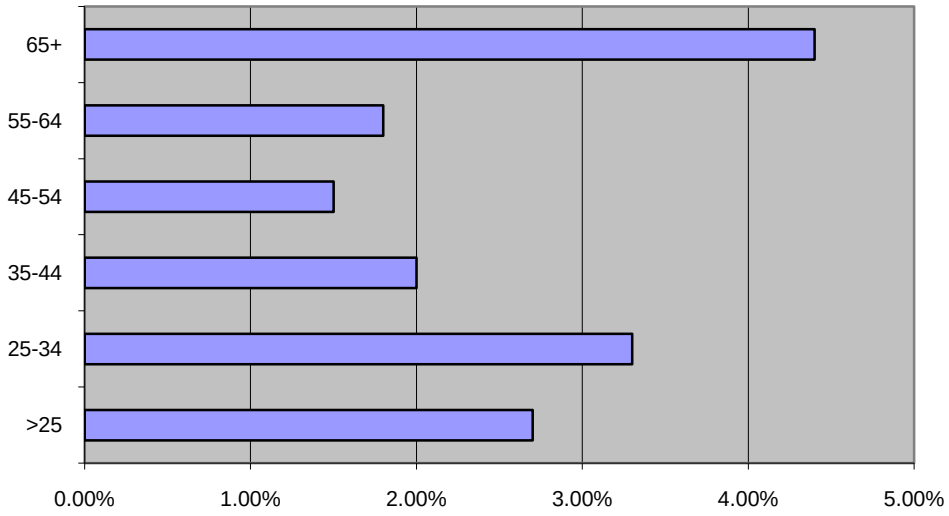


National data for all trips, however, show African-Americans and Hispanics both walking for about 12% of all trips, though African-Americans bicycle less. Whites walk less than any other ethnic group, but take 0.9% of their trips by bike, the same as Hispanics.[5]

C. Age

Chart 2-6 shows walk/bike commute mode share by age. People under 35 and over 65 are more likely to walk or bike to work than the middle-aged. Nationally the elderly have a lower than average mode share for bicycling, so we can presume that most of the elderly are walking rather than bicycling.

Chart 2-22: Walk/Bike Commute Mode Share by Age



D. Motor Vehicles per Household

Vehicles per household is another strong predictor, as shown in Table 2-4. People in households without any vehicles are much more likely to walk or bike to work than households that own one, while those living in households with one vehicle are more likely to walk or bicycle to work than those owning more than one vehicle. Non-work trips also shift radically away from walking in households that have at least one car.

5 Ibid, p. 68.

Table 2-4
Walk/Bike Mode Share by Number of Vehicles

Number of Vehicles in the Household	0	1	2	3	4+
Walk/Bike Commute Mode Share 2004	11.40%	3.70%	1.20%	1.40%	0.60%
Walk/Bike Commute Mode Share 2007	12.40%	4.0%	1.20%	1.40%	0.60%
Walk Mode Share – All Trips (NPTS)[6]	41.1%	12.5%	7.8%	6.3% (3 or more)	
Bike Mode Share – All Trips (NPTS)	2.4%	0.7%	0.9%	0.8% (3 or more)	

Trip Distances

Distance was the third most frequently cited reason, by 28% of respondents, to COG/TPB's 2007 Bike to Work Day survey to explain why they were *not* riding to work. Reasons One and Two were "Don't ride in cold/winter" (34%) and "No safe route" (33%). So trip distance is of great interest when gauging the potential for increasing bicycling (or walking). The 2007 SOC survey asked respondents about the length of their commutes. Commute mileage is shown in Table 2-5 below.

Table 2-5: Commute Distance

Distance	Less than 5 miles	5 to 9 miles	10 to 14 miles	15 to 19 miles	20+ miles
Percentage	17%	20%	17%	12%	33%

17% of commutes in the Washington region are less than five miles and therefore potentially bikable on a daily basis. The average commute distance for Bike to Work Day survey respondents was 10.1 miles.

Another major potential source of walk or bike trips is the trip to transit, park and ride lot, or vanpool and carpool pick-up point. As shown in Table 2-6, access trips to alternative mode meetings points tended to be short. Respondents traveled an average of 3.1 miles. The majority of respondents (51%) traveled one mile or less to the meeting point.

6 Ibid, p. 57.

Another 14% said they traveled between two miles. Only 11% of respondents traveled more than five miles. Based on the distances being traveled, many of the 28% of

respondents who are currently driving to their alternative mode meeting point might be able to walk or bicycle instead.

Table 2-6
Distance Traveled from Home to Alternative Mode Meeting Point
(n=1,230)

Distance	2004	2007
1 mile or less	59%	51%
2 miles	10%	14%
3 miles	7%	8%
4 to 5 miles	9%	12%
6 to 10 miles	10%	11%
11 miles or more	5%	4%

Table 2-7
Means of Getting from Home to Alternative Mode Meeting/Transfer Point
(n=1,577)

Access Mode to Alternative Mode	2004	2007
Walk	39%	35%
Picked up at home	15%	12%
Drive to a central location (e.g., Park & Ride)	18%	18%
Drive alone to driver's/passenger's home	11%	10%
Bus/transit	9%	12%
I am the carpool/vanpool driver	5%	10%
Dropped off/another CP/VP	1%	1%
Other*	1%	2%

Walking and Bicycling to Transit

62.1% of Metrorail Passengers Walk to the Station

Walking is the dominant mode of access to transit. The census walk to work mode share does not include walk trips to transit, since a walk trip to transit is counted as a transit trip

rather than as a walk trip. In areas with high transit ridership the census walk to work numbers significantly undercount the amount of walking to or from work. According to the 2004 *State of the Commute Survey*, 83% of bus commuters walk to the bus.[7]

In 2007 WMATA surveyed passengers at all 86 of its Metrorail stations. The primary purpose of the survey was to estimate the percentage of total ridership residing in each jurisdiction. Passengers *entering* each Metro station were queried throughout the entire day, so the "mode of access" number for any given Metro station includes both people on their way to work or some other destination, and those on their way home. "Mode of Access" is the mode people use to get to the station, not to leave it.
Appendices E and F show mode of access to Metrorail by station.[8]

In 2007 62.1% of all Metrorail passengers walked to the station, which is slightly more than in 2002. 0.55% arrived by bicycle, an increase from the 0.31% who arrived by bicycle in 2002. 13.7% drove, and another 6.1% arrived as auto passenger or were dropped off by someone. 15.6% arrived at the Metro station by bus.

However the AM peak results, which are the best measure of how people access the system (as opposed to any particular station), show higher auto mode and bus mode of access. Pedestrian mode of access for the AM peak is only 33.3%. and bike is 0.7%. Nearly 40% of Metrorail customers access the system by automobile.

7 *2004 State of the Commute Survey Results*. Metropolitan Washington Council of Governments, p. 63.
8 2007 WMATA Rail Passenger Survey,from the table "Origin Station by Mode of Access".

Table 2-8 Mode of Access to Metrorail in 2007	Percent of Daily Total	AM Peak
Bus	15.6	22.3
Auto Driver	13.7	29.3
Auto Passenger (drop off)	5.5	9.3
Rode with someone who Parked	0.6	1
Bike	0.5	0.7
Walk	62.1	33.3
Commuter Rail	1.7	3.8
Taxi	0.2	0.2

Mode of Access varies greatly by station, from Capitol South, with 95% access by foot, to Shady Grove, with 3.7% access by foot. The thirty stations with the greatest share of pedestrian access (as a percentage of total passengers accessing that station) are all located in the District of Columbia, Arlington, or Alexandria.[9]

Stations with a very high share of pedestrians tend to be located in major employment centers, with people walking from work to the station, rather than from home to the station. However, largely residential-area stations such as Cleveland Park, Eastern Market, and Columbia Heights are found in the top twenty. Dense, mixed-use areas such as Bethesda, Foggy Bottom, Crystal City, Pentagon City, Friendship Heights, Van Ness, Dupont Circle, Shaw, and the Rosslyn-Ballston Corridor have high percentages of pedestrian access as well.

The bicycle mode of access to Metrorail ranged from 4% at West Hyattsville to zero at 14 stations.[10] Stations with more bicycling tended to be located in the western portion of the region, have access to a major shared-use path, be near a major University, and/or be located in an area with a bicycle-friendly street grid. Stations with no bicycling are either in dense urban employment centers with no bicycle parking, or are located in the eastern portion of the region. Brookland CUA was a notable exception, with no bicycle access despite the presence of a university.

9 Appendix E: Origin Station Sorted by All Day Walk Mode of Access.
10 Appendix F: Origin Station Sorted by All Day Bike Mode of Access.

Of the sixteen stations located east of the Anacostia River in 2007, ten had bicycle access that rounded to zero. All stations in Fairfax and Montgomery Counties had some bicycle use. The WMATA *Rail Passenger Survey* confirms what the census tells us about the distribution of walking and bicycling in the region, with walking and bicycling heavily concentrated in the Metro core and at certain inner suburban stations.

Outlook

Walking and bicycling taken together are significant travel modes in the Washington region, especially for non-work trips, and for trips to transit. Walking is the larger mode, and it is growing, while cycling is less common, and is stable at the regional level.

Growth in Walking and Bicycling will likely occur in the Urban Core and Regional Activity Centers

Commutes are getting longer across the region, and the fastest population growth is taking place in outer jurisdictions that have low and declining levels of walking and bicycling. Those areas have developed in ways that make utilitarian walking and bicycling difficult and dangerous, with long distances, lack of direct routes, heavy, fast automobile traffic, and incomplete facilities for walking or bicycling.

The story in the urban core is different. In the District of Columbia, Arlington, Alexandria, and portions of Montgomery County, walking and bicycling are growing rapidly. In mixed-use activity centers people walk and bicycle. Where land uses are separated and development densities are lower, walking and bicycling are much less common.

It is likely that the urban core and inner suburban communities will develop over the next thirty years in ways that will be conducive to walking and bicycling. In 2005 73% of the region's employment was found within a series of "regional activity clusters", or concentrations of employment and housing identified by the TPB. Many inner suburban activity centers have already reached critical levels of traffic congestion, and regional projections call for rapid employment growth in these same areas. Seventy-two percent of regional employment growth to 2030 is planned to take place within these clusters, as

well as fifty-four percent of household growth.[11] Under "Complete Streets" policies new development should accommodate pedestrians and bicyclists. If growth occurs in ways that are consistent with the TPB *Vision* and *Region Forward 2050*, creating activity centers that mix jobs, housing and services in a walkable environment, we can expect walking and bicycling to increase.

11 Metropolitan Washington Council of Governments, *Growth Trends to 2030: Cooperative Forecasting in the Washington Region,* October, 2005. Pp. 2, 14-15.

Summary of Data Sources

Major sources of data for bicycling and walking in the Washington region include the 1994 and 2007/2008 COG/TPB *Household Travel Survey*s, the US Census, the Commuter Connections *State of the Commute Survey*, COG/TPB's cordon counts, DDOT's bicycle counts, pedestrian and bicycle crash data from the Departments of Transportation, WMATA's 2002 and 2007 *Rail Passenger Surveys*, and the 2007 *Bike to Work Day Survey*.

A. COG/TPB Household Survey

The household travel survey is a roughly once in a decade survey of households in the greater Washington region. The survey was done in 1994, and again in 2007-2008. It is the best available source of information on travel mode shares in the Washington region.

For the most recent survey, 11,000 randomly selected households in TPB Region and adjacent areas (+3,500 in the Baltimore Region) were surveyed. Higher numbers of samples were taken in higher density, mixed use urban areas, and regional activity centers. The sample was address-based. Interviews were conducted between February 2007 and March 2008. Travel is weekday travel only; week-end travel was not counted.

B. 2000 US Census

The most fine-grained data on travel behavior comes from the Census. Every 10 years the Census Bureau asks roughly one in seven individuals (those who fill out the ♣long form♠) how they get to work. People are polled at their home, not at their place of work. The most recent data available is from the 2000 Census. The biggest limitation of the Census data is that it only contains commute trips. Only one quarter of all trips in the Washington region are commute trips.[12] However, commute trips occur at the most congested time of day.

For the 2010 census there will be no long form. Instead, a five-year rolling average of the annual American Community Survey will be used to discover travel mode shares.

12 National Capital Region Transportation Planning Board, *1994 COG/TPB Household Travel Survey: Summary of Major Findings.* January, 1998. Page 4.

C. Bike Counts

COG/TPB's cordon counts are conducted by machine or in person, on specific roads or trails. In cordon counts, COG/TPB counts the volume of traffic crossing a series of points along an imaginary circle. For example, one cordon line is the Capital Beltway. At approximately 60 points along the Beltway, COG/TPB counts all vehicles crossing over or under the Beltway. Another cordon line is known as the Metro Core, circling downtown DC and part of Arlington. Counts take place on a single day, so results may vary widely depending on weather, transportation incidents, security emergencies, or other factors. Pedestrians are not counted. Bicyclists crossing the cordon line may or may not be commuters; they are counted but not stopped or asked their trip purpose. In most cases the numbers represent only one day of counting and can not be viewed as a daily average.

The District of Columbia also contracts with COG/TPB to do bicycle counts within the District, as described on page 2-24.

D. 2007 Commuter Connections State of the Commuter Survey

The *State of the Commute Survey* is a random sample survey of 6,610 employed persons in the 11 jurisdictions of the Washington Metropolitan designated (air quality) non-attainment region. Commuter Connections commissions this survey in order to evaluate the effectiveness of its programs. The region polled is the Washington Metropolitan Statistical Area, shown in figure i-1 on page i-4, minus Stafford County but adding Calvert and Charles Counties. The sample size of the *State of the Commute Survey* permitted the calculation of walk/bike mode shares by annual income, ethnicity, age, and state of residence.

The SOC survey does not provide any information on non-work trips. Surveys were carried out from Janaury 31st to April 28th, 2007, by telephone, and asked about behavior "last week". This methodology differs somewhat from U.S. Census, which asks about behavior during the first week in April. The 2001 and 2004 SOC surveys show lower numbers for walking and bicycling than does the census.

E. 2007 WMATA Rail Passenger Survey

In 2007, Metro conducted a survey of its rail passengers. Surveys were distributed to rail patrons entering stations on weekdays between April 17 and May 24, 2007. Data were

collected for the full day, divided into a.m. and p.m. peak and off-peak periods. Riders could drop off responses in collection boxes stationed throughout the system or return them by mail. The primary purpose of the survey was to allow Metro to estimate the percentage of total ridership residing in each jurisdiction. However, the survey also asked riders what mode of transportation they used to access or egress the station. 66,321 valid survey responses were obtained.

F. 2007 Bike to Work Day Survey

The *Bike to Work Day Survey* is a survey of participants in the regional Bike to Work Day of May 18, 2007. It is not a random sample, but it provides a portrait of a self-selected group of cyclists. In November 2004, COG/TPB mailed surveys to all 6,600 registered participants, and got back 2,411 completed surveys, a response rate of 37%.

Participants in Bike to Work Day often rode considerable distances for the event, with 26% riding 10-15 miles, and another 17% riding more than 15 miles. However, the post-ride survey indicates that people may be willing to ride farther for a one-day event than they will on a daily basis. Several months after the event participants were asked if they still biked to work, and if not why not. Of the 444 respondents who did not continue riding to work after participating in Bike to Work Day, 38% cited weather, while another 33% cited lack of a safe route, 28% cited distance, 16% cited lack of showers or changing facilities, 9% cited lack of bike parking/storage, and 8% cited the need for a car to take care of personal business.

Chapter 3
Pedestrian and Bicycle Safety

Overview

Pedestrian and bicycle fatalities and injuries are a serious problem in the Washington region. Nearly a quarter of all traffic fatalities in the region are pedestrian or cyclist. Every jurisdiction has a significant pedestrian safety problem. Pedestrian and bicyclist fatalities account for at least 9% of total traffic fatalities in every major jurisdiction.

While all areas and demographic groups are affected, some groups are more affected than others. Urban areas and inner suburban areas are more heavily affected than the outer suburbs, Hispanics and African-Americans more than Whites and Asians.

Adjusted for their high walk and bike mode shares, the urban core jurisdictions are the safest places to walk or bicycle.

This section will describe the scope of the pedestrian and bicycle safety problem, its distribution across the region by jurisdiction and ethnicity, and the legal rights and responsibilities of drivers, pedestrians, and bicyclists. It will also discuss the region's efforts to deal with the problem through the "Street Smart" pedestrian and bicycle safety campaign.

The Scope of the Problem: Fatalities

Pedestrian safety is a major problem nationally and in the metropolitan Washington region. Of the 37,261 traffic fatalities in the United States in 2008, 4,378, or 8.5%, were pedestrians.[1] 69,000 pedestrians were injured in 2008. Urban areas have higher pedestrian fatality rates than rural areas. The Washington-Baltimore region ranks 32nd out of the 50 largest metropolitan areas in terms of pedestrian deaths per capita.[i2]

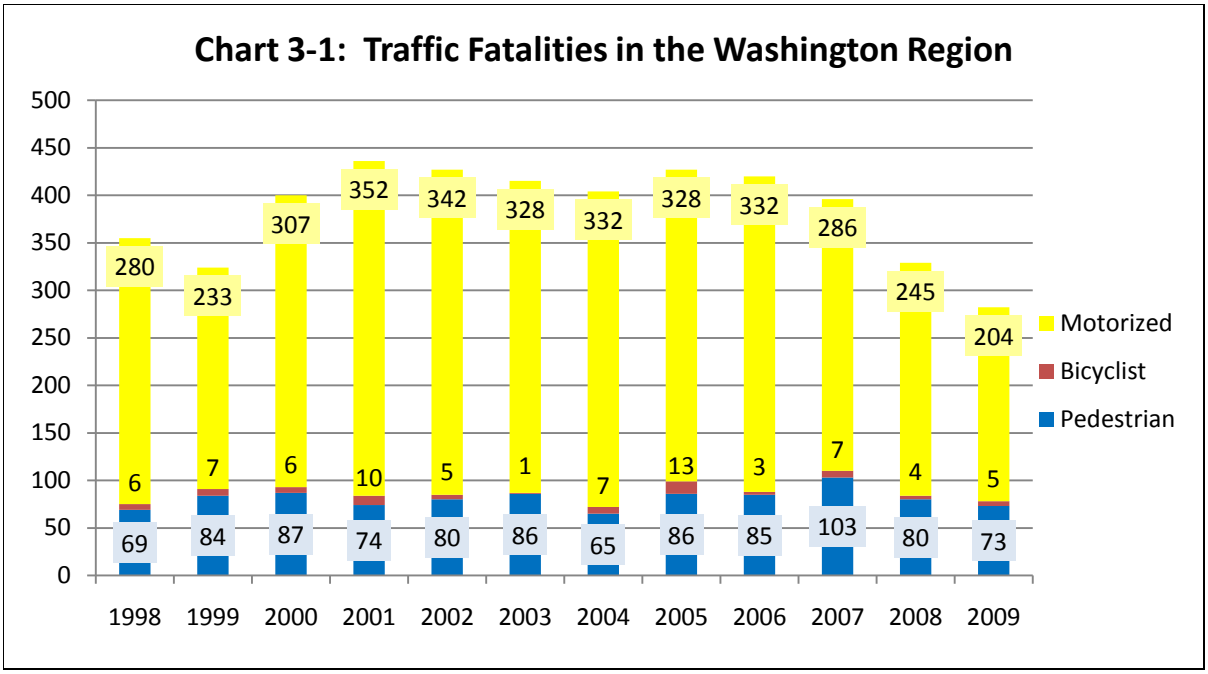
Pedestrians and bicyclists account for nearly a quarter of those killed on the roads in the Washington region. Over 2,600 pedestrians and bicyclists are injured every year, and 89 are killed. On average, there are 395 traffic fatalities per year in the Washington region.[3] Chart 3-1 shows average annual pedestrian and bicycle fatalities in the Washington Region, as a proportion of total traffic fatalities.

[1] www.nhtsa.dot.gov

[2] *Mean Streets 2004*, Surface Transportation Policy Project, p. 17.

[3] Regional totals compiled from data provided by the District Department of Transportation, the Maryland Office of Highway Safety, and the Virginia Department of Motor Vehicles.

Chart 3-2 shows the yearly variations in traffic fatalities from 1998-2009. Overall traffic fatalities have been declining since 2005, while pedestrian and bicyclist fatalities have remained roughly flat. The *proportion* of total fatalities that are pedestrian or bicyclist out total fatalities is rising.

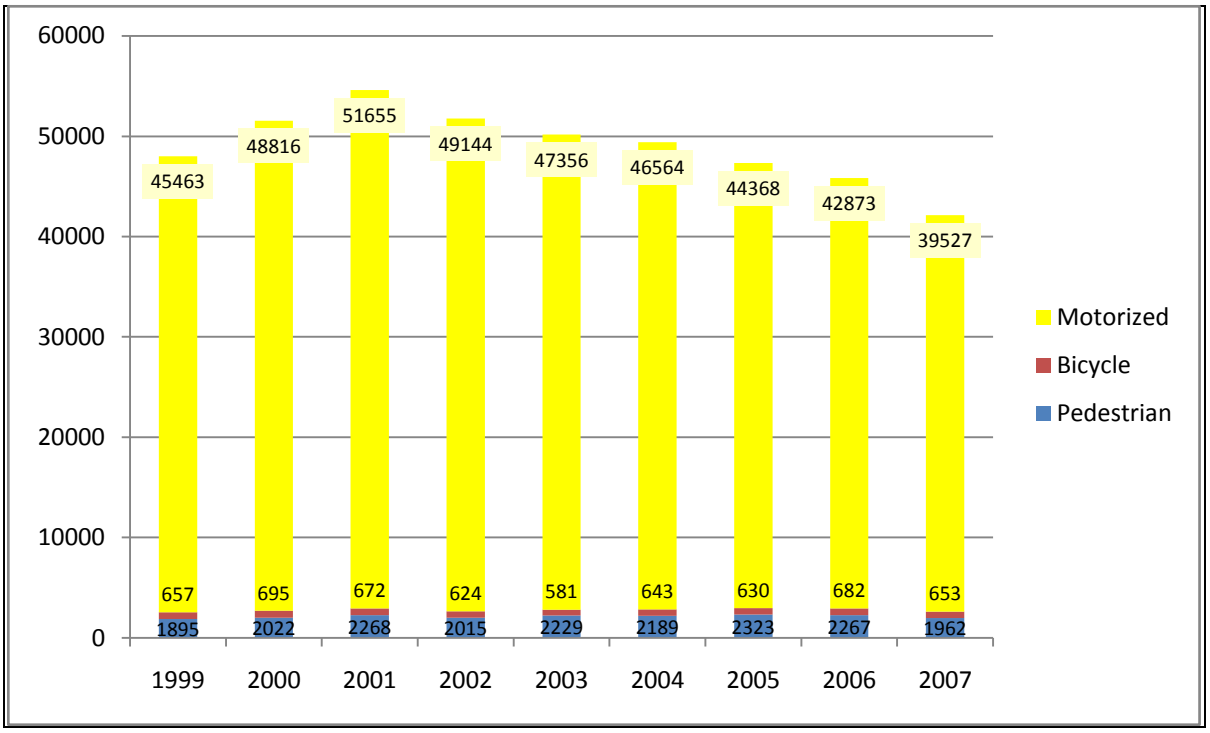


Injuries

Pedestrian injuries exact a steep toll as well. Of the approximately 3000 persons hit by motor vehicles every year in the region, 90% suffer some sort of injury. Approximately 500 injured pedestrians every year require more than 24 hours of hospitalization, which at an average cost of about $25,000 leads to more that $12 million in hospitalization charges alone.[4] This is probably only a fraction of the total financial costs, which would include costs for those hospitalized for less than 24 hours, further medical care, disability, and lost time at work. Many of the people being hit can ill afford such a setback.

[4] Northern Virginia Injury Prevention Prevention Center, INOVA Regional Trauma Center (2005). *Pedestrian Injury in the Washington, D.C. Metropolitan Region.* Page 37.

Chart 3-2: Traffic Injuries in the Washington Region



Pedestrian injuries in the Washington region declined steadily from 2001 to 2007. However, total traffic injuries declined much faster, so the proportion of traffic injuries that are pedestrian or bicyclist is rising.

Distribution of Pedestrian and Bicycle Fatalities by Jurisdiction

The region is often divided into an urban core, consisting of Arlington, Alexandria and the District of Columbia, the inner suburbs of Fairfax, Montgomery, and Prince George's Counties, and the outer suburbs, such as Frederick, Loudoun, and Prince William Counties. Manassas, Manassas Park, the City of Falls Church, and the City of Fairfax are shown as "Other Northern Virginia".[5] Outer suburban jurisdictions had fewer pedestrian fatalities than inner jurisdictions, as seen in Chart 3-5.

[5] Towns in Northern Virginia are not included in the surrounding Counties; their traffic fatalities are tallied separately.

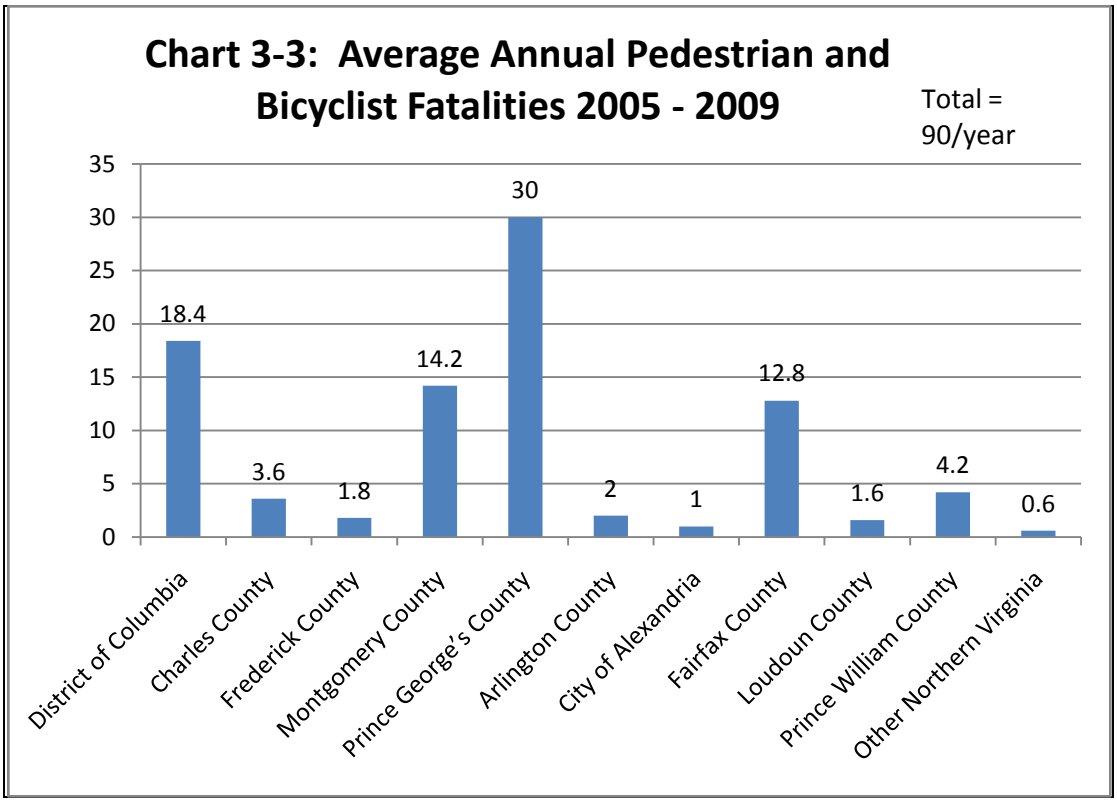


Chart 3-3: Average Annual Pedestrian and Bicyclist Fatalities 2005 - 2009
Total = 90/year
35
30
25
20
15
10
5
0
18.4
3.6
1.8
14.2
30
2
1
12.8
1.6
4.2
0.6
District of Columbia
Charles County
Frederick County
Montgomery County
Prince George's County
Arlington County
City of Alexandria
Fairfax County
Loudoun County
Prince William County
Other Northern Virginia

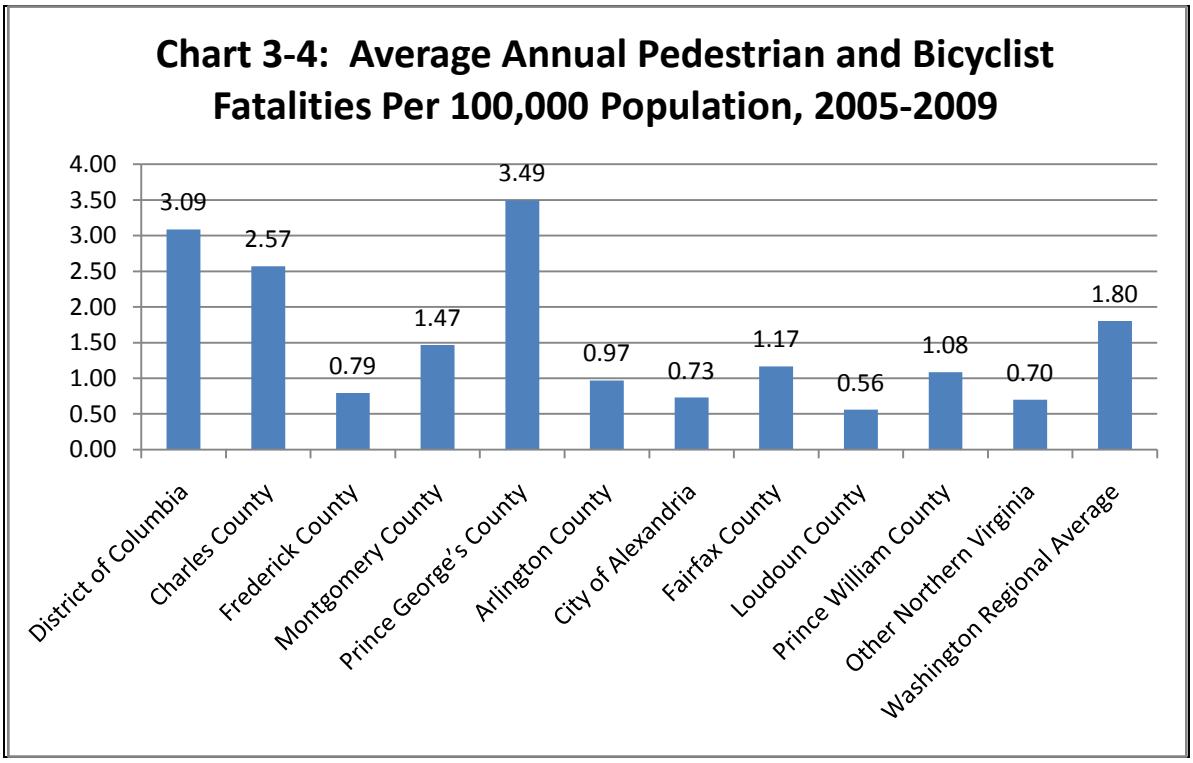
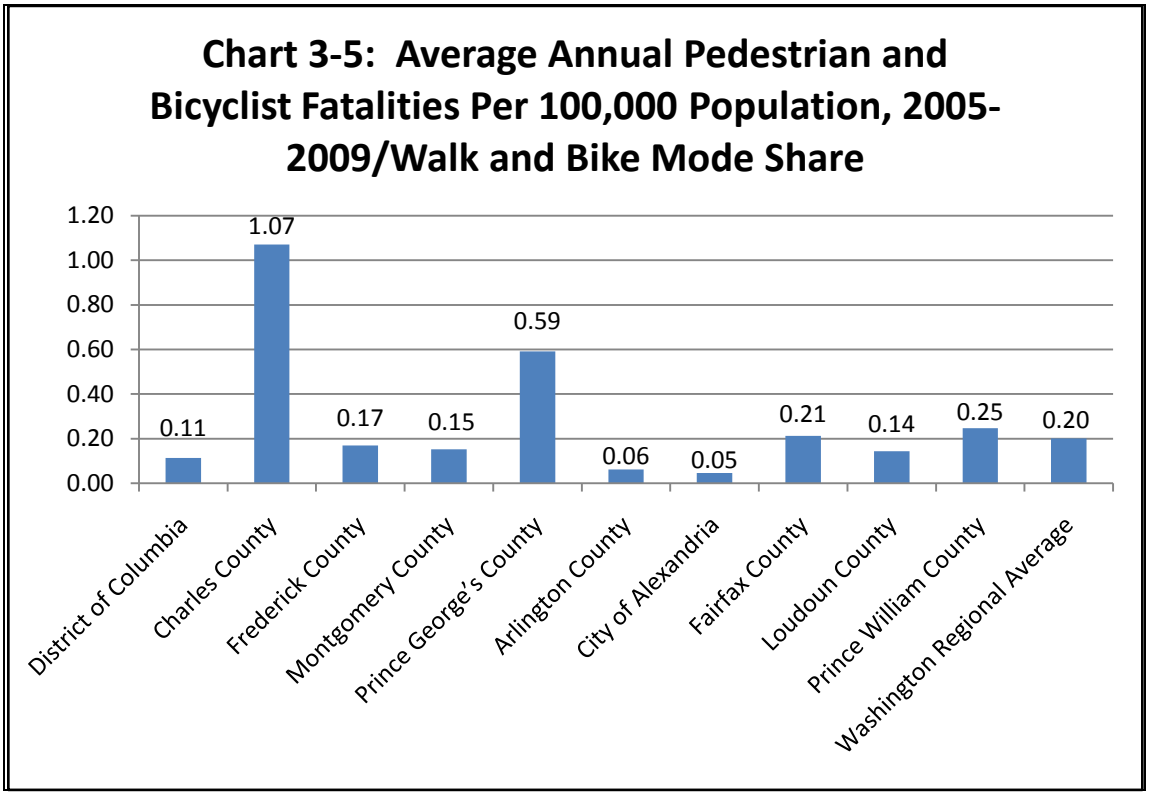


Chart 3-4: Average Annual Pedestrian and Bicyclist Fatalities Per 100,000 Population, 2005-2009
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
3.09
2.57
0.79
1.47
3.49
0.97
0.73
1.17
0.56
1.08
0.70
1.80
District of Columbia
Charles County
Frederick County
Montgomery County
Prince George's County
Arlington County
City of Alexandria
Fairfax County
Loudoun County
Prince William County
Other Northern Virginia
Washington Regional Average

Evem when calculated as a rate per 100,000 population as in Chart 3-6, the outer jurisdictions mostly have below-average pedestrian and bicyclist fatality rates. The Virginia jurisdictions all have fatality rates below the regional average, while Prince George's County, the District of Columbia, and Charles County have the highest rates in the region.



A fair comparison should take into account exposure as well as fatalities per population. Dividing pedestrian and bicyclist fatality rates by walk and bike mode share for all trips f gives a more accurate impression of the risk.

Corrected for exposure, walking and bicycling appear to be safer in the urban core areas with numerous pedestrians than in the inner or outer suburbs.

Pedestrians find Safety in Numbers

Safety in Numbers

In the Washington region the jurisdictions with the most pedestrians are the safest places to walk. The urban core has good pedestrian facilities and low traffic speeds, and drivers expect to see pedestrians and bicyclists. The pedestrian crash rate tends to fall as the number of pedestrians at a location increases. Doubling the number of pedestrians at an intersection already

crowded with pedestrians will usually result in little, if any, increase in pedestrian crashes.[6] Similar effects have been noted for cyclists, with cities having the highest rates of bicycling also having the lowest crash rate per bicycle trip.[7] High levels of walking and bicycling are associated, in advanced industrialized nations, with very low auto-involved crash rates.[8] The Netherlands has half the overall traffic fatality rate of the United States, despite a very high walk and bike mode share.

Experience of other nations shows that it is possible to reduce pedestrian and bicycle fatalities while increasing walking and bicycling. On the other hand, it is not possible to eliminate pedestrian fatalities by eliminating pedestrian facilities and discouraging walking; even in our least pedestrian-oriented jurisdictions, pedestrian fatalities account for at least 9% of total traffic fatalities. For the foreseeable future there will be people without cars, and there will always be some trips that will be made on foot. The region's most dangerous areas for walking have high-speed roads and poor pedestrian facilities, together with people who lack automobiles.

Ethnicity and Hospitalization Rates

Hispanics are three times as likely as Whites to be hospitalized for a Pedestrian Injury

There are large differences in the rates of hospitalization for pedestrian injury by ethnicity. The rate of hospitalization per 100,000 population for pedestrian injuries for Hispanics is nearly three times as high as that for Whites, and twice that for African-Americans. [9]

Geographically, the highest rates of hospitalization are found in the area east of the Anacostia river in the District of Columbia, most of Prince George's County inside the beltway, the Columbia Pike corridor in Arlington, the area between Fairfax City and Falls Church in Fairfax County, and Dumfries in Prince William County.[10]

Factors contributing to Pedestrian and Bicycle Crashes

Data from the Washington region indicate that drivers are about as likely as pedestrians to be at fault in a crash. Drivers were cited for a violation in about half the crashes.[11]

[6] Raford, Noah. *Space Syntax: An Innovative Pedestrian Volume Modeling Tool for Pedestrian Safety*. Presented at the 2004 TRB Conference, January, 2004. (TRB2004-000977) p. 8.
[7] Denmark Ministry of Transport (1994) *Safety of Cyclists in Urban Areas: Danish Experiences*.
[8] Pucher, John. "Making Walking and Bicycling Safer: Lessons from Europe," *Transportation Quarterly,* Summer 2000.
[9] Northern Virginia Injury Prevention Prevention Center, INOVA Regional Trauma Center (2005). *Pedestrian Injury in the Washington, D.C. Metropolitan Region.* Page 35.
[10] Ibid, pp. 40-42.
[11] INOVA study, page 23.

Males aged 25 to 34 are most likely to hit pedestrians, while pedestrians who are hit are most likely to be males aged 25 to 44. Pedestrian crashes are most likely to occur at the evening rush hour, 5-7 p.m., with 6-9 a.m. the second most likely.[12] Alcohol is a serious problem for both pedestrians and motorists, affecting approximately one third of crashes.

Legal Status of Bicyclists and Pedestrians

State traffic codes allow bicyclists to travel on most roadways with the general rights and responsibilities of drivers of vehicles. Bicyclists must ride in the same direction as traffic, use lights after dark, and yield to pedestrians. Like operators of other slow-moving vehicles, cyclists--when traveling at less than the normal speed of other traffic--should generally ride as far to the right as safely practicable, except when preparing to turn left, passing, avoiding obstructions, mandatory turn lanes or unsafe pavement conditions, or when the travel lane is not wide enough to safely split with a motor vehicle. Cyclists may use the full travel lane if the lane is too narrow to allow them to ride to the right of motor vehicles safely. Cyclists may usually ride on roadway shoulders, paths and sidewalks, except where prohibited. Cyclists have the rights and duties of pedestrians when traveling on paths, sidewalks, and crosswalks, however, they must yield to pedestrians in those locations. Rules relating to bicycles are summarized on page E-4 of the Metropolitan Washington Council of Governments' *Bike to Work Guide*, on the Washington Area Bicyclist Association web site, and in Table 3-1 below.[13]

Table 3-1: Selected Bicycle Rules in the Washington Area[14]

	DISTRICT OF COLUMBIA	MARYLAND	VIRGINIA
General	**Bicyclists traveling on roadways have all the general rights and duties of drivers of vehicles.**		
Where to Ride	Ride **with the flow** of traffic as closely as practicable to the right-hand curb or edge of roadway or left-hand curb on one-way streets.	Ride **with the flow** of traffic as closely as practicable to the right side of roadway.	Same as DC.

[12] Ibid, page 12.

[13] See www.commuterconnections.org

[14] See http://www.waba.org/resources/laws.php

	Full lane use allowed when traveling at the normal speed of traffic, passing, preparing for a turn, avoiding hazards, traveling in a lane 11 feet wide or less, avoiding a mandatory turn lane and when necessary for the bicyclist's safety.	Full lane use allowed when traveling at the normal speed of traffic, operating on a one-way street, passing, preparing for a turn, avoiding hazards, traveling in a lane too narrow to share and avoiding a mandatory turn lane.	Full lane use allowed when traveling at the normal speed of traffic, passing, preparing for a turn, avoiding hazards, traveling in a lane too narrow to share and avoiding a mandatory turn lane.
Restricted Roads	Prohibited from interstate and controlled access highways, as marked	Prohibited from expressways, toll bridges, toll tunnels, and other marked roads.	Prohibited from interstate and controlled access highways, as marked.
Passing Cars	Allowed to pass on left or right, in the same lane or changing lanes, or pass off road.	Exercise due care when passing.	Same as DC.
Cars Passing Cylists	A person driving a motor vehicle shall exercise due care by leaving a safe distance, but in no case less than 3 feet, when overtaking and passing a bicycle.	Motorists must give cyclists three feet of clearance when passing	
Dooring	No person shall open any door of a vehicle unless it is safe to do so and can be done without interfering with moving traffic.	A person may not open the door of any motor vehicle with intent to strike, injure or interfere with any bicyclist.	Not mentioned.
Bicycling Two Abreast	Allowed when it does not impede traffic. May not ride more than two abreast.		
Mandatory Use of Bike Lanes and Paths	Not required.	Use of bike lanes required when available except when passing, preparing for a turn or avoiding hazards. No required use of separated paths.	Not required.
Cycling on Sidewalks	Yield right of way to pedestrians.		
	Prohibited in the central business district (bounded by Massachusetts Ave. NW, 2nd St NE-SE, D St SE/SW, 14th St NW, Constitution Ave and 23rd St NW). Allowed where	Allowed where permitted by local ordinance (such as in Montgomery County).	Allowed except where prohibited by local ordinance, such as Alexandria. Must give audible signal before passing pedestrian.

	posted in this area, and prohibited where posted outside this area. View Map>>		
Audible Warning Devices	Bell or other device required, sirens prohibited.	Bells allowed (not required), sirens and whistles prohibited.	Bell not required.
Helmets	Required for any operator or passenger under 16 years of age.	Same as DC.	Required by local ordinance for any operator or passenger 14 years of age or younger in Alexandria, Arlington Co., Fairfax Co. Falls Church, Vienna and other jurisdictions.
Lights at Night	Front white light and rear red reflector (or rear red light) required when dark, may be attached to operator.	Front white light and rear red reflector (or rear red light) required when dark.	Front white light and rear red reflector required when dark, may be attached to operator; rear red light required on roads 35 mph and up.
	District of Columbia	**Maryland**	**Virginia**

Pedestrians are not vehicle operators and are not subject to the same rules. Persons on rollerblades, skateboards, etc. operating on the street are considered pedestrians, but bicyclists are not. Motorists must yield to pedestrians when making turns across adjacent crosswalks. "Jaywalking" is legal in most locations, but pedestrians must yield to motorists if they are crossing at a location other than a crosswalk. Pedestrians may not cross at mid-block if they are between two signal-controlled intersections; they must use the crosswalk. Tables 3-2 and 3-3 summarize the rules in each state regarding pedestrians.

Table 3-2: Pedestrian Traffic Law—Motor Vehicles Drivers

	DISTRICT OF COLUMBIA	MARYLAND	VIRGINIA[15]
Crosswalk Definition	Same as Maryland	Any intersection of two roadways is a legal crosswalk, whether marked or not. Pedestrians have the same rights in marked crosswalks as in	Same as Maryland

[15] http://www.virginiadot.org/programs/bk-default.asp , www.bikewalkvirginia.org

		unmarked crosswalks	
Blocking a Crosswalk	Pedestrians have the right of way in the sidewalk. Parking on the sidewalk prohibited.	A motorist may not park or stop in a crosswalk	Same as Maryland
Sidewalk	Same as Maryland	Pedestrians have the right of way in the sidewalk	Pedestrians have the right of way in the sidewalk.
Right Turn on Red	Same as Maryland	Vehicles turning right on red must yield to pedestrians in the crosswalk	Same as Maryland
Turn on Green	A pedestrian who has begun crossing on the walk signal shall be given the right-of-way by the driver of any vehicle to continue to the opposite sidewalk or safety island, whichever is nearest.	Vehicles turning either right or left on a green light must yield to pedestrians in the adjacent crosswalk	Same as Maryland
Red Light	The driver of a vehicle shall **STOP** and give right of way to a pedestrian crossing the roadway within any marked crosswalk or unmarked crosswalk at an intersection.	Motorist should stop before the crosswalk, or if no crosswalk is striped, before the intersection	Same as Maryland
Stop-Controlled or Uncontrolled Intersection		Motorist must stop for any pedestrian in the same half of the roadway as the motorist, or who is approaching from the adjacent lane in the other half of the roadway. No motorist may pass another vehicle which has stopped for a pedestrian	The drivers of vehicles entering, crossing, or turning at intersections shall change their course, slow down, or *stop if necessary* to permit pedestrians to cross such intersections safely. Pedestrians have the right of way unless the speed limit is more than 35 mph, in which case the motorist has the right of way.

Table 3-3:
Pedestrian Traffic Law—Pedestrians

	DISTRICT OF COLUMBIA	MARYLAND	VIRGINIA
Green light	A pedestrian facing a green light (other than a turn arrow) may cross the roadway, within a marked or an unmarked crosswalk	A pedestrian facing a green light (other than a turn arrow) may cross the roadway, within a marked or an unmarked crosswalk	Same as Maryland
Red light	Pedestrians shall not enter the roadway on a steady red light.	Pedestrians shall not enter the roadway on a steady red light	Same as Maryland

Pedestrian Control Signal	Pedestrians shall not enter the roadway when there is a flashing "Don't Walk" or "Wait" indicator	Pedestrians shall not enter the roadway when there is a flashing "Don't Walk" or "Wait" indicator	Same as Maryland
Stop-controlled or uncontrolled intersection	Essentially the same as Maryland, but with a specific prohibition on walking suddenly into the path of a vehicle: (a) No pedestrian shall suddenly leave a curb, safety platform, safety zone, loading platform or other designated place of safety and walk or turn into the path of a vehicle which is so close that it is impossible for the driver to yield.	Pedestrians may cross the roadway within a marked or unmarked crosswalk	Same as Maryland, except the pedestrian must yield to motor vehicle traffic if the speed limit is 35 mph or more. Pedestrians may not disregard approaching traffic when entering or crossing an intersection
Crossing at Other Than Crosswalks	Same as Maryland	(a) If a pedestrian crosses a roadway at any point other than in a marked crosswalk or in an unmarked crosswalk at an inter section, the pedestrian shall yield the right-of-way to any vehicle. (b) If a pedestrian crosses a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing is provided, the pedestrian shall yield right of way to any vehicle. (c) Between adjacent intersections at which a traffic control signal is in operation, a pedestrian may cross a roadway only in a marked crosswalk. (d) A pedestrian may not cross a roadway intersection diagonally.	Same as Maryland, except that pedestrians may not enter the roadway at any point where drivers view of them is blocked by a parked vehicle or other obstruction.
Pedestrians on Roadways		(a) A pedestrian may not walk on a roadway where sidewalks are provided. (b) Where no sidewalk is provided, a pedestrian may walk only on the left side of the roadway, facing traffic.	Same as Maryland

Pedestrian and Bicyclist Enforcement and Education: The "Street Smart" Campaign

Pedestrian and bicycle safety efforts generally fall into three broad categories of actions, the three E's: Engineering, Education, and Enforcement. Engineering deals with the design of safer roads, streets, and pedestrian and bicycle facilities. Education includes both classroom-based training and behavioral modification campaigns. Enforcement consists of enforcement of the traffic laws with respect to pedestrians and bicyclists. The regional pedestrian and bicycle safety campaign, Street Smart, deals primarily with education through mass media.

Figure 1: Street Smart Poster

Street Smart was created in 2002 by the region's governments in response to an ongoing regional pedestrian and bicycle safety problem. Since the region is a single media market, a unified regional campaign is the most cost-effective approach. The program is supported by federal funds made available through state governments, with local funds matching the federal funds, and is administered by the National Capital Region Transportation Planning Board.

The Street Smart campaign is a one-month blitz of radio, cable, transit, and internet advertising, supported public relations activities and by concurrent law enforcement. The goal of the campaign is to change driver and pedestrian behavior in order to reduce deaths and injuries. Motorists are urged to "Be Alert", bicyclists to "Obey Signs and Signals", and transit riders to "Cross after the bus leaves the stop". All materials, including radio spots, are translated into Spanish. Since 2007 campaigns have been held twice per year, in the fall and in the spring. Campaign materials can be found on the web site, http://bestreetsmart.net.

Figure 2: Speed Demonstration

Efforts to enforce pedestrian laws have also been stepped up in conjunction with the "Street Smart"

pedestrian and bicycle safety campaign. Law enforcement has helped reinforce the campaign message, just as it has been used effectively as part of anti-drunk driving and seatbelt advertising campaigns. Public awareness of these heightened enforcement activities has been a key aspect of this campaign. Research shows that fear of fines and legal consequences is more effective at changing behavior than fear of death or injury. Also the TV and press media often covers enforcement stings, increasing the public's perception that they are likely to be ticketed for breaking the law.

The Street Smart campaign sponsors annual seminars on best practices in pedestrian safety enforcement for law enforcement officers. Participating agencies report the number of warnings and citations issued.

Evaluation

Pre and post-campaign surveys show that the public is hearing and remembering the Street Smart messages. For example, surveys taken before and after the campaign of April, 2009 show that awareness of the "Yield to Pedestrians" message rose by 30 percentage points among drivers, and awareness of law enforcement increased by 25 percentage points.

Outlook

Pedestrian and bicycle safety has drawn increasing attention in the Washington region and at all levels of government. To build walkable communities, walking and bicycling need to be made safer. Improved occupant protection and vehicle design have saved the lives of many motorists, but we have not made comparable progress for people outside motor vehicles. As the population of car-less immigrants and poor people grows in suburban areas that were designed for driving, pedestrian and bicyclist safety will remain a challenge.

The Street Smart campaign is yielding positive results, but it is meant to complement, not replace, local three "E" safety efforts. States, cities, and counties need to continue engineering and building safer streets, enforcing the pedestrian safety laws, and educating motorists and pedestrians. We know that the streets can be made safe for pedestrians and bicyclists, because some of our jurisdictions have already done it. Agencies that make pedestrian safety a priority are getting results, while those that do not, are not.

[i] *Mean Streets 2004*, Surface Transportation Policy Project, p. 17.

Chapter 4

Existing Facilities for Bicyclists and Pedestrians

Overview

The Washington region has excellent long-distance separated facilities for bicyclists and pedestrians, and an urban core and certain regional activity centers that have good pedestrian and bicycle facilities. On the other hand, many activity centers, not originally designed with pedestrians in mind, have grown dense enough to generate significant pedestrian traffic, and face challenges in terms of providing safe facilities and crossing locations for pedestrians and bicyclists. Other parts of the region have developed at low densities, with separated land uses and indirect routes, which increase pedestrian and bicycle travel time. Pedestrian and bicycle accommodations are not always provided.[1]

Figure 1: Informal foot path

Informal Foot-Paths Show where People Walk

Bicycle connections with transit are generally good, with bicycle parking, bus bicycle racks, and bikes permitted on Metrorail at most hours. Walking is the primary mode of access to transit. Conditions for pedestrian access are excellent at many rail stations, though at some rail stations, originally designed primarily with auto and transit access in mind, pedestrian access could be improved. Bus stops in places originally designed primarily for automobiles often have access and safety problems.

Pedestrians are found throughout the region, and pedestrian traffic is increasingly found in places that were not built for it. This section highlights some of the region's successes in providing for bicycling and walking. These successes can serve as examples of what the region needs to serve its pedestrians and bicyclists.

[1] Photo of Informal Path, Southern Avenue, Prince George's County, MD: COG/TPB, Michael Farrell

Shared-Use Paths[2]

Figure 2: Mount Vernon Trail

The Washington region is renowned for the quality and extent of its major shared-use paths. Shared-use paths are typically located in their own right-of-way, such as a canal, railway, or stream valley, or in the right-of-way of a limited-access highway or parkway, such as the George Washington Memorial Parkway. Shared-use paths are eight to twelve feet in width. The region has approximately 200 miles of major shared-use paths, either paved or level packed gravel surface suitable for road bikes. Well-known trails include the W&OD and Mount Vernon Trails in Virginia, and the C&O Canal, Capital Crescent, and Rock Creek Trails connecting the District of Columbia and Maryland. Many of the region's shared-use paths go through heavily populated areas, connect major employment centers, and get significant commuter traffic. More information on trails in the Washington region can be found at www.bikewashington.org.

The region continues to build new trails along stream valleys and in conjunction with major highway projects, but the remaining inventory of disused rail lines, which often provide the best opportunities for shared-use paths, is fairly small.

Figure 3: Side Path on Fairfax County Parkway

Side-Paths[3]

Side-paths differ from shared-use paths in that they do not have their own right of way, but are closely adjacent to a non-limited access roadway and thus subject to more frequent conflict

[2] Photo of Mt. Vernon Trail, Arlington, VA: COG/TPB, Michael Farrell
[3] Photo of Sidepath on the Fairfax County Parkway: Photographer Unknown

with driveways, side streets, and turning traffic. Side-paths differ from sidewalks in that they must be at least eight feet wide and are designed to meet the needs of bicyclists.

The Washington region has approximately 300 miles of side-paths, and there are plans to expand that mileage considerably.

Side-paths meet the need for a separated pedestrian facility and provide separation from traffic that is valued by child and slow-moving cyclists, especially in places where the road has speeds of 40 mph or more and high traffic volumes. However, the AASHTO (American Association of State Highway and Transportation Officials) Guide for the Development of Bicycle Facilities offers a number of cautions regarding the use of side-paths or wide sidewalks for bicycles. Frequent driveways, especially with poor sightlines, are hazardous to bicyclists on side-paths. Side-paths remove bicyclists from the motorists' line of sight and allow travel against the flow of traffic, so they may increase the potential for conflicts with motor vehicles at intersections. Since the facility is shared with pedestrians, there is also a potential for cyclist-pedestrian crashes. Side-paths are most suitable where driveways and intersections are few and sight-lines are good. Intersection crossings should be designed carefully, with a protected signal phase providing the best level of protection.

Bicycle Lanes

Bicycle lanes are marked lanes in the public right-of-way that are by law exclusively or preferentially for use by bicyclists. Bike lanes are one-way, with a bicycle symbol or arrow indicating the correct direction of travel. The minimum width next to a curb is 4 feet for roadways with no curb or gutter, next to a curb or parked cars 5 feet. Bike lanes are provided on both sides of the street, except for one-way streets, and allow travel only in the same direction as adjacent motor vehicle traffic. On-street bicycle lanes are generally much less expensive than separated paths. Bike lanes decrease wrong-way riding, define the road space that cyclists are expected to use, increase cyclists' comfort level, and call attention to the presence of cyclists on the roadway. Bicycle lanes are not generally considered safe or adequate for pedestrians, though in rural areas without sidewalks the roadway shoulder serves as both a bicycle lane and as a pedestrian facility.[4]

Figure 4: Bicycle Lane

[4] Bike lane photo: www.pedbikeimages.org / Dan Burden

The number of bicycle lanes is growing rapidly. The District of Columbia currently has 60 miles of bicycle lanes, up from 19 miles in 2006, and three in 1995, Arlington County has 24 miles, up from three in 1995, and Montgomery County has 17 miles.[5] The regional mileage of bicycle lanes can be expected to expand significantly in the future as the District of Columbia, Arlington County, and Montgomery County all have ambitious plans to build more. A map of regional bicycle paths, lanes, and on-road routes can be ordered at www.adcmap.com.

Buffered Bicycle Lanes

A buffered bicycle lane is a bicycle lane with a spatial buffer to increase the distance between the bicycle travel lane and the automobile travel lane or the parking zone. The buffer zone is usually marked with striped paint. Buffered bike lanes are sometimes used where there is higher than normal speeds, traffic volumes or truck volumes, or high-turnover parking. It allows additional space to be provided for bicyclists without creating something that looks like a travel lane to motorists. There are currently none in the Washington region, though that may change soon.

Cycle Tracks

A cycle track is a bicycle-only facility that provides physical separation within the right of way from vehicle travel lanes. Cycle tracks can be either one-way or two-way, on one or both sides of a street, and are separated from vehicles by wands, bollards, curbs/medians, parked cars, or a combination of these elements. Cycle tracks can either incorporate bicycle-only signal phases at intersections (for 100% separation) or utilize "mixing zones" to merge bicycle and motor vehicle traffic.[6]

Figure 5: 15th Street NW Cycle Track

Cycle tracks have long been viewed skeptically in the United States, and notably in the AASHTO Guide for the Development of Bicycle

[5] *Countywide Bikeways Functional Master Plan,* March 2005. Maryland-National Capital Park and Planning Commission. Page 12.
[6] Nactional Association of City Transportation Officials. http://www.nacto.org/cycletracks.html

Facilities, due to the potential conflicts with turning vehicles, and lack of visibility of cyclists to turning vehicles when separated by parked cars.

Cycle tracks have been used in numerous cities in Europe with mixed results.[7] Installation of cycle tracks was found to result in an increase in collisions at intersections in Copenhagen, which more than offset a decrease in motorist-overtaking collisions and collisions with parked cars, for a net increase in the number of collisions of 9%. However, the same study showed that installing cycle tracks increased bicycle (and moped) ridership 18 to 20 percent.[8] Installing bike lanes resulted in a 5 to 7% increase in ridership, and a 5% increase in crashes. For both cycle tracks and bike lanes the number of riders can be expected to increase more than the number of crashes.

Cycle Tracks can Increase Ridership by 18-20%

Riders perceive cycle tracks as safer, and it should be noted that motorist-overtaking collisions, while relatively rare, account for a disproportionate number of serious and fatal injuries.

New York City, Portland, OR, Cambridge, MA, and now the District of Columbia are installing cycle tracks. The first segment of buffered bicycle lane in the District of Columbia was installed in 2009 on 15th Street NW. The District of Columbia is planning a network of such facilities in downtown DC. Space for them is being made by removing travel lanes, as was done on 15th Street NW, which was reduced from four lanes to three.

Dual Facilities

In recognition of the fact that fast-moving cyclists may be better off with an on-road facility, Montgomery County is planning many of its bicycle routes as dual facilities, with both an on-road bike lane and a side-path for pedestrians and slow bicyclists. VDOT's *Northern Virginia Bikeway and Regional Trail Study* recommends that both on- and off-road accommodation be provided.[9] Under the new routine accommodation policy, VDOT is to provide adequate facilities for pedestrians and bicyclists even if not called for in the local plan.

Where bicycle and pedestrian volume warrant it, and right of way permits, multi-use paths may be split into parallel pedestrian and bicycle paths. This separation allows cyclists and rollerbladers to maintain speed without risk to pedestrians. The Washington

[7] Jensen, Søren Underlien, Claus Rosenkilde and Niels Jensen. Road safety and perceived risk of cycle facilities in Copenhagen. *Available at* http://www.ecf.com/files/2/12/16/070503_Cycle_Tracks_Copenhagen.pdf

[8] *Cycle Tracks: Lessons Learned.* February 2009. Alta Planning and Design. Page 1.

[9] *Northern Virginia Regional Bikeway and Trail Network Study.* November, 2003. Virginia Department of Transporation, Northern District Office. Page 19.

& Old Dominion Trail in Northern Virginia includes several sections with gravel pedestrian paths that parallel the paved shared-use path.

Signed Bicycle Routes

The region has hundreds of miles of signed bicycle routes. Signed routes have the advantage of being inexpensive and informative for cyclists. A signed route has not necessarily had any bicycle-related improvements apart from signing. However, bicycle-friendly features such as paved shoulders, a wide curb lane, or low traffic volumes or speeds *may* be present. The trend with bicycle route signs is to include information on distances to destinations.

Figure 6: DC Bike Route Sign

Long-Distance Bicycle Routes

Several notable long-distance routes promoted by national-level organizations pass through the Washington region. These include the East Coast Greenway, Bicycle Route 1, and the American Discovery Trail. The East Coast Greenway Alliance is promoting what will eventually be a mostly off-road path connecting all the major cities of the East Coast. Currently 20% open for public use, it will span 2,600 miles from Calais, Maine to Key West, Florida. With the exception of the National Capital Mall, the proposed route through the Washington region is not yet signed. Bicycle Route 1 is part of a national network of low-traffic road routes promoted by the Adventure Cycling Association. The American Discovery Trail is a coast-to-coast, recreational, non-motorized trail, which follows the C&O Canal Towpath and the Anacostia River Tributary Trails. All organizations promoting long-distance routes rely on local agencies and organizations to realize their vision.

Exclusive Bus/Bicycle Lanes

Exclusive bus lanes are sometimes used on streets with heavy bus traffic. Bicycles are sometimes permitted to use those lanes. Bus/Bike Lanes can be found in the District of Columbia. Conflicts can occur due to differences in speed between buses and bicyclists.

Bridges

With the completion of the Woodrow Wilson Bridge trail, cyclists may now cross the Potomac River on the capital beltway at between Alexandria.

Figure 7: Woodrow Wilson Bridge Trail

This new multi-use path allows riders on the Mt. Vernon Trail to access the National Harborplace development in Prince George's County without going on street. Connections are also provided an on-street network of bicycle routes in Prince George's County.

The 14th Street Bridge, the Memorial Bridge, the Theodore Roosevelt Bridge, the Key Bridge, and the Chain Bridge all have bicycle and pedestrian facilities. In the north, cyclists and pedestrians may use the ferry at White's Ferry, which connects Montgomery County and Loudoun County. Cyclists may use the US 15 bridge at Point of Rocks and the MD 17 bridge at Brunswick to get across Frederick County and Loudoun County, though they have no separated facilities.

On the Anacostia River separated bicycle and pedestrian facilities of uneven quality are available on the South Capitol Street (Frederick Douglas Memorial) bridge, the 11th Street bridge, the Pennsylvania Avenue Bridge, the East Capitol Street Bridge, and the Benning Road Bridge. The District of Columbia is in the process of upgrading these crossings as these aging bridges are replaced and rebuilt.

On-Line Bicycle and Pedestrian Routing

The last few years have seen a flowering of on-line resources that enable cyclists and pedestrians to locate facilities and plan their routes. For bicyclists, RidetheCity (www.ridethecity.com/dc) is a tool that allows cyclists to point and click their proposed origins and destinations, and choose between a "direct route", a "safe route" and a "safer route". The results show whether a trail, on-street bike lane, or street is being used. "Safer" routes use trails and bike lanes at the expense of increased distance. Ride the City is available only in the New York and DC regions.

Google maps also provides walking and bicycling directions. The bicycling directions show paths, bike lanes, and on-street bike routes, but offer no options for selecting more direct or safer routes.

Accessed via smart phone, these and other on-line applications can replace paper maps for most purposes.

Bicycles and Public Transit

The region has made tremendous progress integrating bicycling and public transit, with secure bike parking available at most rail stations, bicycles permitted on Metrorail at most times, and most of the buses in the region now equipped with bicycle racks. Specific agency policies and facilities are described below.

Metrorail Guidelines

- Bicycles are permitted on Metrorail (limited to two bicycles per car) weekdays except 7-10 a.m. and 4-7 p.m. Bicycles are permitted all day Saturday and Sunday as well as most holidays (limited to four bicycles per car). Bicycles are not permitted on Metrorail on July 4th or other special events or holidays when large crowds use the system.
- Folding bikes are permitted on Metrorail during rush hours if fully enclosed in a carrying bag.
- No tricycles, training wheels, tandem bicycles or recumbent bicycles are allowed on Metrorail.
- For other Bike on Rail guidelines see: http://www.wmata.com/getting_around/bike_ride/bikes_rail.cfm

Metrorail Facilities

- For the most up to date information on bicycle parking at Metrorail, go to the WMATA web site and click on the stations tab. You can see which stations have bike racks and lockers. Or go to http://www.wmata.com/getting_around/bike_ride/parking.cfm for a list of stations with bike racks and lockers, and information on how to rent a bike locker.

- Systemwide, WMATA maintains about 1,280 single bike lockers and about 1,600 bike racks - with capacity for about 3,150 bikes. Racks are first come, first

served. At many downtown stations, local jurisdictions provide additional bike parking near stations.

Metrobus

- **All** Metrobuses have racks on the front that carry **up to** two bicycles. No permit is required. Instructions for how to use bus bike racks is available at http://www.wmata.com/getting_around/bike_ride/bikes_bus.cfm.
- Metro has adopted guidelines for the design and placement of bus stops to improve their safety, comfort, accessibility, and efficiency.

Park and Ride

Of the 175 park and ride lots in the Washington DC-MD-VA Metropolitan Statistical Area, about 50 have bike lockers or racks. Commuter Connections lists information on Park and Ride lots.

Commuter Rail

Collapsible bicycles are permitted on all VRE trains. Full size bicycles will only be allowed on the last three northbound, the mid-day, and the last three southbound trains on each line.

Collapsible bicycles are permitted on MARC, but not full-size bicycles. No bag or case is required.

Pedestrian Access to Transit

82% of Metrobus passengers walk to transit, and 62% of all Metrorail trips start with the passenger walking to the rail station. However, the a.m. peak walk mode of access, which is the best measure of how people originally get into the system, is 33%.

The quality of pedestrian access to Metrorail and Metrobus is uneven. Many suburban rail stations were built with an emphasis on automobile and bus access. Bus stops are often placed in areas with no sidewalks or available crosswalks. Inventorying conditions and making recommendations for specific locations is beyond the scope of this plan, but there have been a number of efforts to do so, such as MTA's Access 2000 Study, COG/TPB's Walkable Communities Workshops, and efforts in Fairfax County and Montgomery County to improve bus stop safety.

WMATA has developed a set of *Guidelines for Station Site and Access Planning*, and WMATA has plans to upgrade pedestrian access at Metrorail stations and carry out station-area development. WMATA also finished an inventory of conditions at all its bus stops in 2008. The inventory included information on the presence of bus shelters, sidewalks, and location at a controlled intersection.[10] Suburban bus stops often lack a nearby controlled intersection for safe street crossing, and may also be missing sidewalks. A soon to be completed study on bicycle and pedestrian access to Metrorail will provide details on pedestrian access to rail transit.

Bike Parking

The District of Columbia, Arlington, Alexandria, and other jurisdictions provide bike racks on public property for short-term bicycle parking. They also require secure long-term bicycle parking to be provided as part of new development.

DC Bike Station

Figure 8: DC Bike Station at Union Station
Photo Credit: COG/TPB

Figure 9: DC Bike Station Interior

In response to demand for secure bicycle parking at Union Station, in 2009 the District of Columbia opened a Bike Station. The facility houses over 100 bicycles in 1,600 sq. ft. of free-standing ultra-modern glass and steel design. It is staffed 66 hours per week and available to members 24/7 for self-service parking. In addition to secure bike parking, the facility also provides a changing room, lockers, bike rental, bike repair, bike rental, and

[10] *WMATA Bus Stop Inventory Project.* Kristin Haldeman, Presentation to TPB Access for All Subcommittee, November 2008.

retail sales. The Bikestation location at Union Station allows commuters to take public transportation to the station, pick up their bicycles and go to work, shopping or entertainment.

The DC bike station is a unique structure designed for a particular site. It required an unusual degree of architectural review due to its location on the National Mall. Far less expensive, modular self-service bike parking structures are available.

Bike Sharing

Bike sharing is self-service public bicycle rental. It is similar to a car-sharing system, such as ZipCar, where members pay a fee and have access to any available bike throughout the regional system. Unlike earlier "public bicycle" or "yellow bike" programs, which failed due to lack of means of preventing theft, modern bicycle sharing links rentals to a user's credit card, which can be charged if the bicycle is not returned. Bike sharing has become common and popular in Europe, with programs in dozens of cities.

The District of Columbia has a pilot bike sharing program, Smartbike, with 100 bikes at ten docking stations in downtown DC. The first bike sharing system in North America, Smartbike is a precursor to a much larger system, which will be known as Capital Bikeshare.

Capital Bikeshare will likely (funding permitting) incorporate more than 3000 bicycles at over 300 docking stations in the District of Columbia, Arlington, Alexandria, Fairfax County, Montgomery County, and the City of College Park. The majority of bicycles and stations are expected to be in the District of Columbia and in Arlington. Capital Bikeshare will use the Bixi bikeshare system developed in Montreal. Bixi's solar-powered semi-mobile bike stations require no utility hook-up, which will expedite installation. Capital Bikeshare is currently the largest planned bike share system in the United States.

Capital Bikeshare will have over 3000 bicycles and 300 stations

Outlook

Facilities for bicycling and walking in the Washington region are likely to improve significantly in the future. Federal, regional, state and local policies and transit agency initiatives all call for better and more complete facilities. Bicycle lanes, cycle tracks, and dual facilities for pedestrians and bicyclists will become more common, and a major regional bike sharing program will soon be in place in the urban core jurisdictions.

Chapter 5
Goals and Indicators

Introduction

As seen in Chapter One, both the Vision of the Transportation Planning Board (1998) and the Region Forward (2010) vision plan of the Council of Governments encourage walking and bicycling. *Region Forward*, a vision for the National Capital region in 2050, was adopted in January 2010. *Region Forward* builds on the TPB *Vision*, calling for more rapid implementation of the regional bicycle and pedestrian plan, increased walking and bicycling, and reduced pedestrian and bicyclist fatalities. The goals of *Region Forward* are broader than those of the TPB *Vision*, encompassing areas such as public safety, land use, economic development, housing, and the environment. New development is to be concentrated in walkable, mixed-use activity centers.

Goals

Region Forward 2050 includes a set of goals, and targets and indicators that will help measure whether those goals are being met. Many of those goals relate to walking and bicycling:

Transportation

1. A broad range of public and private transportation choices for our region which maximizes accessibility and affordability to everyone and **minimizes reliance upon single occupancy use of the automobile.**
2. A transportation system that maximizes community connectivity and walkability, and minimizes ecological harm to the region and the world beyond.

Land Use

1. Enhancement of established neighborhoods of differing densities with **compact, walkable infill development**, rehabilitation and retention of historic sites and districts, and preservation of open space, farmland and environmental resource land in rural areas.
2. **Transit-oriented and mixed-use communities** emerging in regional activity centers that **will capture new employment and household growth**.

Energy & Environment

1. Significant **decrease in greenhouse gas emissions**, with substantial reductions in the built environment and transportation sector.
2. Protect and enhance region's environmental resources by meeting and exceeding standards for our air, water, and land.

Public Safety & Health

1. Safe communities for residents and visitors.

2. …protect the public health, safety, welfare, and preserve the lives, property, and economic well-being of the region and its residents.

3. Healthy communities with …a **focus on wellness and prevention**

Targets and Indicators

In order to measure progress towards the broad transportation goals, *Region Forward* recommends that certain indicators be tracked. Table 5-1 below shows some of the targets and primary indicators from *Region Forward* that relate to walking and bicycling as well as corresponding, additional indicators which the bicycle and pedestrian subcommittee believes will give a more complete and timely picture of the region's progress. A (?) designates an indicator for which a practical data source has not yet been identified.

Table 5-1:

Region Forward 2050 Targets & Indicators **Suggested Supporting Indicators**

Region Forward Targets	Primary Indicators	Data Source/Freq.	Baseline	Suggested Supporting Indicators	Data Sources/Freq.	Baseline
Increase the share of walk, bike, and transit trips.	Mode split – Percent of Walk, Bike and Transit Trips	2007/2008 household travel survey/10 years	Bike: 0.5% Walk: 8.5% Transit: 6.1% Auto: 81.6%	1. Walk and bike commute mode share 2. Pedestrian and bicyclist counts 3. Pedestrian Access to Transit Mode Share *AM peak access 4. Bike Access to Transit mode share *AM peak access 5. Bike share trips Number of bike share trips per day & per bike share bike. 6. % Female cyclists Adopt complete streets policies - Jurisdictions with complete streets policies	• US Census – American Community Survey (ACS) five year rolling average/ Annual • DC, Arlington counts/annual • WMATA rail passenger survey/5 years • Regional Bike Share trip numbers/annual	• ACS available in 2010 • DC Average 2009 Peak hour count = 69 • female bicyclists = 19% • 0.55% bicycle mode of access to Metro in 2007 • 62.12% walk mode of access to Metro in 2007 • 33.3% am peak walk mode, 0.7% bike mode
Reduce VMT per capita	VMT per capita	2008 CLRP/Annual	Vehicle Miles Traveled per capita = 22.94	Share of VMT reduction attributable to increase in walking and bicycling	Estimate from mode shift to walking and bicycling/Annual	ACS 2010

Increase the rate of construction of bicycle and pedestrian facilities from the TPB plan.	Number of bicycle and pedestrian projects from the CLRP	Number of bicycle and pedestrian projects in the CLRP	CLRP/Annual	Pedestrian and Bicycle Infrastructure Construction 1. Centerline mileage of bike lane built 2. Mileage of Side Path Built 3. Mileage of Multiuse path built 4. Bicycle and pedestrian bridges and underpasses built 5. Public bicycle parking • Staffed bike stations 7. Number of Streetscaping projects completed/ Number of pedestrian intersection improvement projects completed Access to Transit 8. Bike share stations and bike share bikes at rail stations and transit hubs 9. Bike share stations and bike share bikes within 3 miles of a transit hub 10. Bike parking - Rack spaces, lockers bike cage, bike parking structure spaces 11. Parking usage rates (?) Bike Sharing 1. Number of bike sharing stations 2. Number of bike sharing bicycles	• Bicycle and Pedestrian Regional Project Database/ Annual • WMATA rail passenger survey/5 years • WMATA web site – Bike 'N Ride • WMATA Bus Stop Inventory/? • Capital Bikeshare	9 miles bike lane/year 13 miles shared use path/year 5 bridges/tunnels 1 staffed bike station 9 streetscaping projects 16 pedestrian intersection projects 77 Metro Stations have racks and/or lockers. 1,280 single bike lockers and about 1,600 bike racks - with capacity for about 3,150 bikes Zero bike cage spaces, bike parking structure spaces 10 bike sharing stations 100 bike sharing bikes
Targets	**Primary Indicators**	**Data Source/Freq.**	**Baseline**	**Suggested Supporting Indicators**	**Data Sources/Freq.**	**Baseline**
Reduce pedestrian and bicyclist fatalities and	Pedestrian and Bicyclist Injuries and	Virginia DMV, DDOT, and Maryland Office of	2004-2008: 84 pedestrian deaths 7 bicyclist	Education • Number of school children trained in safe walking and bicycling (?) • Recognition of key safety	1. Safe Routes to School Program/Annual	• 3500 children trained in DC in 2008, 2700 in Rockville.

injuries	Fatalities	Highway Safety/Annual	deaths 2007: 1962 pedestrian injuries 653 bicyclist injuries	messages by the general public • Number of Bike to Work day participants Enforcement: Number of pedestrian-related and bicycle-related citations and warnings issued as part of the Street Smart campaign. 1. Speeding 2. Speeding, school zone 3. Reckless driving 4. Passing stopped school bus 5. Failure to yield to pedestrian or bicyclist 6. Cross against the signal (pedestrian) 7. Walk into the path of motor vehicle outside marked or unmarked crosswalk. 8. Ignore traffic signal (bicyclist) 9. Wrong way riding 10. Ride on sidewalk where prohibited	2. Street Smart Annual Report 3. Bike to Work Day Annual Report 4. Street Smart Enforcement Reports/annual	Virginia SRTS does not tally such numbers. • 8500 Bike to Work Day participants in 2010 • 30,221 ped-related citations • 7,804 warnings
Targets	**Primary Indicators**	**Data Source/Freq.**	**Baseline**	**Suggested Indicators**	**Data Sources/Freq.**	**Baseline**

Chapter 6
Best Practices

The *TPB* Vision and *Region Forward* plans call for a transportation system that allows convenient and safe bicycle and pedestrian access, with dynamic regional activity centers and an urban core that contain a mix of jobs, housing and services in a walkable environment. In order to achieve these goals, the Bicycle and Pedestrian Subcommittee has developed the following set of recommended best practices.

A. Incorporate bicycle and pedestrian elements in all jurisdictional planning and design policies. Adopt "Complete Streets" policies.

"VDOT will initiate all highway construction projects with the presumption that the projects shall accommodate bicycling and walking"

Figure 1: Missing sidewalk near Ft. Totten Metro

1. Include bicycling and walking, including provisions for persons with disabilities, in all stages of the transportation and land use planning process, from initial concept through implementation.[1]

Many Agencies involve Walking and Biking Advocates in the Planning Process

2. In particular, consistent with federal policy, every jurisdiction and agency should adopt a "complete streets" or routine accommodation policy such as the Virginia Department of Transportation has adopted. Under "complete streets" policies pedestrians and bicyclists will be accommodated as part of all transportation projects, with a few limited and well-defined exceptions. Typical exceptions drawn from Oregon's "Bicycle Bill", which has been the model for such ordinances, are listed below:

    a. Bicyclists and pedestrians are prohibited by law from using the roadway, as with a tunnel or limited-access highway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.

    b. The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is

[1] Ft. Totten, DC Photo: COG/TPB, Michael Farrell

defined as exceeding twenty percent of the cost of the larger transportation project.

c. Where sparsity of population or other factors indicate an absence of need. This exception is meant for remote rural areas that are not likely to experience development within the life span of the investment. Since the life span of a bridge may be 50 years or more, the existing sparsity of population should be expected to continue for that long; otherwise pedestrian and bicycle facilities should be provided.

Agencies should carry out periodic **audits to monitor compliance** with a Complete Streets policy once it is adopted.

An effective complete streets policy is critical, since retrofitting pedestrian and bicycle accommodations is far more expensive than designing them in from the beginning. Policies which urge agencies to "consider" or "encourage" the provision of pedestrian and bicycle facilities often do not provide clear guidance as to when pedestrian or bicycle facilities should or should not be provided. Absent a clear mandate, pedestrian and bicycle facilities tend to be omitted.

In 2010, the region budgeted roughly $23 million for bicycle and pedestrian projects, or about 1% of transportation capital expenditures

3. Take into account likely future demand for bicycling and walking facilities in planning transportation projects; do not adopt designs that would preclude future improvements.

4. Encourage public participation by bicyclists and pedestrians and other community groups in the planning process.

5. Ensure adequate funding for bicycle and pedestrian transportation staff and facilities, including land acquisition, design, construction, and proper maintenance.

6. Integrate bicycling and walking into new development.

   a. Require land developers to finance and construct sidewalks, shared-use paths, and bicycle parking facilities within their developments.

   b. Require land developers to design developments in a way that facilitates internal and external bicycle and pedestrian access. New development should feature a dense network of interconnected streets to minimize trip distance and offer many low-speed, low-traffic routes. Superblock and cul-de-sac development patterns should be discouraged, and transit-oriented development should be encouraged. Use the Virginia Department of Transportation's Secondary Street Acceptance Requirements as a model.

7. Design, construct, operate, and maintain sidewalks, shared-use paths, street crossings (including over- and undercrossings), pedestrian signals, signs, street furniture, transit stops and facilities, and all connecting pathways so that **all pedestrians, including people with disabilities**, can travel safely and independently.

8. Improve inter-jurisdictional coordination to identify, plan, construct and preserve **multi-jurisdictional routes**, and provide connecting links for existing routes to assure the establishment of a continuous bicycle and pedestrian transportation system throughout the Washington metropolitan area.

    a. Identify networks of existing bicycle routes (both on-street and off-street) in the urban core, suburbs, developing fringe, as well as connecting **long distance inter-city routes**. Ensure that these routes are included in land use and transportation plans, and not eliminated as development occurs.

    b. Identify shared-use path corridors before they are developed, and preserve opportunities for development as shared-use paths.

    c. Identify existing physical barriers to bicycling (such as rivers and streams, bridges, railroad tracks, highway crossings, and limited access highways with no crossing route) and identify solutions to overcome them.

    d. Implement uniform wayfinding and/or designation for inter-jurisdictional routes that will provide easily understood instructions and information.

    e. Convene and participate in a regional **working group** consisting of state and regional representatives to identify regional and long distance travel corridors for bicyclists, develop common guide signage guidelines, and develop of recommended bikeway alignments within travel corridors.

B. Develop and adhere to consistent bicycle and pedestrian facility design and construction standards in each jurisdiction:

1. Assure adequate planning, construction and maintenance standards for comfortable and safe bicycling on both on-street routes and off-street paths, as well comfortable and safe walking on paths and sidewalks. Assure that safety is the primary consideration in all design standards.

   a. Adopt, as minimum standards for privately and publicly built facilities, the AASHTO *Guide for the Development of Bicycle Facilities*, AASHTO's *A Policy on Geometric Design of Highways and Streets*, and the AASHTO *Guide for the Planning, Design and Operation of Pedestrian Facilities*, the *ADA Accessibility Guidelines* from the U.S. Architectural and Transportation Barriers Compliance Board (Access Board), and the *Manual on Uniform Traffic Control Devices* from the Federal Highway Administration.

   b. Establish and maintain **minimum design and maintenance standar**ds for each type of facility.

   c. In accordance with federal guidance, **go beyond the minimum requirements where necessary** to provide safe and comfortable accommodation for bicyclists and pedestrians. Agencies such as the District of Columbia Department of Transportation have developed their own design manuals to meet their specific needs, and which may incorporate experimental measures which are not found in the current AASHTO bicycle facility design guide.

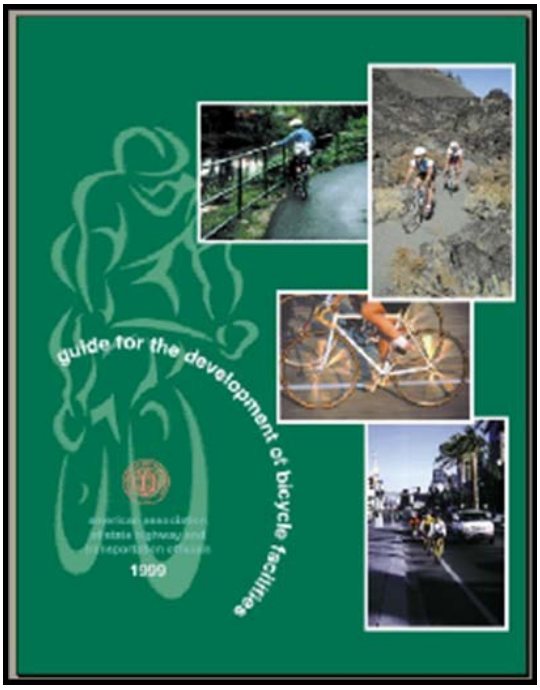


Figure 2: AASHTO Guide for the Development of Bicycle Facilities

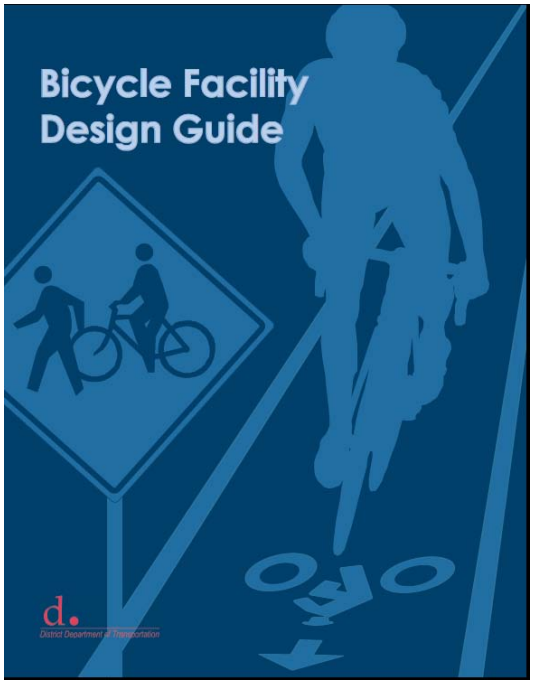


Figure 3: DDOT Bicycle Facility Design Guide

2. Improve Access for Persons with Disabilities to Pedestrian Facilities[2]

Poorly Placed Curb Ramps and Rough Pavement can be Difficult to Navigate in a Wheelchair

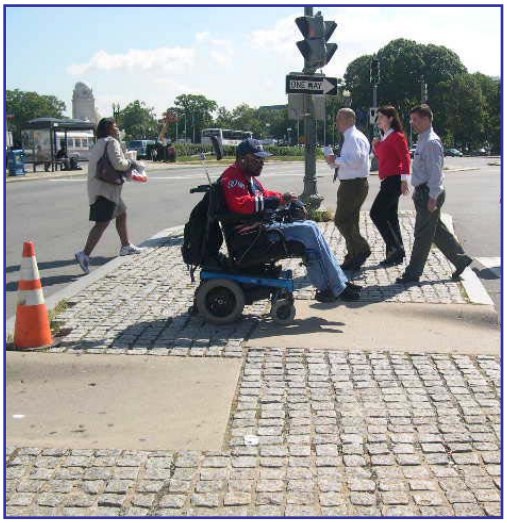


Figure 4: Pedestrian Island near Union Station

The Transportation Planning Board's Access for All Advisory Committee has identified the following recommended best practices for improving access for persons with disabilities to pedestrian facilities. More detailed recommendations can be found in the *ADA Accessibility Guidelines* as noted above. With the exception of hand-rails on steep sidewalks, all of the following practices are legally required under the ADA for all new facilities and all reconstructed facilities:

a. Sidewalks should have curb ramps. Ramps should be well-maintained, well-placed, and not too steep in order to permit their use by persons in wheelchairs.[3]
b. The height of wheelchair users should be considered when placing shrubs or other objects where they might block them from the view of motorists.
c. Objects such as security barriers, fences, fire hydrants, telephone poles, parking meters, newspaper boxes, signal control boxes, and other street furniture should be placed in locations where they will not block curb ramps.
d. The placement of crosswalk buttons must take into consideration the needs of people with disabilities.
e. Audible pedestrian signals make communities safer for all pedestrians, including seniors and children as well as people with visual impairments.
f. Sidewalks with steep slopes are difficult for people with disabilities to navigate, especially for people who use manual wheelchairs or people who have trouble walking. Hand rails could help mitigate these difficulties.

[2] "Lessons Learned" fact sheet for Disability Awareness Day. National Capital Region Transportation Planning Board Access for All Committee, October 20, 2004.
[3] Wheelchair ramp photo: COG/TPB, Access for All Committee

C. Minimize roadway width, curb radii & crossing distance.[4]

To minimize pedestrian crossing distances and reduce impermeable, heat–absorbing asphalt coverage, the paved roadway of **all streets should be designed to be the minimum width — and have the minimum number of lanes** — that safely and cost– effectively allow for the desired operations of motor vehicles, buses, and bicyclists. Excess width should be reallocated to provide walking, transit, and bicycling facilities, public open space, green cover, and/or stormwater source control measures. If financial limitations preclude final implementation of street retrofits (e.g., curbing, streetscaping, etc.), the reallocation of space should still proceed with temporary or least costly approaches such as restriping.

To further reduce pedestrian crossing distances and slow turning vehicles, **all roadway corners should be designed with the smallest possible radius** that still accommodates the intended vehicle and emergency vehicles.

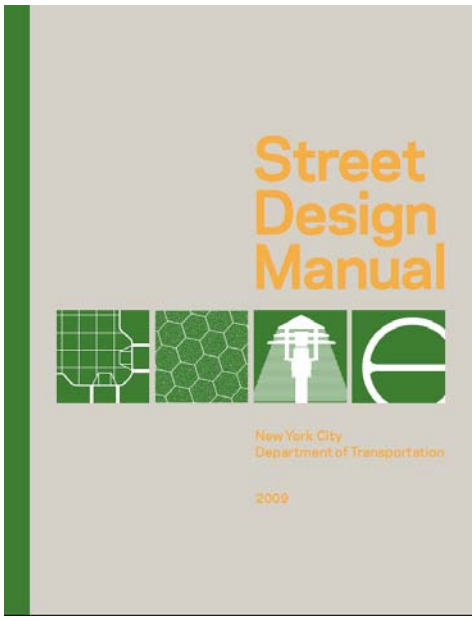


Figure 5: New York City Street Design Manual

D. Set target vehicle speeds appropriate to surrounding land use.[5]

Streets should be designed with target speeds and speed limits appropriate to their surrounding uses and desired role in the vehicular network. Slower target speeds and speed limits should be considered on local streets, residential streets, alleys; on streets adjacent to schools, senior or disabled pedestrian trip generators; waterfronts, parks, rail stations, and other significant pedestrian destinations.

Traffic calming features may be designed in from the beginning, or retrofitted where needed, to bring traffic speeds down to the desired level.[6]

E. Improve bicycle and pedestrian circulation within and between regional activity centers and the urban core.

1. Improve sidewalks, bikeways, intersections, signage and links to transit for bicyclists and pedestrians in activity centers

[4] New York City Department of Transportation, *Street Design Manual*, 2009. Page 46.
[5] Ibid,
[6] Ibid, pp. 76-91.

2. Improve access to and between regional activity centers.

   a. Provide access to activity centers from surrounding neighborhoods.

   b. Provide facilities to connect nearby activity centers.

Figure 6: Bike Racks and Lockers at New York Avenue Metro Station

F. Integrate bicycling and walking into the public transportation system.[7]

All Metrobuses have been equipped with racks to carry up to two bikes per bus

1. Provide safe and convenient access for pedestrians and bicyclists to all Metro and commuter rail stations and park-and-ride lots.

2. Improve bicycle parking at Metro, commuter rail stations, and park and ride lots. Replace broken and obsolete bicycle racks with current models. Provide safe, secure, covered high capacity bike parking, with both long- and short term rental options.

Figure 7: Bike on Metrobus. Photo Credit: WABA

3. Improve customers' ability to make the "last mile" of their trip by locating bike sharing or increasing bike parking options at rail stations, and eliminate the need to bring a bike on the train during peak periods. If/when capacity constraints permit, expand the hours when bicycles are permitted on Metrorail.

4. Provide bicycle racks on all transit buses.[8]

5. Provide for more efficient accommodation of bicycles on future rail services, including commuter rail, Metro, and light rail, in the Washington region.

[7] Photo of NY Avenue Metro Bike Lockers: COG/TPB, Michael Farrell
[8] Photo of Bike on Bus by WABA/Eric Gilliland

Vertical storage racks such as those on the River light rail line in New Jersey are a good model.

G. Provide adequate bicycle support facilities.

1. Enact zoning laws to require bicycle parking and related facilities as part of all new construction or major renovation, including office, retail, and housing developments.

Figure 8: On-Street Bike Parking, Seattle

a. Construct bicycle parking facilities in well-traveled and lighted areas. Facilities should be covered and secure.

b. Require placement of bicycle parking facilities in convenient locations; short-term parking should be as close as possible to building entrances; long term parking facilities should be located in secure areas.

A keypad-controlled bike cage with racks is very secure

c. Ensure the provision of showers and changing facilities in all new or renovated commercial developments.

2. Provide bicycle parking on public property. Jurisdictions should install bicycle parking in public spaces where there is demand, such as public libraries, parks, and sidewalks near storefront retail.[9]

The District of Columbia requires bicycle barking in any building with automobile parking, and installs bike racks on public sidewalks on request

Figure 9: Bike Cage, Stanford University

[9] Photo of bike cage on Stanford Campus, COG/TPB, Michael Farrell

The Washington, D.C. Department of Transportation has established the following bicycle parking requirements for property owners:

- Bicycle parking is required for office, retail and service uses that provide car parking
- The required number of bike parking spaces is five percent (5%) of the required number of automobile parking spaces
- Bicycle parking must be convenient, secure, and well-lit
- For older buildings, one percent (1%) of the amount of required parking spaces may be converted to bicycle parking spaces
- DDOT offers free technical advice and racks for existing garages and off-street parking lots

H. Build a regional Bike Sharing Program

Bike sharing is self-service public bicycle rental. It is similar to a car-sharing system, such as ZipCar, where members pay a fee and have access to any available bike throughout the regional system. Unlike earlier "public bicycle" or "yellow bike" programs, which failed due to lack of means of preventing theft, modern bicycle sharing links rentals to a user's credit card, which can be charged if the bicycle is not returned. Bike sharing has become common and popular in Europe, with programs in dozens of cities.

Figure 10: Cyclist training
Photo Credit: WABA

See Chapter 4, pp. 10-11 for details on bike sharing in the Washington region. The bike sharing system for the Washington region is Capital Bikeshare.

I. Develop pedestrian and bicycle safety education and enforcement programs in all jurisdictions.

1. Promote pedestrian and bicycle safety education programs for children, beginning at the earliest possible age.
   a. Establish pedestrian and bicycle safety programs at the elementary school level, including classroom and on-bicycle instruction.
   b. Develop and distribute pedestrian and bicycle safety information materials designed to teach beginning cyclists and young pedestrians.
   c. Emphasize the use of bicycle helmets as a means of injury reduction, lights after dark, reflectors, and reflective clothing for pedestrians.

2. Improve cycling skills and pedestrian safety habits of adults and young adults.

   a. Produce and distribute information on bicycle usage and safety.

   b. Emphasize the use of helmets for rider protection, lights after dark, reflectors, and reflective clothing for pedestrians.

3. Increase motorist awareness and accommodation of bicyclists and pedestrians, and bicyclist and pedestrian awareness and accommodation of motorists.

   a. Include bicycle and pedestrian information in automobile drivers' training classes, driver's manuals, and license exams, and through the media.

   b. Coordinate public media campaigns with law enforcement

Figure 11: Trail Patrol, C & O Canal Park

4. Encourage jurisdictional uniformity of traffic laws relating to bicycling and walking. Encourage conformity with such regulations as the Uniform Vehicle Code.

Volunteer Patrols can help with Trail Security

5. Encourage consistent bicycle law enforcement to assure safe bicycling and walking.

   a. Emphasize the enforcement of traffic laws dealing with offenses known to cause crashes between bicycles and motor vehicles, such as wrong way bicycling, and ignoring stop signs or stop lights.

   b. Emphasize enforcement of traffic laws dealing with offenses known to cause crashes between pedestrians and motor vehicles, such as motorists failing to yield to pedestrians, and pedestrians disobeying “Don’t walk” signals.

6. Improve bicycle and pedestrian accident reporting and analysis procedures at the state and regional levels, to provide jurisdictions with a better understanding of accident causes and countermeasures.

7. Provide increased law enforcement presence along regional off-road trail networks and encourage inter-jurisdictional cooperation and coordination to provide for the safety and security of all pedestrians and bicyclists.

The regional "Street Smart" Pedestrian and Bicycle Safety Campaign urges motorists and pedestrians to "Be Alert"

Figure 12: Street Smart Poster

J. Encourage Walking and Bicycling

Each jurisdiction and agency should encourage walking and bicycling, and promote the perception of both as legitimate forms of travel, in the way most appropriate to that organization. Examples include:

a. Have walk and bike-friendly policies for employees. Let employees know that walking and bicycling is both permitted and encouraged. Organize/support/participate in events such as Bike to Work Day, Car-Free Day, etc.

b. Carry out pedestrian and cyclist education programs that also encourage walking and bicycling, such as Safe Routes to School.

c. Provide high-quality information to the public on the benefits of walking and bicycling, and where and how it can be done in your community, through programs such as WalkArlington and BikeArlington. Partner with employers, transportation demand managers, and advocacy groups.

d. As part of a comprehensive transportation demand management program, provide financial incentives for employees to walk and bicycle.

e. For States and Metro regions, consider investing in paid media campaigns.

K. Each jurisdiction should develop a high visibility bicycle or pedestrian project to demonstrate the effectiveness of bicycling and walking as a short distance transportation mode.

Figure 13: Lawyers Road Before Road Diet
Photo credit: VDOT

Figure 14: Lawyers Road After Road Diet

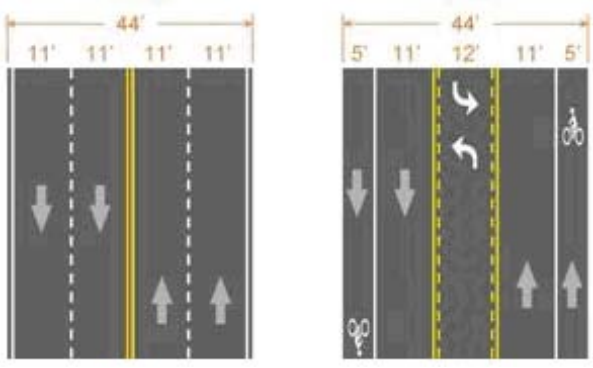


Figure 15: Before and After Illustration

VDOT recently completed a model Road Diet project in Reston, VA, shrinking Lawyer's Road from four lanes to two plus a turn lane and bike lanes

1. Ensure that projects are feasibly implemented, and supported by the community and the government agencies responsible for implementation.

2. Undertake extensive publicity and promotion for each facility or service included in the project.

3. Conduct an extensive analysis of the effectiveness of each project following the demonstration period.

L. Each agency should designate a bicycle coordinator and a pedestrian coordinator to oversee bicycle and pedestrian programs.

Experience has shown that without a designated staff person or persons responsible over for overseeing their implementation, pedestrian and bicycle programs and policies are not implemented effectively. Staffing levels should be proportional to the size of the agency and volume of work.

All TPB member jurisdictions with active pedestrian and bicycle programs designate a lead staff person or coordinator.

Chapter 7

The 2035 Bicycle and Pedestrian Network

The Regional Bicycle and Pedestrian Network in 2040

The *Bicycle and Pedestrian Plan for the National Capital Region* includes approximately 336 bicycle and pedestrian facility improvement projects from across the region. If every project in the plan is implemented, in 2040 the region will have added approximately 450 miles of bicycle lanes and 630 miles of shared-use path. The overall network length (allowing for some dual bike lane/sidepath facilities) will increase by over 1000 miles.

In addition, hundreds of miles of signed on-road bicycle routes will be created. In many cases roads are designated for improvement as bicycle routes, but the exact nature of the improvement – bike lane, widened shoulders, wide outside lane, shared lane markings, signs – has not yet been determined.

Twenty major pedestrian intersection improvements will be carried out, and ten pedestrian/bicycle bridges or tunnels will be built. Hundreds of intersections will receive new crosswalk signals, and ongoing sidewalk improvement programs will retrofit sidewalks in areas where they are missing.

A new bicycle and pedestrian crossing over the Potomac will be created at the American Legion Bridge, and the bridges over the Anacostia River will be improved for pedestrians and bicyclists. In addition, twenty-one major streetscaping projects will improve pedestrian and bicycle access and amenities in places such as H Street NE, Tysons Corner, Ballston-Rosslyn, and Columbia Pike.

Table 7-1 below summarizes the new facility mileage that will be added by 2040 if this plan is implemented in full.

Table 7-1:
Miles of Bicycle/Pedestrian Facilities in the Washington Region

Facility Type	Total in 2005	Completed 2006- May 2010	Planned New Facilities/Upgrades	Total in 2040
Bicycle Lane	56	35	450	541
Shared-Use Path	490	53	630	1173
Total	546	88	1125	1714

Progress Since 2006

Seventy-three projects from the 2006 Bicycle and Pedestrian Plan have been completed. This total does not count projects on which significant progress has been made, unless for reporting purposes the project was split into phases, and the earlier phases reported as complete.

The region is currently adding about 13 miles of shared-use path and nine miles of bike lane per year. At the current pace of construction the region will have completed about 390 miles of shared use path, and 270 miles of bike lane by 2040, or a little more than half the planned network.

At the same time sixteen major pedestrian intersection improvements, nine streetscaping projects, and five pedestrian bridges or tunnels were completed.

Notable projects finished since 2006 include the pedestrian bridge over Route 50 at 7 corners, the Woodrow Wilson Bridge, the College Park Trolley Trail, and the DC Bike Station at Union Station.

Mileage of sidewalk construction was not tracked, but there are ongoing sidewalk retrofit and pedestrian safety programs in all the major inner jurisdictions. Privately provided facilities are also not counted.

Of the 73 projects completed, 37 had a total reported cost of $64,914,000. The rest were part of larger projects, or had no cost reported.

Funding

While many of these projects have no identified funding source, and are not expected to be built soon, some are very close to being realized. Of the 336 planned projects, twenty are under construction, fifty-seven are fully funded, and another sixty-six have some funding identified.

Under "Complete Streets" policies, most bicycle and pedestrian projects are now built as part of larger transportation projects. Of the 359 transportation projects in the FY 2010-2015 Transportation Improvement Program, 161 include some form of bicycle and pedestrian accommodation, while 17 projects were identified as being specifically bicycle or pedestrian.

Cost Estimates

Cost estimates were provided by the agencies for about 30% of the planned projects. For most of the planned projects that have not yet been designed, no meaningful project-level estimates can be made. Many of the projects which have cost estimates are part of a larger project. In a combined project it is nearly impossible to disentangle the portion of the cost attributable to bicycle or pedestrian features.

Given the difficulties of getting actual cost estimates for each project, we have imputed a range of regional costs for the plan based on an assumed typical cost per mile or per

project. The total cost of improvements listed in the plan is estimated at about $1 billion (2010 dollars).

Table 7-2: Imputed Costs for the Planned Projects ($1,000's)

Facility Type	Imputed Cost Range per Mile or per Project	Miles or Number of Projects with No Assigned Cost	Imputed Cost
Multi-Use Path	$500 - $2,000	630 miles	$315,000 - $1,260,000
Bicycle Lane	$10 $30	450 miles	$4,500 - $13,500
Pedestrian/Bicycle Bridge/Tunnel	$4,000 - $6,000	10 projects	$40,000 - $60,000
Pedestrian Intersection Improvement	$300 - $600	20 projects	$6,000 - $12,000
Streetscape	$2,000 - $4,000	21 project	$42,000 - $84,000
Total			$407,500 - $1,429,500

No comparable "financially unconstrained" plan exists for other types of transportation projects over the next 30 years. The six-year, FY 2010-2015 Transportation Improvement Program includes $17.6 billion worth of transportation projects and programs, an amount which is widely seen as inadequate for the region's transportation needs. Assuming the region continues to fund transportation at the same real level for the next 30 years, fully funding the bicycle and pedestrian plan over the same period would cost about 1.2% of the total transportation budget.

Explanation of Project listings

Appendix A lists the plan projects, organized alphabetically by state and jurisdiction. Facility type, responsible agencies, limits, length, and cost are also included. Note that due to the nature of bicycle and pedestrian facility improvements, the list in Appendix A is expected to change annually, as projects are added or removed.

The project list is drawn from a database that includes more extensive information, including project status, agency project ID number, facility lengths, facility alignment, description, project status, project web site, date of (projected) completion, date the record was last updated, and project manager name and contact information. Agency staff may enter via a password-protected web site to enter, edit, and delete project information, making the process of keeping the database accurate simple. A public access version of this on-line version of this database can be found at http://www.mwcog.org/bikepedplan/.

Over time the database has proven useful in tracking the progress of bicycle and pedestrian projects at a regional level. A sample database entry and a data dictionary are found in Appendix B.

This project list is intended to be a list of significant planned bicycle and pedestrian projects in the Washington region. Agencies were encouraged to submit projects for inclusion if they were one mile or more in length, or cost more than $400,000. Small sidewalk projects are not included unless they were part of a larger pedestrian or bicycle project.

Figures 7-1 and 7-2 show the location of major bicycle and pedestrian projects throughout the region. Pedestrian/bicycle bridge or tunnel projects, multi-use paths greater than three miles in length, and projects estimated by their sponsors to cost more than $500,000 are mapped, except for area projects that cannot be mapped in a meaningful way. About a quarter of the plan projects are mapped. Project details can be found in the project list in Appendix A, which groups the projects by state and jurisdiction.

Projects are labeled on the maps with their "Project ID", a permanent identification number. To find the project name from the Project ID number on the label, use Table-7-3, which lists the mapped projects by Project ID number, cross-referenced to the line number for Appendix A. .

Table 7-3: Mapped Bicycle and Pedestrian Projects
By Project ID, Cross Referenced to the line number in Appendix A

Project ID	Appendix A Line Number	Project Name	Project Type
2	110	Matthew Henson Trail	Shared-Use Path
5	189	Collington Branch	Shared-Use Path
10	154	Seven Locks Road	Shared-Use Path
12	105	ICC Bike Path	Shared-Use Path
17	66	Bowie Mill Road	Bike Lane
20	68	Briggs Chaney Road East	Shared-Use Path
22	93	Frederick Road (MD 355) - Upcounty	Shared-Use Path
27	279	Rosslyn Circle Crossing	Pedestrian Intersection Improvement
28	78	Darnestown Road (MD 28) - North	Shared-Use Path, Bike Lane
30	324	Cross County Trail	Shared-Use Path
34	285	Eisenhower Trail	Shared-Use Path
38	22	Pedestrian Tunnel	Bridge
39	109	Macarthur Boulevard	Shared-Use Path
41	58	American Legion Bridge	Pedestrian/Bicycle Bridge
49	333	Great Falls Street Trail	Shared-Use Path
52	196	Henson Creek Trail Extension	Shared-Use Path
54	227	Suitland Parkway Trail	Shared-Use Path
58	299	Accotink Gateway Connector Trail	Shared-Use Path
65	276	VA 120 (S Glebe Road)	Streetscape/Pedestrian
66	101	Goshen Road/Brink Road	Shared-Use Path
70	406	Pedestrian Study and Improvements	Streetscape/Pedestrian
71	298	Woodrow Wilson Bridge - VA	Pedestrian/Bicycle Bridge
72	115	Mid-County Highway	Shared-Use Path
73	19	New Pedestrian Bridge over Anacostia Freeway	Bridge
75	30	Union Station Bike Station	Bicycle Parking
78	216	Piscataway Creek Trail	Shared-Use Path

Project ID	Appendix A Line Number	Project Name	Project Type
85	371	US 50 Pedestrian Improvements	Streetscape/Pedestrian
88	162	University Boulevard	Shared-Use Path
90	118	Muddy Branch Road	Shared-Use Path
93	20	Oxon Run Trail Restoration	Shared-Use Path
94	95	Georgia Avenue (MD 97) - North	Shared-Use Path
98	286	Holmes Run Greenway	Pedestrian/Bicycle Tunnel
100	231	US 1	Shared-Use Path, Bike Lane
101	149	River Road (MD190)	Shared-Use Path
102	397	VA 234 Bike Trail	Shared-Use Path
104	119	Muncaster Mill Road (MD 115)/Norbeck Road	Shared-Use Path
109	202	MD 197	Shared-Use Path
110	272	Route 110 Trail	Shared-Use Path
111	177	Anacostia River Trail (Prince George's)	Shared-Use Path
125	187	Chesapeake Beach Rail-Trail	Shared-Use Path
129	282	Duke Street Pedestrian Bridge	Pedestrian/Bicycle Bridge
136	90	Forest Glen Pedestrian Bridge	Pedestrian/Bicycle Bridge
144	72	Clopper Road/Diamond Avenue (MD 117)	Shared-Use Path, Bike Lane
158	79	Democracy Boulevard	Shared-Use Path
164	396	Route 28 Trail Extension	Shared-Use Path
171	392	Linton Hall Road Widening	Shared-Use Path
173	2	Anacostia Riverwalk Trail	Shared-Use Path
176	328	Fairfax County Parkway Trail	Shared-Use Path
178	24	Rock Creek Park Trail	Shared-Use Path
179	275	VA 120 (Glebe Road)	Streetscape/Pedestrian
181	31	Watts Branch Trail	Shared-Use Path
184	407	Ped and Bike Path Network	Streetscape/Pedestrian
186	224	Ritchie Marlboro Road	Shared-Use Path
188	174	Addison Road	Bike Lane
191	55	Folly Branch Trail	Shared-Use Path
192	280	Mount Vernon Trail Extensio	Shared-Use Path

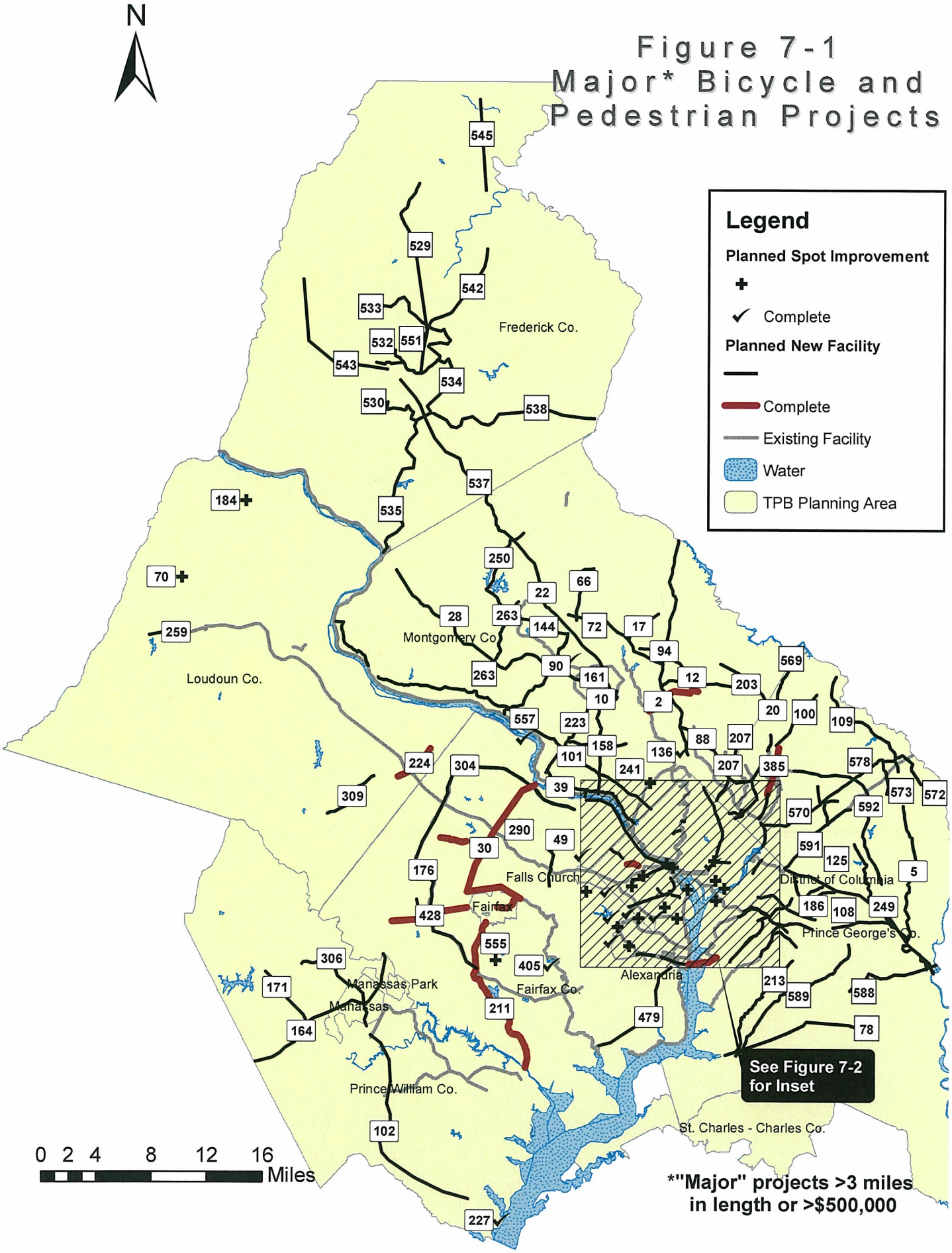
Project ID	Appendix A Line Number	Project Name	Project Type
196	236	Woodrow Wilson Bridge	Pedestrian/Bicycle Bridge
197	18	Metropolitan Branch Trail	Shared-Use Path
198	218	Prince George's Connector	Shared-Use Path
203	69	Briggs Chaney Road West	Bike Lane
206	570	MD 450 Sidepath and/or Wide Sidewalks	Shared-Use Path
207	126	New Hampshire Avenue	Shared-Use Path
211	387	Route 123 Widening	Shared-Use Path
213	229	Tinkers Creek Trail	Shared-Use Path
217	288	King Street/Beauregard/Walter Reed Interchange	Pedestrian Intersection Improvement
223	87	Falls Road (MD 189)	Shared-Use Path
224	383	VA 846 Sterling Boulevard	Streetscape/Pedestrian
227	408	Potomac Avenue	Streetscape/Pedestrian
241	62	Bethesda Bikeway and Pedestrian Facilities	Streetscape
247	179	Auth Road	Shared-Use Path
249	234	Western Branch Trail	Shared-Use Path
250	71	Clarksburg Road (MD 121)/Stringtown Road	Shared-Use Path
256	370	US 50 Pedestrian Bridge	Pedestrian/Bicycle Bridge
259	384	W&OD Trail Extension	Shared-Use Path
263	98	Germantown Road (MD 118)	Shared-Use Path
290	365	Trap Road	Pedestrian/Bicycle Bridge
304	332	Georgetown Pike Multiuse Trail	Shared-Use Path
306	390	Bus 234 Add Signalized Crosswalks	Streetscape/Pedestrian
309	380	Old Ox Road Widening	Shared-Use Path
310	268	Old Dominion Drive Complete Streets Phase I	Streetscape/Pedestrian
311	264	I-395 Shirlington Underpass, Four Mile Run Trail	Pedestrian/Bicycle Bridge
385	35	College Park Trolley Trail	Shared-Use Path
402	322	Columbia Pike	Shared-Use Path
405	326	Danbury Forest	Pedestrian/Bicycle Bridge

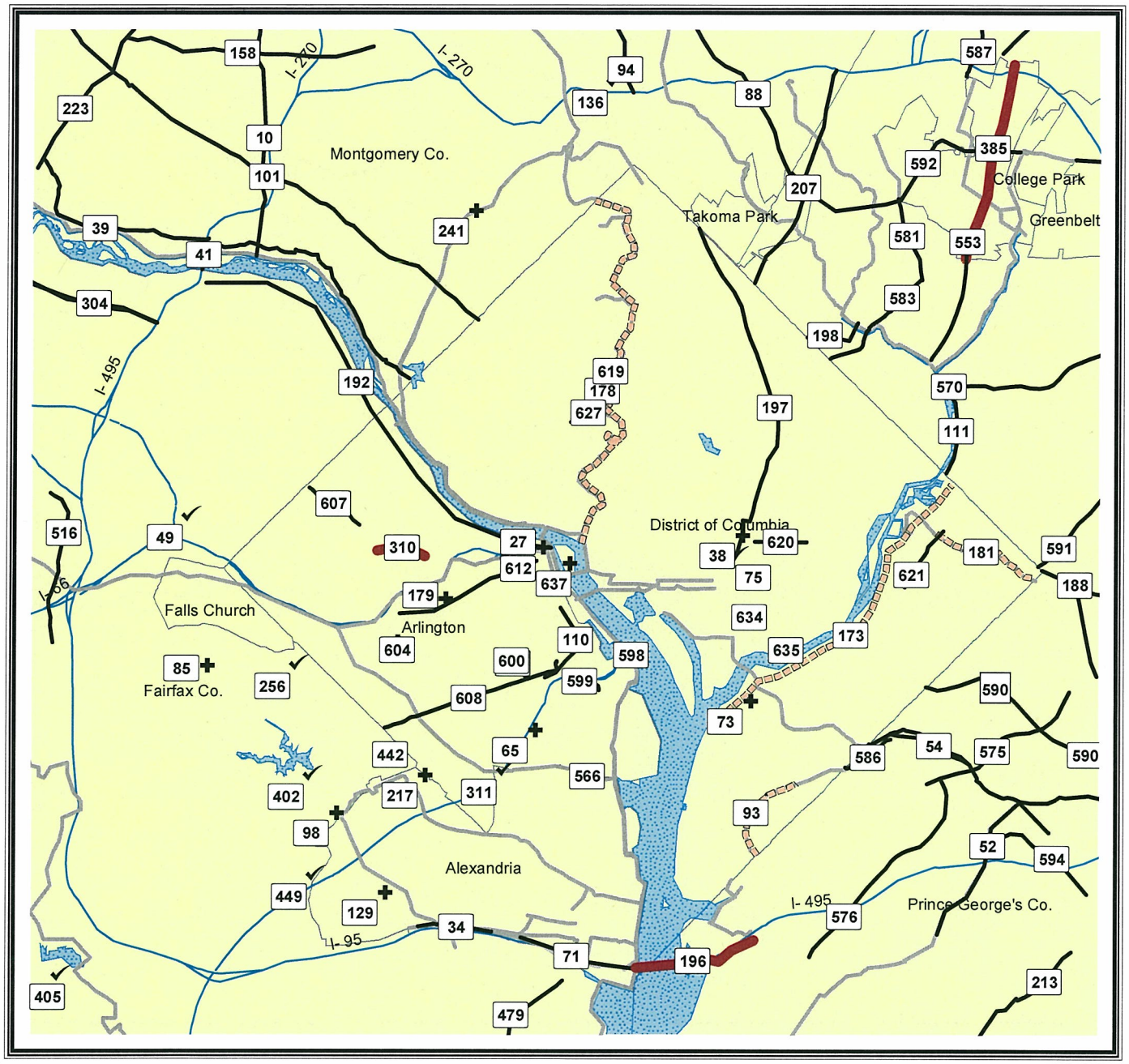
Project ID	Appendix A Line Number	Project Name	Project Type
428	338	Lee Highway	Shared-Use Path
442	340	Leesburg Pike at South Jefferson	Pedestrian Intersection Improvement
449	344	Little River Turnpike	Pedestrian Intersection Improvement
479	354	Richmond Highway Pedestrian and Bicycle Improvements	Pedestrian Intersection Improvement
516	331	Gallows Road On-Road Bicycle Facility	Bike Lanes
529	48	H&F Trolley Trail Phase II	Shared-Use Path
530	40	Ballenger Creek Trail	Shared-Use Path
532	36	Carroll Creek Trail	Shared-Use Path
533	47	Tuscarora Creek Trail	Shared-Use Path
534	46	Monocacy River Greenway Trail I	Shared-Use Path
535	43	Monocacy River Greenway Future Phases	Shared-Use Path
537	49	I-270 Transitway	Shared-Use Path
538	41	Bush Creek Trail	Shared-Use Path
542	56	Walkersville-Woodsboro Corridor II	Shared-Use Path
543	52	Middletown-Myersville Trolley Trail	Shared-Use Path
545	51	Emmitsburg Railroad Trail	Shared-Use Path
551	39	East Street Rail Trail	Shared-Use Path
553	237	Rhode Island Avenue Trolley Trial Extension	Shared-Use Path
555	352	Pohick VRE Trail	Shared-Use Path
566	297	Four Mile Run Pedestrian Bridge	Bridge
557	321	Clarks Branch Bridge at Riverbend Park	Bridge
569	195	Gunpowder Road Sidepath and Bike Lanes	Shared-Use Path, Bike Lanes
570	206	MD 450 Sidepath and/or Wide Sidewalks	Shared-Use Path
572	222	Race Track Road Sidepath	Shared-Use Path
575	225	Silver Hill Road Sidewalks and Bike Lanes	Bike Lanes, Sidewalks

576	226	St. Barnabas Road Sidewalks and Bike Lanes	Bike Lanes, Sidewalks
581	175	Adelphi Road Sidewalks and Bike Lanes	Bike Lanes, Sidewalks
583	221	Queens Chapel Road Sidewalks and Bike Lanes	Bike Lane, Sidewalks
587	200	Little Paint Branch Trail Extension	Shared-Use Path
588	184	Charles Branch Trail	Shared-Use Path
589	204	MD 223 Sidepath	Shared-Use Path
590	205	MD 4 Sidepath	Shared-Use Path
591	209	MD 704 Sidepath and Bike Lanes	Shared-Use Path, Bike Lanes
592	203	MD 193 Sidepath	Shared-Use Path, Bike Lane
594	179	Auth Road Sidewalks and Bike Lanes	Bike Lanes, Sidewalks
598	266	Long Bridge Esplanade Park Bridge	Bridge
599	251	Army-Navy Drive Joyce Street Bike Facility	Shared-Use Path
600	278	Washington Boulevard Trail Phase II	Shared-Use Path
604	255	Carlin Springs Road Bridge Replacement	Bridge
607	267	Old Dominion Drive Complete Streets	Streetscape
608	256	Columbia Pike Complete Streets	Streetscape
600	278	Washington Boulevard Trail Phase II	Shared-Use Path
612	257	Complete Streets R-B Corridor	Streetscape
619	6	Blagden Avenue Hiker-Biker Trail	Shared-Use Path
620	13	Great Streets H Street NE Streetscape	Streetscape
621	14	Greet Streets Minnesota Avenue NE Streetscape	Streetscape
627	17	Klingle Road Reconstruction	Shared-Use Path
632	337	Lawyers Road Road Diet	Bike Lanes
634	11	Garfield Park Canal Park 2nd Street SE	Shared-Use Path

635	1	11th Street SE Bridges and Intersection	Bridge
637	28	Theodore Roosevelt Bridge Rehabilitation	Bridge
Project ID	**Appendix A Line Number**	**Project Name**	**Project Type**

Figure 7-1
Major* Bicycle and Pedestrian Projects





Legend

Planned Spot Improvement

- ✚
- ✓ Complete
- Planned Facility Upgrade
- Planned New Facility
- Existing Facility
- Major Highways
- Water
- TPB Planning Area

Figure 7-2: Major* Bicycle and Pedestrian Projects in the Central Washington Region

0 0.5 1 2 3 4 Miles

N

***"Major" projects > 2 miles in length or > $500,000**

Appendix A

Bicycle and Pedestrian Projects

Of the Long-Range Bicycle and Pedestrian Plan

For the National Capital Region

This appendix contains a complete list of the projects in the Bicycle and Pedestrian Plan for the National Capital Region. Below is a guide to the printed project list. Appendix B contains a data dictionary for the electronic database, which contains more information than this printed list, as well as a sample data entry form.

PROJECT LIST DATA DICTIONARY	
Field	**Explanation**
Line Number	Short ID number used to label projects on the maps
Agency Project ID	The sponsoring agency's project identifying number
Project Name	Descriptive name provided by the sponsoring agency
From	Project Limits
To	Project Limits
Length (Miles)	Length of the project from start to finish in miles. Example: if a project consists of four miles of road with a continuous bike lane and sidewalk, the project length is four miles. For projects that have no length, such as bicycle racks, the listed length is zero.
Responsible Agencies	Agencies responsible for implementing the project or otherwise involved
Bike Lane	Bike lanes are striped lanes at least 4' wide in the public right-of-way, marked for the exclusive use of bicyclists
Multi-Use Path	A paved or hard-surface path separated from traffic, officially designated for bicycles and other non-motorized users. Should be at least 8' wide.
Sidewalk	Sidewalks are usually less than 8' wide, and are not designed for bicyclists.
Type of Spot/Area Improvement	For non-linear projects. The pull-down menu gives the following options: Type of Improvement — Code Letter 1. Pedestrian Intersection Improvement — I 2. Pedestrian/Bicycle Bridge or Tunnel — B 3. Traffic Calming — TC 4. Streetscape/Pedestrian Improvements — S 5. Bicycle Parking — PK 6. Bicycle Route Marking — BR 7. Other — O
In CLRP	Project is in the Financially Constrained Long-Range Transportation Plan for the National Capital Region, and therefore is officially considered to have funding available to support project completion.
In TIP	Project is in the most recent National Capital Region Transportation Improvement Program with specific funding amounts identified for program completion.

Field	Explanation
Status	The pull-down menu offers the following options: 1. Fully Funded[1] — Code Letter F 2. Partially Funded — P 3. Unfunded — U 4. Under Construction — UC 5. Complete — C
Cost	In thousands of dollars. As many projects in the plan may not be built for many years, and have not been fully scoped, this can be a very rough estimate. If a project is part of a larger project the total project cost is *not* listed, only that portion of the cost which is attributable to the bicycle or pedestrian facility. Use of a rule of thumb for such estimates was acceptable, i.e. 3% of total project cost. Many projects do not have a cost estimate available.

[1] "Funded" indicates that the sponsoring agency has considered funding for completion of this project to be reasonably available within projected funding sources. "Unfunded" indicates, that while the project has been identified, there is no projected funding to support its completion at this time.

2010 Bike/Ped Plan Project List

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
1	635	11th Street SE Bridges and Intersection			1	DDOT	☐	☑	☐	B	☑	☑	F	
2	173	Anacostia Riverwalk Trail	Potomac River	Maryland	20	DDOT	☐	☑	☐		☑	☑		$20,000
3	215	Bicycle Lanes			30	DDOT	☑	☐	☐		☑	☑		$600
4	56	Bicycle Parking Racks				DDOT	☐	☐	☐		☑	☑		$500
5	74	Bicycle Route Signs				DDOT	☐	☐	☐		☑	☑	P	$300
6	619	Blagden Avenue Hiker and Biker Trail - EA	Matthewson Drive	Beach Drive	0.4	DDOT, National Park Service	☐	☑	☐		☐	☐	P	
7	613	Capital Bikeshare - District of Columbia				DDOT, Arlington County	☐	☐	☐	O	☑	☑	P	
8	636	Capitol Hill Transportation Study Inf. Improvement			0	DDOT	☐	☐	☐	TC	☑	☑	F	$4,200
9	142	Cultural/Heritage Trail System				DDOT	☐	☐	☐		☑	☑	U	$0
10	622	District-Wide Bicycle and Pedestrian Program				DDOT	☑	☐	☐		☑	☑		$3,300
11	634	Garfield Park Canal Park 2nd Street SE	Garfield Park	Canal Park	0	DDOT	☐	☐	☐	B	☑	☑		$2,400
12	625	Great Streets - Georgia Avenue				DDOT	☐	☐	☐	S	☑	☑		$16,140
13	620	Great Streets - H Street NE Streetscape	3rd Street NE	14th Street NE	1	DDOT	☐	☐	☐	S	☑	☑	UC	$62,000
14	621	Great Streets - Minnesota Avenue NE	A Street SE	Sheriff Road NE	1	DDOT	☐	☐	☐	S	☐	☐	F	$7,000
15	626	Great Streets - Nannie Helen Burroughs				DDOT	☐	☐	☐	S	☑	☑		$12,300
16	638	I-295 bridges over S. Capitol St. SE			0	DDOT	☐	☐	☐	B	☑	☑	F	
17	627	Klingle Road Reconstruction	Porter Street	Woodley Road	1	DDOT	☐	☑	☐		☑	☑	F	$9,100
18	197	Metropolitan Branch Trail	Union Station	Takoma Park	7	DDOT	☑	☑	☐		☑	☑	U	$20,000
19	73	New Pedestrian Bridge	Over Anacostia Freeway	Near Firth Sterling		DDOT	☐	☑	☐		☑	☑		$2,000
20	93	Oxon Run Trail Restoration	South Capitol Street	Southern Avenue	2	DDOT	☐	☑	☐		☑	☑		$1,500
21	628	Pavement Markings & Traffic Calming				DDOT	☐	☐	☐	TC	☑	☑	F	$34,390

Key to Codes B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded
PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
22	38	Pedestrian Passageway/Tunnel	1st Street Metro Station Kiosk	1st Street, N.E. (Under H Street Overpass)	1	DDOT	☐	☐	☑	B	☑	☑	F	$13,000
23	623	Replace Pedestrian Bridge over Kenilworth Ave			1	DDOT	☐	☐	☐	B	☑	☑	F	$6,800
24	178	Rock Creek Park Trail			4	DDOT, National Park Service	☐	☑	☐		☑	☑	P	$2,500
25	97	Safe Routes to School Program				DDOT	☐	☐	☐		☑	☑	F	$5,000
26	639	Safety Improvements Citywide			0	DDOT	☐	☐	☐	TC	☑	☑	F	
27	96	Sidewalk Construction				DDOT	☐	☐	☑		☐	☐		$2,000
28	637	Theodore Roosevelt Bridge Rehabilitation			1	DDOT	☐	☐	☐	B	☑	☑	F	
29	624	Transportatation Enhancements				DDOT	☐	☐	☐	S	☑	☑	F	$13,800
30	75	Union Station Bike Station	(Union Station)			DDOT	☐	☐	☐		☑	☑	C	$4,000
31	181	Watts Branch Trail	Minnesota Ave	62nd Street, NE	2	DDOT	☐	☑	☐		☑	☑	C	$3,000

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
32	617	Capital Bikeshare Region-Wide				DDOT, Arlington, City of Alexandria, Montgomery	☐	☐	☐	O	☐	☐	P	$22,284
33	568	WMATA Bicycle Parking Project			0	WMATA	☐	☐	☐		☐	☐	P	$1,165

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
34	258	Boundary Channel Bridge Trails				National Park Service	☐	☐	☐		☐	☐	

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
35	385	College Park Trolley Trail	Paducah Road	Albion Road	4	City of College Park	☑	☑	☐	R	☐	☐	C	$500

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
36	532	Carroll Creek Trail	Rocky Springs Road	Monocacy River	0	City of Frederick	☐	☑	☐		☑	☑	P	$10,000
37	552	Citywide Sidewalk Retrofit	City of Frederick	City of Frederick	0	City of Frederick	☐	☐	☐		☐	☐	P	$240
38	531	Rock Creek Trail	Stonegate Park	US Route 15	0	City of Frederick	☐	☑	☐		☑	☑	P	$1,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
39	551	East Street Rail Trail	Carroll Creek	Tuscarora Creek	0	City of Frederick, MDOT	☐	☑	☐		☑	☑	P	$2,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
40	530	Ballenger Creek Trail	Ballenger Creek Park	Monocacy River	0	Frederick County	☐	☑	☐		☑	☑	UC	$3,200
41	538	Bush Creek Trail	Monocacy River	Montgomery County Line	0	Frederick County	☐	☑	☐		☐	☐	U	$1,300
42	558	Frederick County Safe Routes to Schools	Countywide	Countywide	0	Frederick County, Frederick County Public Schools	☐	☐	☐		☐	☐	P	$350
43	535	Monocacy River Greenway Future Phases	Ballenger Creek Trail	Potomac River	0	Frederick County	☐	☑	☐		☐	☐	U	$7,000
44	547	On-Street Bikeways Countywide	Countywide	Countywide	0	Frederick County, MD SHA	☑	☐	☐		☑	☑	P	$3,000

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
45	512	H&F Trolley Trail Phase II	Water Street	Moser Road	0	Frederick County, Frederick County Div. of Parks & Rec; City of Fred	☐	☑	☐		☐	☐	C	$7,000
46	534	Monocacy River Greenway Phase I	Tuscarora Creek	Ballenger Creek Trail	0	Frederick County, Frederick County Div. of Parks & Rec; City of Fred	☐	☑	☐		☐	☐	U	$5,500
47	533	Tuscarora Creek Trail	Yellow Springs Road	Monocacy River	0	Frederick County, Frederick County Div. of Parks & Rec; City of Fred	☐	☑	☐		☐	☐	U	$2,250

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
48	529	H&F Trolley Trail Phase III	Thurmont	Frederick	0	Frederick County, Frederick County Div. of Parks & Rec; City of Fred	☐	☑	☐		☐	☐	U	$6,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
49	537	I-270 Transitway	City of Frederick	Montgomery County Line	0	Frederick County, Frederick County Div. of Parks & Rec	☐	☑	☐		☐	☐	U	$5,000
50	536	Sugarloaf – Little Bennett Trail	Little Bennett Regional Park	Monocacy River	0	Frederick County, Frederick County Div. of Parks & Rec; City of Fred	☐	☑	☐		☐	☐	U	$375

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
51	545	Emmitsburg Railroad Trail	Rocky Ridge	Emmitsburg	0	Frederick County, Frederick County Div. of Parks & Rec / Emmitsburg	☐	☑	☐		☐	☐	U	$3,250

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
52	543	Middletown – Myersville Trolley Trail	Frederick	Myersville	0	Frederick County	☐	☑	☐		☐	☐	U	$5,000
53	544	Middletown Greenway	Middletown	Middletown	0	Frederick County, Frederick County Div. of Parks & Rec; Middletown	☐	☑	☐		☐	☐	U	$3,000

Key to Codes B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded
PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
54	539	B&O Trail	Mount Airy	Mount Airy	0	Frederick County, Town of Mt. Airy, Carroll County	☐	☑	☐		☐	☐	U	

Key to Codes B=Bridge or Tunnel C = Complete F = Fully Funded I = Intersection Improvement O = Other P = Partially Funded
PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
55	540	Walkersville – Woodsboro Corridor I	Monocacy River	Israel Creek	0	Frederick County, Frederick County Div. of Parks & Rec; MDOT; Woodsb	☐	☑	☐		☐	☐	U	$2,000
56	542	Walkersville – Woodsboro Corridor III	Monocacy River	Woodsboro - Railroad	0	Frederick County	☐	☑	☐		☐	☐	U	$5,500

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PK = Bicycle Parking R = Bicycle Route Marking S = Streetscape U = Unfunded UC = Under Construction

	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
57	9	ADA Compliance Transportation Access	Countywide			MCDOT	☐	☐	☐		☑	☑		$15,881
58	41	American Legion Bridge	Macarthur Blvd	Fairfax County Line		MDOT, MCDOT, VDOT	☐	☑	☐		☐	☐		$0
59	153	Annual Bikeway Program	Countywide			MCDOT	☐	☐	☐		☑	☑		$1,650
60	231	Annual Sidewalk Program	countywide			MCDOT	☐	☐	☐		☑	☑		$10,027
61	234	Bel Pre Road - east	Georgia Avenue (MD97)	Layhill Road (MD182)		MCDOT	☐	☑	☐		☐	☐		$0
62	241	Bethesda Bikeway and Pedestrian Facilities	Bethesda CBD			MCDOT	☐	☐	☐		☑	☑		$3,500
63	92	Bethesda Trolley Trail	Twinbrook Metro Station	Norfolk/Rugby Ave. intersection (Bethesda)		MCDOT	☑	☑	☐		☑	☑		$0
64	190	Bethesda Trolley Trail	South Drive	Twinbrook Metrorail station		MCDOT, MDOT	☑	☑	☐		☐	☐	UC	$0
65	33	Bethesda Trolley Trail-NIH connector	Battery Lane	Cedar Lane		MCDOT	☐	☑	☐		☐	☐		$0
66	17	Bowie Mill Road	Muncaster Mill Road (MD115)	Olney-Laytonsville Road (MD108)		MCDOT	☑	☐	☐		☐	☐		$0
67	232	Bradley Boulevard (MD191)	Persimmon Tree Road	Wisconsin Avenue (MD355)	6	MCDOT, MDOT	☑	☐	☐		☐	☐	P	$0
68	20	Briggs Chaney Road East	Old Columbia Pike	Prince George's County line		MCDOT	☐	☑	☐		☐	☐		$0
69	203	Briggs Chaney Road West	New Hampshire Avenue	Old Columbia Pike		MCDOT	☑	☐	☐		☐	☐		$0
70	35	CCT-Black Hill connector	Crystal Rock Drive	Black Hill Regional Park		MCDOT	☐	☑	☐		☐	☐		$0
71	250	Clarksburg Road (MD121)/ Stringtown Road	Clopper Road (MD117)	MidCounty Highway	5	MCDOT	☐	☑	☐		☐	☐		$0
72	144	Clopper Road/Diamond Avenue (MD117)	Summit Avenue	Clarksburg Road (MD121)	3	MCDOT, MDOT	☑	☑	☐		☐	☐		$0
73	31	Columbia Pike (US29) North	New Hampshire Avenue/ Lockwood Drive	Spencerville Road (MD198)	7	MDOT, MCDOT	☐	☑	☐		☐	☐		$0
74	57	Corridor Cities Transitway bike path	Shady Grove Metrorail Station	Frederick Road (MD355)		MCDOT, MTA	☐	☑	☐		☐	☐		$0
75	261	Crabbs Branch Way	Gude Drive	Shady Grove Road		MCDOT	☐	☑	☐		☐	☐		$0
76	630	Dale Drive Sidewalk	Mansfield Road	Hartsford Avenue	0.4	MCDOT	☐	☐	☑		☑	☑	F	$4,675
77	140	Darnestown Road - south	Key West Avenue (MD28)	Wootton Parkway		MCDOT	☐	☑	☐		☐	☐		$0
78	28	Darnestown Road (MD28) - North	Seneca Road	Great Seneca Highway (MD119)	5	MCDOT, MDOT	☑	☑	☐		☐	☐		$0
79	158	Democracy Boulevard	Falls Road (MD189)	Old Georgetown Road		MCDOT	☐	☑	☐		☐	☐		$0

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80	25	Doctor Bird Road/Norwood Road (MD182)	Layhill Road (MD182)	Olney-Sandy Spring Road (MD108)		MCDOT, MDOT	☐	☑	☐		☐	☐		$0
81	174	East Jefferson Street	Montrose Road	Rollins Avenue		MCDOT	☐	☑	☐		☐	☐		$0
82	238	Ednor Road/Layhill Road	Norbeck Road (MD28)	New Hampshire Avenue (MD650)		MCDOT	☐	☑	☐		☐	☐		$0
83	244	Elm Street	Exeter Road	Wisconsin Avenue (MD355)		MCDOT	☑	☐	☐		☐	☐		$0
84	165	Executive Boulevard	Woodglen Road/North Bethesda Trail	Montrose Road		MCDOT	☑	☐	☐		☐	☐		$0
85	67	Fairland Road - West	Randolph Road	Columbia Pike (US 29)		MCDOT, MDOT	☑	☐	☐		☐	☐		$0
86	107	Fairland Road East	Columbia Pike (US29)	Prince George's County line		MCDOT	☐	☑	☐		☐	☐		$0
87	223	Falls Road (MD189)	MacArthur Boulevard	Wootton Parkway	5	MCDOT, MDOT	☐	☑	☐		☑	☑	P	$20,865
88	240	Father Hurley Boulevard/Ridge Road	Germantown Road (MD118)	Brink Road		MCDOT	☐	☑	☐		☐	☐	C	$0
89	245	Fieldcrest Road	Woodfield Road (MD124)	Olney-Laytonsville Road (MD108)		MCDOT	☑	☐	☐		☐	☐		$0
90	136	Forest Glen Pedestrian Bridge	west side of Georgia Avenue at Locust Grove Road	west side of Georgia Avenue at Forest Glen Road		MCDOT	☐	☐	☐		☑	☑	C	$0
91	43	Forest Glen Road - central	Belvedere Place	Sligo Creek Trail		MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
92	141	Frederick Road (MD355)	Gude Drive	Watkins Mill Road	5	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
93	22	Frederick Road (MD355)-Upcounty	Watkins Mill Road	Frederick County line		MCDOT, MDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
94	204	Georgetown Branch Trail	Bethesda CBD	Silver Spring Metrorail station		MCDOT	☐	☑	☐		☐	☐	C	$0
95	94	Georgia Avenue (MD97) - North	Olney-Laytonsville Road (MD108)	Glenmont Metrorail station	6	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
96	1	Georgia Avenue (MD97) - Upcounty	Brookeville Bypass	Howard County line		MCDOT, MDOT	☑	☐	☐		☐	☐		$0
97	242	Georgia Avenue (MD97)-Brookeville	Olney-Sandy Spring Road (MD108)	Brookeville Road	2	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
98	263	Germantown Road (MD118)	Darnestown Road (MD28)	Frederick Road (MD355)	7	MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
99	127	Glenallen Avenue	Randolph Road	Kemp Mill Road		MCDOT	☐	☑	☐		☐	☐		$0
100	151	Goldboro Road (MD614)	MacArthur Boulevard	Bradley Boulevard (MD191)	2	MCDOT, MDOT	☑	☐	☐		☐	☐		$0
101	66	Goshen Road/Brink Road	MidCounty Highway	(Woodfield Road (MD124)		MCDOT	☐	☑	☐		☐	☐		$0

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102	44	Greencastle Road - east	Robey Road	Prince George's County line		MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
103	122	Grosvenor Connector	Beach Drive	Metro station		MCDOT, MDOT	☐	☑	☐		☐	☐		$0
104	113	Hines Road-North Branch connector	Rock Creek's North Branch Trail	Cashell Road		MCDOT	☐	☑	☐		☐	☐		$0
105	12	ICC bike path	I-370 terminus	Prince George's County line		MDOT, M-NCPPC, MCDOT	☐	☑	☐		☐	☐		$0
106	45	Layhill Road (MD182)	Georgia Avenue (MD97)	Norbeck Road (MD28)	2	MDOT, Montgomery County	☑	☐	☐		☐	☐		$0
107	128	Lockwood Drive	Columbia Pike (US29)	New Hampshire Avenue (MD650)		MCDOT	☐	☑	☐		☐	☐		$0
108	146	Long Draft Road	Quince Orchard Road	Clopper Road (MD117)		MCDOT	☐	☑	☐		☐	☐		$0
109	39	MacArthur Boulevard	I-495	Oberlin Avenue	4	MCDOT	☐	☑	☐		☐	☐	P	$7,610
110	2	Matthew Henson Trail	Rock Creek Trail (west of Viers Mill Rd.)	East of Georgia Ave. (Alderton Road)		MCDOT, M-NCPPC	☐	☑	☐		☑	☑	C	$5,142
111	251	MD198/MD28 shared use path	New Hampshire Avenue (MD 650)	Old Columbia Pike	3	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
112	42	MD384 connector to Silver Spring Metro Station	16th Street	East-West Highway	1	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
113	15	Metropolitan Branch Trail	Silver Spring Metro/Transit Center	Montgomery College Campus Takoma Park		MCDOT	☐	☑	☐		☐	☐		$0
114	106	Metropolitan Branch Trail	Silver Spring Metro Station	DC Line		MCDOT	☐	☑	☐		☐	☐		$0
115	72	MidCounty Highway	ICC	Frederick Road (MD355)		MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
116	172	Middlebrook Road	Father Hurley Boulevard	MidCounty Highway		MCDOT	☐	☑	☐		☐	☐		$0
117	86	Montrose Road/Parkway	Falls Road	Veirs Mill Road (MD586)		MCDOT, M-NCPPC	☐	☑	☐		☐	☐	P	$0
118	90	Muddy Branch Road	Darnestown Road (MD28)	Clopper Road (MD117)		MCDOT	☐	☑	☐		☐	☐		$0
119	104	Muncaster Mill Road (MD115)/ Norbeck Road (MD28)	Woodfield Road	Georgia Avenue (MD97)	5	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
120	169	Nebel Street - north	Old Georgetown Road	Randolph Road		MCDOT	☑	☐	☐		☐	☐		$0
121	160	Nebel Street - south	Nicholson Lane	Old Georgetown Road		MCDOT	☑	☐	☐		☐	☐		$0
122	149	Nebel Street extended	Randolph Road	Chapman Avenue		MCDOT	☐	☑	☐		☐	☐		$0

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123	154	Needwood Road	Redland Road	Muncaster Mill Road (MD115)		MCDOT	☐	☑	☐		☐	☐		$0
124	89	New Hampshire Avenue	DC Line	I-495	4	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
125	134	New Hampshire Avenue (MD650) - Ashton	Ednor Road	Olney-Sandy Spring Road (MD108)	2	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
126	207	New Hampshire Avenue (MD650) - Colesville	Randolph Road	Spencerville Road (MD198)	4	MCDOT, MDOT	☑	☐	☐		☐	☐		$0
127	252	New Hampshire Avenue (MD650) - Ednor	Spencerville Road (MD198)	Ednor Road	2	MCDOT, MDOT	☑	☐	☐		☐	☐		$0
128	120	New Hampshire Avenue (MD650) - Hillandale	I-495	Lockwood Drive	1	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
129	47	Nicholson Lane/Parklawn Drive	Nebel Street	Twinbrook Parkway		MCDOT, M-NCPPC	☑	☐	☐		☐	☐		$0
130	87	Norbeck Road (MD28)	Georgia Avenue (MD97)	Layhill Road	3	MCDOT, MDOT	☐	☑	☐		☑	☑	P	$0
131	205	North Bethesda Trail Bridges	crossings of I-495 and I-270			MCDOT	☐	☐	☐	B	☑	☑	C	$0
132	79	Norwood Road	Layhill Road (MD182)	New Hampshire Avenue (MD650)		MCDOT, M-NCPPC	☑	☐	☐		☐	☐		$0
133	208	Observation Drive	Germantown Road (MD118)	Frederick Road (MD355)		MCDOT	☐	☑	☐		☐	☐		$0
134	62	Old Baltimore Road/New Cut Road	Clarksburg Road (MD121)	Frederick Road (MD355)		MCDOT	☐	☑	☐		☐	☐		$0
135	257	Old Columbia Pike	E. Randolph Road	MD 198		MCDOT	☐	☐	☐		☑	☑		$0
136	228	Olney-Laytonsville Road (MD108) - Laytonsville	Laytonsville Town boundary	Olney Mill Road		MCDOT, MDOT	☐	☑	☐		☐	☐		$0
137	236	Olney-Sandy Spring Road (MD108) - Ashton	Layhill Road (MD182)	Howard County line	2	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
138	194	Pedestrian Safety Program	Countywide			MCDOT	☐	☐	☐		☑	☑		$9,600
139	126	Persimmon Tree Road	Oaklyn Drive	Falls Road (MD189)		MCDOT	☐	☑	☐		☐	☐		$0
140	95	Piney Meetinghouse Road	River Road (MD190)	Darnestown Road		MCDOT	☑	☐	☐		☐	☐		$0
141	112	Quince Orchard Road	Dufief Mill Road	Darnestown Road (MD28)		MCDOT	☐	☑	☐		☐	☐		$0
142	150	Randolph Road - central	Parklawn Drive	Veirs Mill Road (MD586)		MCDOT	☑	☐	☐		☐	☐		$0
143	119	Randolph Road - east	Veirs Mill Road (MD586)	Kemp Mill Road/ Northwest Branch Trail		MCDOT	☐	☑	☐		☐	☐		$0
144	206	Randolph Road - west	Rockville Pike (MD355)	Parklawn Drive		MCDOT	☐	☑	☐		☐	☐		$0
145	183	Redland Road - east	Needwood Road	Muncaster Mill Road (MD115)		MCDOT	☑	☐	☐		☐	☐		$0
146	59	Redland Road - west	Shady Grove Metrorail station	Needwood Road		MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0

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147	156	Richter Farm Road	Great Seneca Highway (MD119)	Clopper Road (MD117)		MCDOT	☐	☑	☐		☐	☐	C	$0
148	221	Riffleford Road	Darnestown Road (MD28)	Germantown Road (MD118)		MCDOT	☑	☐	☐		☐	☐		$0
149	101	River Road (MD190)	DC line	Seneca Road (MD112)	13	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
150	157	Rock Creek Trail-Forest Glen Metro connector	Stoneybrook Road	Seminary Road		MCDOT, Montgomery County, M-NCPPC	☐	☑	☐		☐	☐		$0
151	138	Rock Springs Connector	Democracy Boulevard	Tuckerman Lane		MCDOT	☐	☑	☐		☐	☐		$0
152	187	Rockville Pike (MD355) - north	Halpine Road	Veirs Mill Road (MD586)/ Norbeck Road (MD28)		City of Rockville, MDOT	☐	☑	☐		☐	☐		$0
153	200	Seneca Road	River Road (MD190)	Darnestown Road (MD28)		MCDOT, MDOT	☑	☐	☐		☐	☐		$0
154	10	Seven Locks Road	Montrose Road	Bradley Blvd.		MCDOT	☑	☑	☐		☐	☐	P	$1,567
155	152	Shady Grove Road - east	Frederick Road (MD355)	Muncaster Mill Road (MD115)		MCDOT	☑	☐	☐		☐	☐	UC	$0
156	170	Shady Grove Road - west	Darnestown Road	Frederick Road (MD355)		MCDOT	☑	☑	☐		☐	☐	P	$0
157	209	Silver Spring Green Trail	Silver Spring Metro Station	Sligo Creek Hiker-Biker Trail		MCDOT	☑	☐	☐		☑	☑	F	$6,334
158	68	Spencerville Road (MD198) - Fairland	Old Columbia Pike	Prince George's County line	2	MCDOT, MDOT	☐	☑	☐		☐	☐		$0
159	117	Tilden Lane	Nicholson Lane	Hounds Way		MCDOT	☑	☐	☐		☐	☐		$0
160	46	Tuckerman Lane	Old Georgetown Road	Rockville Pike (MD355)		MCDOT	☑	☐	☐		☐	☐		$0
161	76	Twinbrook Parkway	Frederick Road (MD355)	Veirs Mill Road (MD586)		MCDOT	☑	☐	☐		☐	☐		$0
162	88	University Boulevard	Georgia Avenue	Prince George's County Line		MCDOT, MDOT	☐	☑	☐		☐	☐		$0
163	220	Viers Mill Road (MD586) - west	Twinbrook Parkway	Matthew Henson Trail	2	MCDOT, MDOT	☑	☐	☐		☐	☐		$0
164	229	Watkins Mill Road	Frederick Road (MD355)	MidCounty Highway		MCDOT	☐	☑	☐		☐	☐		$0
165	81	Wayne Avenue Green Trail	Spring Street	Sligo Creek Trail		MCDOT, M-NCPPC	☐	☑	☐		☐	☐		$0
166	233	West Cedar Lane	Old Georgetown Road	Beach Drive		MCDOT	☐	☑	☐		☐	☐	P	$0
167	40	Western Avenue	River Road	Chevy Chase Circle		MCDOT	☐	☑	☐		☐	☐		$0
168	185	Westlake Drive	Westlake Terrace	Tuckerman Lane		MCDOT	☑	☐	☐		☐	☐	C	$0
169	230	Westlake Terrage/Fernwood Road/Green Tree Road	Rockledge Drive	Old Georgetown Road		MCDOT	☑	☐	☐		☐	☐		$0
170	84	Willard Avenue Bike Lanes	Willard Avenue Park	Wisconsin Avenue		MCDOT	☑	☐	☐		☐	☐		$0

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171	121	Wilson Lane (MD188) - west	MacArthur Boulevard	Elmore Lane	2	MCDOT, MDOT	☑	☐	☐		☐	☐		$0
172	260	Wisconsin Avenue Path	Bradley Lane	Oliver Lane		MCDOT, M-NCPPC	☑	☐	☐		☐	☐		$0
173	83	Woodmont Avenue	Bethesda Avenue	Battery Lane		MCDOT	☑	☐	☐		☐	☐		$0

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174	188	Addison Road	MD 214	Walker Mill Road		Prince Georges County	☑	☐	☐		☐	☐	U	$2,343
175	581	Adelphi Road Sidewalks and Bike Lanes	MD 193	MD 410	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$1,400
176	77	Allentown Road	MD 5	Old Fort Road		Prince Georges County	☑	☐	☐		☐	☐	U	
177	111	Anacostia River Trail	Bladensburg Marina	Wash. D.C. line		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	UC	$500
178	247	Auth Road	MD 337 (Allentown Road)	MD 5 (Branch Avenue)		Prince Georges County	☑	☑	☐		☐	☐	F	$450
179	594	Auth Road Sidewalks and Bike Lanes	MD 337	Auth Way	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$1,000
180	155	Bock Road	Livingston Road	Tucker Road		Prince Georges County	☑	☐	☐		☐	☐		
181	133	Brinkley Road	Allentown Road	St. Barnabas road		Prince Georges County	☑	☐	☐		☐	☐		
182	53	Cabin Branch Trail	MD 214	Cheverly Metro		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$260
183	108	Cabin Branch Trail	Presidential Corporate Center	Western Branch		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$1,350
184	588	Charles Branch Trail	Rosaryville Creek	Western Branch	0	M-NCPPC, Prince Georges County, M-NCPPC	☐	☑	☐		☐	☐	U	$4,000
185	124	Chesapeake Beach Rail-Trail	Capital Beltway	Upper Marlboro		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$1,080
186	135	Chesapeake Beach Rail-Trail	MD 704	Addison Road Metro		M-NCPPC, Prince Georges County, City of Seat Pleasant	☐	☑	☐		☐	☐		$200
187	125	Chesapeake Beach Rail-Trail	MD 214	Capital Beltway		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	P	$650
188	573	Chestnut Avenue/Highbridge Road Sidepath	MD 450	MD 564	0	Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	U	$1,512

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189	5	Collington Branch Trail	MD 214	Upper Marlboro		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	P	$2,000
190	23	East Coast Greenway American Discovery Trail	Washington D.C.	Anne Arundel County		MDOT, M-NCPPC, Prince Georges County	☑	☑	☐		☐	☐		$0
191	55	Folly Branch Trail	Bald Hill Branch	Glenwood Park Neighborhood Park		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$1,000
192	218	Fort Foote Road	Oxon Hill Road (north)	Oxon Hill Road (south)		Prince Georges County	☑	☐	☐		☐	☐		
193	163	Fort Washington Road	MD 210	Fort Washington National Park		Prince Georges County	☑	☐	☐		☐	☐		
194	168	Good Luck Road	MD 193	MD 201		Prince Georges County	☑	☐	☐		☐	☐		
195	569	Gunpowder Road Sidepath and Bike Lanes	MD 212	MD 198	0	Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	P	$2,000
196	52	Henson Creek Trail extension	Brinkley Road	Branch Avenue Metro		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	P	$1,367
197	580	Iverson Street Sidewalks and Bike Lanes	MD 5	Iverson Place	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$700
198	582	Jamestown Road Sidewalks and Bike Lanes	MD 500	Ager Road	0	Prince Georges County, M-NCPPC	☐	☐	☐		☐	☐	U	$1,000
199	571	Jericho Park Road Sidepath and Bike Lanes	MD 197	Race Track Road	0	Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	U	$385
200	587	Little Paint Branch Trail Extension	Cherry Hill Road	Sellman Road	0	M-NCPPC, Prince Georges County, DPW&T	☑	☑	☐		☐	☐	P	$5,000
201	6	Livingston Road	Oxon Hill Road	MD 210		Prince Georges County	☑	☐	☐		☐	☐	P	
202	109	MD 193	MD 564	Montgomery Co. line		MDOT	☑	☑	☐		☐	☐		$0
203	592	MD 197 Sidepath	MD 198	Rockledge Drive	0	MDOT, M-NCPPC	☑	☑	☐		☐	☐	U	$18,000
204	589	MD 223 Sidepath	MD 4	Livingston Road	0	MDOT, M-NCPPC	☑	☑	☐		☐	☐	U	$15,000
205	590	MD 4 Sidepath	I-495	Southern Avenue	0	MDOT, M-NCPPC	☑	☑	☐		☐	☐	U	$4,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
206	570	MD 450 Sidepath and/or wide sidewalks	Seabrook Road	US 1	0	MDOT, SHA	☑	☑	☐		☐	☐	U	$3,000
207	116	MD 564 Sidepath and Bike Lanes	MD 197	MD 450		Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	U	$4,000
208	578	MD 564 Sidepath and Bike Lanes	MD 197	MD 450	0	MDOT, M-NCPPC	☑	☑	☐		☐	☐	U	$10,000
209	591	MD 704 Sidepath and Bike Lanes	MD 450	Eastern Avenue	0	MDOT, M-NCPPC	☑	☑	☐		☐	☐	U	$60,000
210	574	Mitchellville Road Sidepath	Mt. Oak Road	US 301	0	Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	U	$768
211	577	Old Chapel Road Sidewalk and Bikeway	MD 197	Race Track Road	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	C	$2,000
212	235	Old Fort Road	MD 210	Fort Washington Road		Prince Georges County	☑	☐	☐		☐	☐		
213	51	Oxon Hill Road	MD 210	Livingston Road		Prince Georges County, DPW&T	☑	☐	☐		☐	☐	P	$0
214	139	Oxon Hill Road (MD 414)	MD 210	St. Barnabas Road		MDOT	☑	☐	☐		☐	☐		$350
215	586	Oxon Run Trail	Southern Avenue	Naylor Road	0	M-NCPPC, Prince Georges County, M-NCPPC	☐	☑	☐		☐	☐	U	$1,100
216	78	Piscataway Creek Trail	Dower House Branch near Cheltenham	Potomac River		M-NCPPC, Prince Georges County, National Park Service	☐	☑	☐		☐	☐	P	$2,300
217	115	Potomac Heritage On-Road Bicycle Route	Oxon Cove Park	Piscataway		Prince Georges County, DPW&T	☑	☐	☐		☐	☐		$0
218	198	Prince George's Connector	Chillum Road	Gallatin Street		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	F	$400
219	585	Princess Garden Parkway Sidewalks and Bike Lanes	MD 450	Good Luck Road	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$700
220	579	Prospect Hill Sidewalks and Bike Lanes	Hillmeade Road	MD 953	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$800
221	583	Queens Chapel Road Sidewalks and Bike Lanes	MD 410	Eastern Avenue	0	MDOT, M-NCPPC	☑	☐	☐		☐	☐	U	$5,000
222	572	Race Track Road Sidepath and Bike Lanes	MD 450	MD 197	0	Prince Georges County, M-NCPPC	☑	☑	☐		☐	☐	U	$1,900

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223	593	Ritchie Branch Trail	Marlboro Pike	Walker Mill Road	0	M-NCPPC, Prince Georges County, M-NCPPC	☐	☑	☐		☐	☐	U	$2,000
224	186	Ritchie Marlboro Road	Old Marlboro Pike	Capital Beltway		Prince Georges County	☐	☑	☐		☐	☐		$1,100
225	575	Silver Hill Road Sidewalks and Bike Lanes	MD 5	Walker Mill Road	0	MDOT, DPW&T	☑	☐	☐		☐	☐	U	$1,680
226	576	St. Barnabas Road Sidewalks and Bike Lanes	Silver Hill Road	Livingston Road	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$2,500
227	54	Suitland Parkway Trail	Washington D.C.	MD 4	6	National Park Service	☐	☑	☐		☐	☐		$0
228	21	Temple Hills Road	Saint Barnabas Road	Piscataway Road		Prince Georges County	☑	☐	☐		☐	☐		
229	213	Tinkers Creek Trail	MD 5	Piscataway Creek		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$1,600
230	253	Tucker Road	Saint Barnabas Road	Allentown Road		Prince Georges County	☑	☐	☐		☐	☐		
231	100	US 1	Sunnyside Avenue	Contee Road		MDOT	☑	☑	☐		☐	☐		$1,000
232	118	US 1 (College Park)	Sunnyside Avenue	Albion Road		MDOT	☑	☑	☐		☐	☐		$0
233	201	WB&A Spur Trail	WB&A Trail	Fran Uhler Natural Area		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		
234	249	Western Branch Trail	Lottsford Road	Upper Marlboro		M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐		$3,100
235	584	Whitfield Chapel Road Sidewalks and Bike Lanes	MD 704	MD 450	0	Prince Georges County, M-NCPPC	☑	☐	☐		☐	☐	U	$800
236	196	Woodrow Wilson Bridge	Oxon Hill Road	Virginia		M-NCPPC, Prince Georges County, MDOT	☐	☑	☐	B	☑	☑	C	$0

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237	553	Rhode Island Avenue Trolley Trail Extension	College Park	Armentrout Drive	0	M-NCPPC, Prince Georges County	☐	☑	☐		☐	☐	P	$1,500

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
238	559	Accessible Pedestrian Signals	Citywide project		0	City of Rockville	☐	☐	☐		☐	☐	P	$750
239	24	Bicycle Route System Improvements	Citywide project			City of Rockville	☐	☐	☐		☐	☐	C	$1,057
240	167	Millennium Trail South - Wootton Parkway	W. Edmonston Dr	Veirs Mill Rd	1	City of Rockville, Maryland State Highway Administration	☐	☑	☐		☐	☐	C	$905
241	161	Ped/Bike Bridge Over I-270 along MD 28	Adclare Rd and Nelson Street	Darnestown Road	2	City of Rockville, Maryland State Highway Administration	☐	☑	☐	B	☐	☐	C	$4,714
242	216	Pedestrian Safety	Citywide project			City of Rockville	☐	☐	☐		☐	☐	UC	$1,670
243	560	Rockville Intermodal Access - Baltimore Road	Rockville Town Center	City limit	0	City of Rockville	☐	☐	☐		☑	☑	P	$4,000
244	143	Sidewalks	Citywide project			City of Rockville	☐	☐	☐		☐	☐	UC	$1,337

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245	50	Carroll Avenue Bike Lanes	DC Line	Piney Branch Road		MDOT, Takoma Park	☐	☐	☐		☐	☐	$0

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
246	546	Emmitsburg Greenway Trail	Emmitsburg	Emmitsburg	0	Frederick County, Town of Emmitsburg	☐	☑	☐		☐	☐	U	$2,500

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
247	609	Arlington Blvd. Irving St. HSIP	Arlington Boulevard	Irving Street		Arlington County, VDOT	☐	☐	☐	I	☑	☑	F	$473
248	610	Arlington Blvd. Park Drive HSIP	Arlington Boulevard	Park Drive		Arlington County, VDOT	☐	☐	☐	I	☑	☑	F	$495
249	601	Arlington Blvd. Trail improvements	Pershing Drive	Washington Blvd.	1	Arlington County, VDOT	☐	☑	☐		☑	☑	P	$800
250	123	Arlington Boulevard Ped and Bike Trail	N. Meade Street /Arl. Blvd. Bridge	Service Rd		Arlington County, Arlington County	☐	☑	☐	S	☐	☐	P	$120
251	599	Army Navy Drive/Joyce St. bike facilities	S. Joyce Street	12th Street South	1	Arlington County, FHWA, VDOT	☑	☐	☐		☐	☐	U	$1,000
252	611	Arterial Street Safety improvements				Arlington County	☐	☐	☐	S	☐	☐	F	$800
253	48	Bike Lane Implementation			8	Arlington County	☑	☐	☐		☐	☐	UC	$120
254	618	Capital Bikeshare - Arlington				Arlington County, DDOT	☐	☐	☐	O	☑	☑		
255	604	Carlin Springs Rd. bridge replacement	Carlin Springs Rd.	North George Mason Drive	0	Arlington County	☐	☐	☐	B	☐	☐	F	$550
256	608	Columbia Pike Complete Streets	Frederick St.	Fairfax County Line	3	Arlington County	☑	☐	☐	S	☑	☑	P	$2,000
257	612	Complete Streets (R-B corridor)				Arlington County	☐	☐	☐	S	☐	☐	F	$300
258	383	CUSTIS TRAIL WESTOVER UNDERPASS @ I-66				Arlington County	☐	☐	☐		☐	☐	C	$75
259	605	Doctor's Run Trail	South Quincy Street	South George Mason Drive	0	Arlington County	☐	☐	☐		☐	☐	U	$500
260	313	General Trail Improvements			0	Arlington County	☐	☐	☐		☐	☐	UC	$130
261	514	Glebe Road Bridge Replacement	500' south of Route 50	500' north of route 50	0	VDOT	☐	☐	☐		☐	☐	F	$1,950
262	518	Glebe Road Pedestrian Crossings	Fairfax Drive	North Carlin Springs Road	0	VDOT	☐	☐	☐		☑	☑	F	$2,780
263	19	Hoffman - Boston Connector	S. Queen St.	Army Navy Country Club (Private Drive)	0	Arlington County	☐	☐	☐		☐	☐	U	$2,000
264	311	I-395 Shirlington Underpass, Four Mile Run Trail	Shirlingotn Rd	West Glebe Rd	0	Arlington County, VDOT	☐	☐	☐		☐	☐	C	$2,000
265	602	Kirkwood Rd. sidewalks	Lee Highway	14th Street North	1	Arlington County	☐	☐	☑		☑	☑	P	$400
266	598	Long Bridge Park Esplanade Bridge	Boundary Drive	GW Parkway	0	Arlington County, FHWA, VDOT, NPS	☐	☐	☐	B	☐	☐	U	$2,000

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267	607	Old Dominion Drive Complete Streets	N. Glebe Rd.	Fairfax Co. line	1	Arlington County, VDOT	☐	☐	☑	S	☑	☑	P	$2,000
268	310	Old Dominion Drive Complete Streets (phase I)	Lee Highway	N. Glebe Rd.	0	Arlington County, VDOT	☐	☐	☐	S	☐	☐	C	$1,000
269	219	Old Jefferson Davis Highway/ Mount Vernon Trail CO				National Park Service	☐	☐	☐		☐	☐		
270	147	Potomac Yard/Four Mile Run Trail				Arlington County	☐	☐	☐		☐	☐	U	$350
271	606	Priority Bus Stop improvements				Arlington County, WMATA	☐	☐	☐	S	☑	☑	F	$450
272	110	Route 110 Trail	Memorial Dr	Pentagon North Parking Lot	1	Arlington County, National Park Service	☐	☑	☐		☐	☐	P	$504
273	603	Shirlington Rd. bridge replacement	Shirlington Rd.	Four Mile Run		Arlington County	☐	☐	☐	B	☐	☐	U	$1,000
274	384	Sidewalk Projects				Arlington County, VDOT	☐	☐	☑	I	☐	☐	UC	$1,000
275	179	VA 120 (Glebe Road)	N. Randolph Street	Fairfax Drive		Arlington County, VDOT	☐	☐	☐	I	☑	☑	F	$1,000
276	65	VA 120 (S Glebe Road)	@ 27th Street	@ Ramp from I-395 to West Glebe Road		Arlington County	☐	☐	☐	S	☑	☑	P	$100
277	315	Washington Blvd Trail Phase I	Arlington Blvd	Walter Reed	0	Arlington County, VDOT	☐	☐	☐		☐	☐	C	$350
278	600	Washington Blvd. Trail (phase II)	S. 2nd Street	Columbia Pike	1	Arlington County, FHWA, VDOT	☐	☑	☐		☑	☑	P	$1,400

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
279	27	Rosslyn Circle Crossing	N. Lynn St	Ft. Myer Dr	0	Arlington County, VDOT	☐	☐	☐	I	☐	☐	F	$1,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
280	192	Mount Vernon Trail Extension	Beltway	Theodore Roosevelt Island		National Park Service, Fairfax County	☐	☑	☐		☐	☐	

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281	564	Bicycle Parking/Sharing/Racks-on-Buses	various	various	0	City of Alexandria	☐	☐	☐		☑	☐	P	$2,300
282	129	Duke Street Pedestrian Bridge	Cameron Station	Ben Brennman Park	1	City of Alexandria	☐	☐	☐		☑	☑	F	$750
283	80	Duke Street Pedestrian Improvements	Duke Street	Carlyle Avenue	1	City of Alexandria	☐	☐	☐		☐	☐	C	$195
284	561	Eisenhower Ave Complete Street	Stovall	Holland	0	City of Alexandria, VDOT	☑	☐	☐		☑	☑	F	$14,000
285	34	Eisenhower Multi-Use Trail	Cameron Run East	Telegraph Road	2	City of Alexandria	☐	☑	☐		☑	☑	UC	$1,600
286	98	Holmes Run Greenway Tunnels/Grade Separation	N Chambliss	N Ripley	1	City of Alexandria	☐	☑	☐		☑	☑	P	$7,000
287	37	I-95/I-495 Woodrow Wilson Memorial Bridge - Trail	Prince George's County, MD	Mount Vernon Trail, Alexandria	2	City of Alexandria	☑	☑	☐		☑	☑	C	$24,400
288	217	King Street/Beauregard Intersection	Beauregard/Walter Reed Dr.	28th Street	1	City of Alexandria, VDOT	☐	☐	☐		☑	☑	F	$11,000
289	565	Old Cameron Run Channel Trail	Mill Road	South Payne Street	0	City of Alexandria	☐	☑	☐		☑	☑	P	$1,000
290	563	On-Street Bikeways	various	various	0	City of Alexandria	☑	☐	☐		☑	☐	P	$2,500
291	130	Pedestrian Improvements on Mount Vernon	Glebe Road	Four Mile Run	0	City of Alexandria	☐	☐	☐		☑	☐	F	$500
292	26	Potomac Yard Park/Landbay K	Braddock Road Metro	Four Mile Run	2	City of Alexandria, VDOT	☐	☑	☐		☐	☐	P	$9,000
293	562	Safe Routes to School	citywide	citywide	0	City of Alexandria, VDOT	☑	☑	☐		☑	☑	P	$4,300
294	99	Sidewalk/Trail Construction- Holmes Run/Chambliss	Citywide	Citywide	1	City of Alexandria, VDOT	☐	☐	☑		☑	☑	F	$750
295	64	Transit Facilities Pedestrian Improvements	citywide	citywide	6	City of Alexandria, VDOT	☐	☐	☐		☑	☑	F	$750
296	131	Wilkes Street Tunnel	South Royal	South Union	0	City of Alexandria	☐	☐	☐		☐	☐	C	$770

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297	566	Four Mile Run Pedestrian and Bicycle Bridge	S Eads	Commonwealth Ave	0	Arlington County, VDOT	☐	☐	☐		☑	☑	P	$6,000

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298	71	Woodrow Wilson Bridge Project	Md State Line	Telegraph Road	2	VDOT	☐	☑	☐	B	☑	☑	UC	2,500,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
299	58	Accotink Gateway Connector Trail	Daniel's Run	Pickett Road	1	VDOT, City of Fairfax	☐	☑	☐		☑	☑	C	$1,762
300	521	Route 29 Spot Improvements			0	VDOT	☐	☐	☐		☑	☑	F	$6,677
301	175	US 29 (Lee Highway) Fairfax Circle	@ US 50			VDOT, City of Fairfax	☐	☐	☐	I	☑	☑	P	$11,586

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
302	262	Old Town Manassas City Square, Walkways, & Crosswa	Phase I and Phase II			VDOT	☐	☐	☐	I	☑	☑	C	$557

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303	63	Manassas Drive Sidewalk	Andrew Drive	Euclid Avenue		VDOT, City of Manassas Park	☐	☐	☐	S	☑	☑	C	$195

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
304	8	Bicycle Parking (M-70A)	District-wide			VDOT	☐	☐	☐	PK	☐	☐	C	
305	180	Interstate Bicycle Route 1				VDOT	☐	☐	☐		☐	☐		$0
306	225	NOVA signal Program	District-wide			VDOT	☐	☐	☐	I	☐	☐	F	$9,000

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
307	103	Accotink Gateway Connector Trail	King Arthur Drive	Wakefield Park	1	VDOT, Fairfax County	☐	☑	☐		☑	☑	P	$2,619
308	264	Accotink Stream Valley Trail - Dam to Hunter Villa	Lake Accotink Park	Hunter Village Drive	0	Fairfax County Park Authority	☐	☑	☐		☐	☐	C	$400
309	267	Arlington Boulevard	Graham Road		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
310	386	Arlington Boulevard	Patrick Henry Drive		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
311	387	Arlington Boulevard Pedestrian Bridge	Peyton Randolph Drive	Seven Corners Shopping Center	0	Fairfax County, VDOT	☐	☐	☐	B	☐	☐	C	$5,200
312	166	Beulah Street	Franconia Road	Franocia-Springfield Parkway	1	VDOT	☐	☑	☐		☐	☐	C	$15,094
313	391	Braddock Road	Rolling Road		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
314	389	Braddock Road	Guinea Road		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
315	392	Braddock Road	Wakefield Chapel Road		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
316	191	Burke Lake Road Widening	Fairfax County Parkway	Lee Chapel Road	1	VDOT	☐	☑	☐		☐	☐	C	$7,000
317	395	Centreville Road	Green Trails Boulevard		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
318	396	Centreville Road	New Braddock Road		0	Fairfax County	☐	☐	☐		☐	☐	C	
319	397	Centreville Road	Sunrise Valley Drive		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
320	394	Centreville Road	Compton Road		0	Fairfax County Park Authority	☐	☐	☐	I	☐	☐	C	
321	557	Clarks Branch Bridge at Riverbend Park	Clarks Branch		0	Fairfax County Park Authority	☐	☐	☐	B	☐	☐	C	$500
322	402	Columbia Pike	Powell Lane	Homes Run	0	Fairfax County, VDOT	☐	☐	☐	S	☐	☐	C	$1,106
323	403	Cross County Trail			0	Fairfax County Park Authority	☐	☐	☐		☐	☐		
324	30	Cross County Trail	Great Falls Park to Alban Road	Lake Accotink Dam to Hunter Village Drive segment	5	VDOT, Fairfax County	☐	☑	☐		☑	☑	C	$1,060
325	404	Cub Run Valley Stream Connections	Samuels Pine Rd	Cub Run Rec Center / Schneider's Branch	0	Fairfax County Park Authority	☐	☐	☐		☐	☐	C	$625
326	405	Danbury Forest	Lake Accotink Park	Danbury Forest Dr	0	Fairfax County Park Authority	☐	☐	☐		☐	☐	C	$376
327	407	Dolley Madison Boulevard	Great Falls Street/Lewinsville Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
328	176	Fairfax County Parkway	123	7	10	VDOT, Fairfax County	☐	☑	☐		☑	☑	P	$122,000
329	408	Fairfax County Parkway	Old Keene Mill Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
330	595	Fairfax County Pedestrian Program			0	Fairfax County	☐	☐	☐	I	☐	☐	F	$58,000
331	516	Gallows Road On Road Bicycle Facility	Lee hwy	Old Courthouse Road	0	VDOT	☑	☐	☐		☑	☑	UC	$1,099
332	304	Georgetown Pike Multi-Use Path	I-495	Route 7	2	VDOT	☐	☑	☐		☐	☐	UC	$845
333	49	Great Falls Street Trail	Crutchfeild Street	Hutchinson Street		Fairfax County, VDOT	☐	☐	☐		☐	☐	C	$596
334	421	Holmes Run Stream Valley	Columbia Pike	Glenn Hills Park / Alexandria	0	Fairfax County Park Authority	☐	☑	☐		☐	☐	C	$1,268
335	18	Huntington Metro Station Vicinity	Pedestrian Improvements			VDOT, Coalition for Smarter Growth	☐	☐	☐	S	☑	☑	C	$174
336	548	I-495 HOT Lanes	I-95	MD State Line	0	VDOT	☐	☐	☐		☑	☑	UC	1,647,493
337	632	Lawyers Road	Reston Parkway	Myrtle Lane	0	VDOT, Reston	☑	☐	☐		☐	☐	F	$5
338	428	Lee Highway	Monument Drive		0	Fairfax County	☐	☐	☐		☐	☐	C	
339	439	Leesburg Pike	Magarity Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
340	442	Leesburg Pike	South Jefferson Street		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
341	443	Leesburg Pike	Tyco Road/Westwood Center Drive		0	Fairfax County, WMATA	☐	☐	☐		☐	☐	F	
342	444	Leesburg Pike	Tysons Square Center Entrance		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
343	445	Lewinsville Road	Balls Hill Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
344	449	Little River Turnpike	Oasis Drive	Beauregard	0	VDOT, Fairfax County	☐	☐	☐	I	☑	☑	C	$933
345	448	Little River Turnpike	Braddock Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
346	255	Lorton Road Widening	US 1	Route 748	1	VDOT	☑	☑	☐		☑	☑	C	$9,000
347	455	North Kings Highway	Huntington Metro		0	Fairfax County	☐	☐	☐	I	☐	☐	F	
348	193	NoVi (Northern Vienna) Trail	Phase I			VDOT, Fairfax County	☐	☐	☐		☑	☑	F	$303
349	460	Old Keene Mill Road	Shiplett Boulevard		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
350	461	Old Keene Mill Road	Sydenstricker Road		0	Fairfax County	☐	☐	☐	I	☐	☐	C	

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
351	554	Pohick Stream Valley CCT reroute	Dominion Powerline Easement	Forest View	0	Fairfax County Park Authority	☐	☐	☐		☐	☐	C	$650
352	555	Pohick VRE Trail	Burke Station VRE	Burke Village Shopping Center	1	Fairfax County Park Authority, Fairfax County	☐	☑	☐		☐	☐	U	$1,270
353	484	Richmond Highway	Old Mill Road/Mt. Vernon Memorial Highway		0	Fairfax County	☐	☐	☐	I	☐	☐	C	
354	479	Richmond Highway Pedestrian Safety Improvements	Ladson Ln, Lukens Ln, Backlick Rd, Kings,	Belford Drive S., Frye Road, Mohawk Lane	0	Fairfax County	☐	☐	☐	I	☐	☐	P	
355	280	Roberts Road	Braddock Road	Shenandoah Lane	0.3	Fairfax County	☐	☐	☐		☐	☐	P	
356	214	Route 1 widening	Telegraph Road	Lorton Road	1	VDOT	☐	☑	☐		☑	☑	C	$23,326
357	524	Route 29 Bridge Replacement over Rocky Run			0	VDOT	☐	☐	☐		☑	☑	P	$15,000
358	527	Route 50 Intersection Improvements @ Patrick Henry			0	VDOT	☐	☐	☐		☐	☐	F	$786
359	105	Route 7 Widening	Rolling Holly Drive	Tyco Road	1	VDOT	☐	☑	☐		☑	☑	P	$37,263
360	556	Spring Hill Rec Center Connector	Spring Hill Recreation Center	Spring Hill Farm HOA	0	Fairfax County Park Authority	☐	☐	☐		☐	☐		$120
361	284	Stringfellow Road	Fair Lakes Boulevard	Route 50	2	VDOT, Fairfax County	☐	☑	☑		☐	☐	P	$46,000
362	285	Sunset Hills Road	Plaza America		0	Fairfax County	☐	☐	☐		☐	☐		
363	515	Telegraph Road Widening	Leaf Road	South Kings Hwy	0	VDOT	☑	☑	☐		☑	☑	P	$97,000
364	199	Trail and Pedestrian Improvements	Fairfax County wide			VDOT, Fairfax County	☐	☐	☐	S	☑	☑	F	$1,600
365	290	Trap Road	Wolf Trap Farm Park	Beulah Road	1	VDOT	☐	☐	☑		☑	☑	C	$2,242
366	177	Tysons Corner	Pedestrian Improvements Identified by	the HJR 276 Committee		VDOT, Fairfax County	☐	☐	☐	I	☑	☑	C	$123
367	292	Tysons Priority Access Improvement Projects			0	Fairfax County	☐	☐	☐		☐	☐		
368	305	US 29 Widening	WEST MERRILEE DRIVE	ROUTE I-495	1	VDOT, Fairfax	☐	☑	☐		☑	☑	P	$119,000
369	137	US 50 install median barrier & fence	VA 7	Patrick Henry Drive	0	VDOT, Fairfax County	☐	☐	☐	S	☑	☑	C	$601
370	256	US 50 Pedestrian Bridge	Vicinity of the Seven Corners Shopping Center			VDOT, Fairfax County	☐	☐	☐	I	☑	☑	C	$5,353

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
371	85	US 50 Pedestrian Improvements	Jaguar Trail	Seven Corners		VDOT, Fairfax County	☐	☐	☐	S	☑	☑	P	$3,000
372	189	VA 193 - Georgetown Pike Trail	Innsbruck Road	River Bend Road	4	VDOT, Fairfax County	☐	☑	☐		☑	☑	P	$1,468
373	14	Walker Road Trail	Columbine Street	Colvin Run Road	2	VDOT, Fairfax County	☐	☑	☐		☑	☑	F	$447
374	239	West Ox Road (route 608)	Ox Trail Road	Lawyers Road	2	VDOT	☐	☑	☐		☑	☑	C	$11,300

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
375	60	Sugarland Run Trail	W&OD Trail	Fairfax County's Sugarland Run Trail	1	VDOT, Town of Herndon	☐	☑	☐		☑	☑	C	$531

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
376	528	Atlantic Blvd	Church Road (Rt. 625)	Magnolia Road (Rt. 1525)	0	VDOT	☐	☐	☐		☐	☐	UC	$24,000
377	269	BATTLEFIELD PARKWAY - 4 LANES ON 6 LANE R/W	KINCAID BOULEVARD	ROUTE 7	1	VDOT	☐	☑	☑		☑	☑	C	$30,000
378	519	Clarks Gap Ped Signals			0	VDOT	☐	☐	☐		☐	☐	C	$1,500
379	270	Loudoun Cnty Pkwy WIDEN UNPVD 2 LN TO 4 LNS DIV ON	1.9 MILES SOUTH ROUTE	0.5 MILE SOUTH ROUTE 7	1	VDOT	☐	☑	☑		☑	☑	C	$12,000
380	309	Old Ox Road Widening (Rt. 606)	Mills Road (Rt. 621)	Dulles Greenway (Rt. 267)	5	VDOT,	☐	☑	☐		☐	☐	P	$49,450
381	271	PACIFIC BOULEVARD (MPO PROJECT	AUTOWORLD DRIVE (NORTHERN TERMINUS	SEVERN WAY	1	VDOT	☐	☑	☐		☑	☑	UC	$10,000
382	526	Route 7 Sidewalk	NORTH SIDE OF WEST MAIN STREET; NORTH 28TH STREET;	NORTH 33RD STREET	0	VDOT	☐	☐	☐		☑	☑	F	$845
383	224	VA 846 (Sterling Boulevard Landscaping)	VA 28	US 7		VDOT, Loudoun County	☐	☐	☐	S	☑	☑	C	$53
384	259	W&OD Trail Extension	W&OD Trail End (Purcellville)	Round Hill	3	VDOT, Loudoun County	☐	☑	☐		☑	☑	F	$1,700
385	69	W&OD/White's Ferry Connection to C&O	W&OD	Potomac River at White's Ferry		VDOT, Northern Virginia Regional Park	☐	☐	☐		☐	☐		

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
386	16	US 50 widening	Pleasant valley Drive	Lee Road	1	VDOT	☐	☑	☐		☑	☑	F	$48,247

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
387	211	123 Widnening	Davis Road	South Burke Lake Road	9	VDOT	☐	☑	☐		☐	☐	C	$6,181

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
388	308	234 Off-Road Multi Use Trail	Lake Jackson Drive	PW Parkway	1	VDOT	☐	☑	☐		☑	☑	UC	$662
389	525	Balls Ford Road Widening	Bus 234	234	0	VDOT	☐	☑	☐		☑	☑	P	
390	306	Bus 234 Add Signalized Crosswalks	All Major Intersections	All Major Intersections		VDOT	☐	☐	☐	I	☐	☐	F	$650
391	307	Bus 234 Sidewalk/Ramps Improvments	Balls Ford Road	Godwin Drive		VDOT	☐	☐	☐	I	☑	☑	F	$515
392	171	Linton Hall Road Widening	Glenkirk Road	Devlin Road	3	VDOT	☐	☑	☐		☑	☑	UC	$8,000
393	523	Old Bridge Road Sidewalk	Mohican	Oakwood Drive	0	VDOT	☐	☐	☐		☐	☐	UC	$749
394	522	Old Bridge Road Sidewalk	Titania	Crickett	0	VDOT	☐	☐	☐		☐	☐	F	$1,672
395	517	Route 234 and Rotue 1 Interchange	.4 miles east of route 1	.4 Miles west of Route 1	0	VDOT	☐	☑	☐		☑	☑	P	$87,000
396	164	Route 28 Trail Extension	Fauquier Co. Line	Vint Hill Road	7	VDOT	☐	☑	☐		☑	☑	P	$6,500
397	102	VA 234 Bike Trail	US 1 to I-95 &	Montclair to vic. Manassas	9	VDOT	☐	☑	☐		☑	☑	U	$1,161

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
398	226	Multiple Sidewalk Enhancements	Purcellville			VDOT	☐	☐	☐	S	☐	☐	F	$500
399	254	PURCELLVILLE - BICYCLE ACCESS TO HIGH SCHOOL & W&O	Main Street	W&OD Trail	1	VDOT	☐	☑	☐		☐	☐	F	$460

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
400	248	Pedestrian/Bicycle Plaza & Pathways	Town of Clifton	- Phase II		VDOT	☐	☐	☐	S	☑	☑	F	$70

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
401	11	Main Street	Town of Hamilton (Improvements)			VDOT, Town of Hamilton	☐	☐	☐	S	☑	☑	F	$47

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
402	210	Town of Haymarket (Streetscaping)	Phase 1			VDOT, Town of Haymarket	☐	☐	☐	S	☐	☐	C	$1,008
403	4	Town of Haymarket Streetscaping	Washington Street	Phase II		VDOT, Town of Haymarket	☐	☐	☐	S	☑	☑	F	$2,026

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
404	549	Folly Lick Trail Connection	North of Herndon Pkwy at existing Folly Lick Trail	Future Herndon Monroe Metrorail station	0	Town of Herndon, Fairfax County	☐	☐	☐		☑	☐	P	$2,000
405	550	W&OD Trail Crossing/Crestview Drive Overpass	W&OD Trail at Crestview Drive	W&OD Trail at Crestview Drive	0	Town of Herndon, Northern Virginia Regional Park Authority	☐	☐	☐		☐	☐	P	$1,125

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
406	70	PEDESTRIAN STUDY & IMPROVEMENTS	Town of Hillsboro	On 704		VDOT	☐	☐	☐	S	☐	☐	P	$15,348

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
407	184	Ped & Bike Path Network	Town of Lovettsville		6	VDOT, Town of Lovettsville	☐	☑	☐	S	☑	☑	P	$450

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	Project ID	Project/Facility Name	From	To	Length (Miles)	Responsible Agencies	Bike	Path	Side walk	Spot/ Area	In CLRP	In TIP	Status	Cost
408	227	Potomac Avenue	CSX Railroad	Potomac River		VDOT, Town of Quantico	☐	☐	☐	S	☑	☑	C	$871
409	61	Potomac Transportation Facility	AMTRAK / VRE Station	Potomac River		VDOT, Town of Quantico	☐	☐	☐	S	☑	☑	C	$512

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Appendix B

Data Dictionary and Sample Database Entry Form

For the Regional Database of Bicycle and Pedestrian Projects in the Long-Range Bicycle and Pedestrian Plan for the National Capital Region

FIELD	EXPLANATION
COG Project ID	COG's internal identifying number for the project in this database
Agency Project ID	The responsible agency's project identifying number
Project Name	Descriptive name provided by the sponsoring agency
From	Project Limits
To	Project Limits
Length of Project	Length of the project from start to finish. Example: if a project consists of four miles of road with a continuous bike lane and sidewalk, the project length is four miles.
Jurisdiction(s)	Jurisdiction(s) in which the project is located
State	State or States in which the project is located.
Agency	Lead agency that is responsible for implementing the project
Secondary Agency	Other agency involved in the project
Cost	In thousands of dollars. As many projects in the plan may not be built for many years, and have not been fully scoped, this can be a very rough estimate. If a project is part of a larger project the total project cost is *not* listed, only that portion of the cost which is attributable to the bicycle or pedestrian facility. Use of a rule of thumb for such estimates was acceptable, i.e. 3% of total project cost. Many projects do not have a cost estimate available.
URL for more project information	If the project has a web site, or if the agency has more detail on its web site, the URL may be listed.
Project Manager Name	If the project has a project manager, his or her name may be listed.
Project Manager's Phone	
Project Manager's E-mail	
Project is in the CLRP	Project is in the Financially Constrained Long-Range Transportation Plan for the National Capital Region, and therefore is officially considered to have funding available to support project completion.
Project is in the TIP	Project is in the most recent National Capital Region Transportation Improvement Program with specific funding amounts identified for program completion.

Project is Part of a Larger Project	Is the project part of a larger project, i.e. a highway, bridge, or transit project?
Length of Bike Lane	Bike lanes are striped lanes at least 4' wide in the public right-of-way, marked for the exclusive use of bicyclists. If a bike lane is found on both sides of the street for four miles, it should be reported as four miles of bike lane, not eight.
Length of Multi-Use Path	A paved or hard-surface path separated from traffic, officially designated for bicycles and other non-motorized users. Should be at least 8' wide.
Length of Sidewalk	Sidewalks are usually concrete, less than 8' wide, and have other design characteristics (street furniture, limited sight-lines) that render them unsuitable for all but the slowest bicyclists.
Type of Spot/Area Improvement	For non-linear projects. The pull-down menu gives the following options: Type of Improvement — Code Letter 1. Pedestrian Intersection Improvement — I 2. Pedestrian/Bicycle Bridge or Tunnel — B 3. Traffic Calming — TC 4. Streetscape/Pedestrian Improvements — S 5. Bicycle Parking — P 6. Bicycle Route Marking — BR 7. Other — O
Path Alignment	Is the multi-use path along a road, or is it on its own right-of-way? This field is meant to distinguish between side-paths, which are built adjacent to a road and cross numerous drive-ways and intersections, and a multi-use path on its own right of way, such as an old railroad, canal tow-path, or stream valley. Paths built along limited-access highways and parkways such at the Mount Vernon Trail should be listed as being built on an independent route, since they have few intersection or driveway conflicts, and are set back some distance from the roadway for most of their length.
Status	The pull-down menu offers the following options: Code Letter 1. Fully Funded[1] — F 2. Partially Funded — P 3. Unfunded — U 4. Under Construction — UC 5. Complete — C

[1] "Funded" indicates that the sponsoring agency has considered funding for completion of this project to be reasonably available within projected funding sources. "Unfunded" indicates, that while the project has been identified, there is no projected funding to support its completion at this time.

	This database is meant to list planned facilities rather than existing facilities, but since 2006 many of the projects in the plan have been completed.
Year of Completion or Implementation	If the project has been completed or implemented, in what year did that happen?
Project Within a Regional Activity Center	Is the project located with in a regional activity center or cluster? See the link for on-line information on activity centers and clusters. A paper map of centers and clusters, which is easier to read than the one on the web, will be sent to anyone who requests one.
Project is Between Regional Activity Centers	Project connects one regional activity center or cluster with another
Maintenance	Project is primarily maintenance or reconstruction of an existing facility
Project Connects to a Transit Facility	Project connects to a metrorail station, commuter rail station, or transit center
BikeNetConnect	Bicycle Network Connectivity. Does the project improve the connectivity of the regional bicycle network? Does it connect to any existing bicycle facilities?
Pedestrian Safety Project	Is the primary purpose of this project to improve pedestrian safety?
Project Identified as a Regional Priority*	Is the project one of the regional priority unfunded bicycle and pedestrian projects recommended by the Transportation Planning Board for consideration in the TIP?

Transportation Planning Board
National Capital Region Bicycle and Pedestrian Plan

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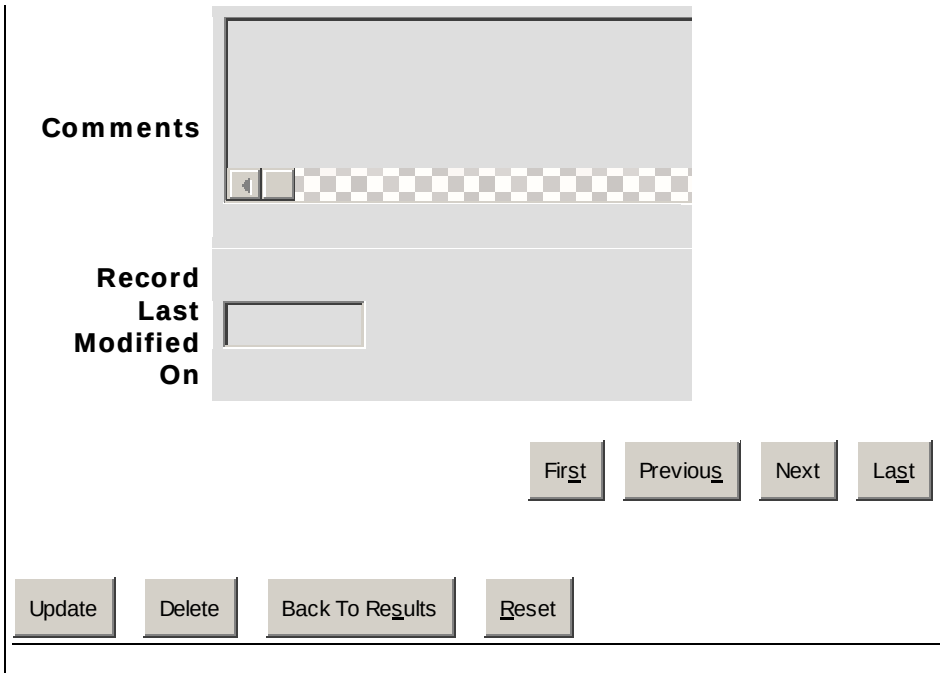
Related Records: Agency

COG Project ID	167967369
Agency Project ID	
Project Name	Metropolitan Branch Trail
From	Union Station
To	Takoma Park
Length of Project	7 (miles)
Description	Construct a 7 mile trail along the red line from U
Jurisdiction (s)	Washington
State	DC
Agency	DDOT
Secondary Agency	

Cost	$ 20000 (In Thousands)
URL for More Project Information	www.metbranchtrail.com
Project Manager's Name	Chris Holben
Project Manager's Phone	202 671 2638
Project Manager's Email	chris.holben@dc.gov
Project Is In the CLRP	◉ Yes ○ No
Corresponding CLRP Project ID	
Project Is In the TIP	◉ Yes ○ No
Corresponding TIP Project ID	
Project Is Part of a Larger Project	○ Yes ◉ No
Length of Bike Lane	2 (miles)
Length of Multi-Use Path	5 (miles)
Length of Sidewalk	(miles)
Type of Spot/Area Improveme	

nt	
Path Alignment	
Status	Partially Funded
Year of Completion or Implementation	2009
Project Within a Regional Activity Center	◉ Yes ○ No Information on Regional Activity Centers
Project Is Between Regional Activity Centers	◉ Yes ○ No
Maintenance	○ Yes ◉ No
Project Connects To a Transit Facility	◉ Yes ○ No
BikeNetConnect	◉ Yes ○ No
Pedestrian Safety Project	○ Yes ◉ No
Project Is In Local Plan	◉ Yes ○ No
Project Identified as a 2005 Regional Priority	◉ Yes ○ No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Appendix C

Completed Projects from the 2006 Bicycle and Pedestrian Plan

COGProjectID	AgencyID	Project Name	From	To	Description	Jurisdiction	State	Agency
310	TAOD	Old Dominion Drive Complete Streets (phas	Lee Highway	N. Glebe Rd.	CONSTRUCT CURB & GU	Arlington County	VA	Arlington County
311	BK39	I-395 Shirlington Underpass, Four Mile Run	Shirlingotn R	West Glebe R	Construction of a new trail	Arlington County	VA	Arlington County
315	BK88	Washington Blvd Trail Phase I	Arlington Blv	Walter Reed	CONSTRUCT BIKE TRAIL	Arlington County	VA	Arlington County
383	BK59	CUSTIS TRAIL WESTOVER UNDERPASS @ I-66			REALIGN BIKE TRAIL AN	Arlington County	VA	Arlington County
37	i	I-95/I-495 Woodrow Wilson Memorial Bridg	Prince Georg	Mount Verno	Trail Crossing along the W	City of Alexandria	VA	City of Alexandria
80	b	Duke Street Pedestrian Improvements	Duke Street	Carlyle Avenu	Intersection and sidewalk i	City of Alexandria	VA	City of Alexandria
131	I	Wilkes Street Tunnel	South Royal	South Union	Tunnel serves as ped-bike	City of Alexandria	VA	City of Alexandria
385		College Park Trolley Trail	Paducah Roa	Albion Road	Phase 1 – Is a completed,	City of College Park	MD	City of College Park
24	9C61	Bicycle Route System Improvements	Citywide project		This project funds the impl	Rockville	MD	City of Rockville
161	3E60	Ped/Bike Bridge Over I-270 along MD 28	Adclare Rd a	Darnestown R	This project funds pedestri	Rockville	MD	City of Rockville
167	3C60	Millennium Trail South - Wootton Parkway	W. Edmonst	Veirs Mill Rd	This project funds a one-m	Rockville	MD	City of Rockville
75	ZU0	Union Station Bike Station	(Union Station)		Design and construct a bic	Washington	DC	DDOT
181		Watts Branch Trail	Minnesota A	62nd Street,	Linear park along Watts B	Washington	DC	DDOT
49		Great Falls Street Trail	Crutchfeild S	Hutchinson S	Facilitate pedestrian acces	Fairfax County	VA	Fairfax County
386	XL	Arlington Boulevard	Patrick Henry Drive		Intersection improvement,	Fairfax County	VA	Fairfax County
387	XL	Arlington Boulevard Pedestrian Bridge	Peyton Rand	Seven Corne	Pedestrian bridge and tie-i	Fairfax County	VA	Fairfax County
395	XL	Centreville Road	Green Trails Boulevard		Intersection improvements	Fairfax County	VA	Fairfax County
396	XL	Centreville Road	New Braddock Road		Intersection improvements	Fairfax County	VA	Fairfax County
397	XL	Centreville Road	Sunrise Valley Drive		Intersection improvements	Fairfax County	VA	Fairfax County
402	UPC50108	Columbia Pike	Powell Lane	Homes Run	600 linear feet of 8' walkwa	Fairfax County	VA	Fairfax County
407	XL	Dolley Madison Boulevard	Great Falls Street/Lewinsv		Intersection improvements	Fairfax County	VA	Fairfax County
408	XL	Fairfax County Parkway	Old Keene Mill Road		Intersection improvements	Fairfax County	VA	Fairfax County
428	XL	Lee Highway	Monument Drive		Intersection improvements	Fairfax County	VA	Fairfax County
439	XL	Leesburg Pike	Magarity Road		Add missing sidewalk alon	Fairfax County	VA	Fairfax County
442	XL	Leesburg Pike	South Jefferson Street		Intersection improvements	Fairfax County	VA	Fairfax County
445	XL	Lewinsville Road	Balls Hill Road		Intersection improvements	Fairfax County	VA	Fairfax County
448	XL	Little River Turnpike	Braddock Road		Intersection improvements	Fairfax County	VA	Fairfax County
460	XL	Old Keene Mill Road	Shiplett Boulevard		Intersection improvements	Fairfax County	VA	Fairfax County
461	XL	Old Keene Mill Road	Sydenstricker Road		Intersection improvements	Fairfax County	VA	Fairfax County
484	XL	Richmond Highway	Old Mill Road/Mt. Vernon N		Intersection improvements	Fairfax County	VA	Fairfax County
264	XL	Accotink Stream Valley Trail - Dam to Hunt	Lake Accotin	Hunter Villag	Build multi-use trail from d	Fairfax County	VA	Fairfax County Park Authority
394	XL	Centreville Road	Compton Road		Intersection improvements	Fairfax County	VA	Fairfax County Park Authority
404	XL	Cub Run Valley Stream Connections	Samuels Pin	Cub Run Rec	Build two connections into	Fairfax County	VA	Fairfax County Park Authority
405	XL	Danbury Forest	Lake Accotin	Danbury Fore	Build multi-use trail and ne	Fairfax County	VA	Fairfax County Park Authority
421	XL	Holmes Run Stream Valley	Columbia Pil	Glenn Hills P	Build multi-use trail & five s	Fairfax County	VA	Fairfax County Park Authority
554	XL	Pohick Stream Valley CCT reroute	Dominion Po	Forest View	Provide two new fair-weath	Fairfax County	VA	Fairfax County Park Authority
557	XL	Clarks Branch Bridge at Riverbend Park	Clarks Branch		90' pedestrian/ equestrian	Fairfax County	VA	Fairfax County Park Authority
512		H&F Trolley Trail Phase II	Water Street	Moser Road	This trail would follow the a	Frederick County, City of I	MD	Frederick County
2		Matthew Henson Trail	Rock Creek T	East of Georgia Ave. (Alderton Road)		Montgomery County	MD	MCDOT

136	509976	Forest Glen Pedestrian Bridge	west side of	west side of C	This project consists of an	Montgomery County	MD	MCDOT
156	SP-65	Richter Farm Road	Great Senec	Clopper Roac	To be built incrementally b	Montgomery County	MD	MCDOT
185	BL-5	Westlake Drive	Westlake Te	Tuckerman L	Provides connections to R	Montgomery County	MD	MCDOT
204	SP-6	Georgetown Branch Trail	Bethesda CB	Silver Spring	Existing, but surface is tem	Montgomery County	MD	MCDOT
205	509587	North Bethesda Trail Bridges	crossings of	I-495 and I-27	Construct bicycle/pedestria	Montgomery County	MD	MCDOT
240	SP-68	Father Hurley Boulevard/Ridge Road	Germantown	Brink Road	Provides connection to Ge	Montgomery County	MD	MCDOT
196		Woodrow Wilson Bridge	Oxon Hill Ro	Virginia	This trail was completed in	Prince George's County	MD	M-NCPPC, Prince Georges County
577	23.00	Old Chapel Road Sidewalk and Bikeway	MD 197	Race Track R	This project consists of a s	Prince George's County	MD	Prince Georges County
8		Bicycle Parking (M-70A)	District-wide		M - 70A Implement Bicycle	District-wide	VA	VDOT
18	70736	Huntington Metro Station Vicinity	Pedestrian Improvements		Install pedestrian crossings	Fairfax County	VA	VDOT
30	00063578	Cross County Trail	Great Falls P	Lake Accotin	The Cross County Trail is	Fairfax County	VA	VDOT
58	00016090	Accotink Gateway Connector Trail	Daniel's Run	Pickett Road	Facility for bikes and pede	City of Fairfax	VA	VDOT
60	00052449	Sugarland Run Trail	W&OD Trail	Fairfax Coun	Construct an 8 foot paved	Herndon	VA	VDOT
61	00017600	Potomac Transportation Facility	AMTRAK / V	Potomac Rive	Construct a timber-deck tra	Town of Quantico	VA	VDOT
63	00056456	Manassas Drive Sidewalk	Andrew Drive	Euclid Avenu	Install sidewalk, curb, and	City of Manassas Park	VA	VDOT
137	56780	US 50 install median barrier & fence	VA 7	Patrick Henry	RTE 50 - INSTALL FENCE	Fairfax County	VA	VDOT
166	5554	Beulah Street	Franconia R	Franocia-Spr	This 1.3-mile section of Be	Fairfax County	VA	VDOT
177	70602	Tysons Corner	Pedestrian Ir	the HJR 276	Construct nine improveme	Fairfax County	VA	VDOT
191	5565	Burke Lake Road Widening	Fairfax Coun	Lee Chapel R	The Virginia Department o	Fairfax County	VA	VDOT
210	00016637	Town of Haymarket (Streetscaping)	Phase 1		Town of Haymarket Street	Town of Haymarket	VA	VDOT
211	13532 + 14	123 Widnening	Davis Road	South Burke Lake Road		Prince William and Fairfax	VA	VDOT
214	12906	Route 1 widening	Telegraph R	Lorton Road	Multi-use Trail added in the	Fairfax County	VA	VDOT
224	00063583	VA 846 (Sterling Boulevard Landscaping)	VA 28	US 7	Landscape to improve corr	Loudoun County	VA	VDOT
227	00060040	Potomac Avenue	CSX Railroa	Potomac Rive	Landscape, streetscape, e	Town of Quantico	VA	VDOT
239		West Ox Road (route 608)	Ox Trail Roa	Lawyers Roa	Widen West Ox Road from	Fairfax County	VA	VDOT
255	98	Lorton Road Widening	US 1	Route 748		Fairfax County	VA	VDOT
256	56866	US 50 Pedestrian Bridge	Vicinity of the Seven Corne		Construct a pedestrian brid	Fairfax County	VA	VDOT
262	00018782	Old Town Manassas City Square, Walkway	Phase I and Phase II		Construct Old Town pavilio	City of Manassas	VA	VDOT
269	18992	BATTLEFIELD PARKWAY - 4 LANES ON (	KINCAID BO	ROUTE 7		Loudoun County	VA	VDOT
270	58922	Loudoun Cnty Pkwy WIDEN UNPVD 2 LN T	1.9 MILES S	0.5 MILE SOUTH ROUTE 7		Loudoun County	VA	VDOT
290	72295	Trap Road	Wolf Trap Fa	Beulah Road	Feasibility and PE for ped	Fairfax County	VA	VDOT
449	63717	Little River Turnpike	Oasis Drive	Beauregard	Signalize intersection and	Fairfax County	VA	VDOT
519	60864	Clarks Gap Ped Signals				Loudoun County	VA	VDOT
632		Lawyers Road	Reston Park	Myrtle Lane	Road diet, bike lanes	Fairfax County	VA	VDOT
COGProjectID	AgencyID	Project Name	From	To	Description	Jurisdiction	State	Agency

Appendix D
Cordon Counts

Table 2-3
2002 Metro Core Cordon Count
Inbound Bicycles and Outbound Bicycles (outbound 1999 and 2002 only)
1986 - 2002
6:30 - 9:30 A.M. and 3:30 - 6:30 P.M. (P.M. 1999 and 2002 only)

Locations	1986	1987	1988	1990	1993	1996	1999		2002	
							A.M. inbound	P.M. Outbound	A.M. inbound	P.M. Outbound
D.C. (Sectors 4-9)	474	470	568	771	799	920	1,152	1,025	1,379	1,113
Va. (Sectors 1-3)	N/C	N/C	N/C	N/C	N/C	N/C	409	565	645	425
Totals Crossing Cordon Line	- -	- -	- -	- -	- -	- -	1,561	1,590	2,024	1,538
14th Street Bridge	131	78	107	139	157	211	197	197	300	238
Memorial Bridge	49	124	146	219	120	232	220	104	104	143
T. Roosevelt Bridge	14	13	2	7	25	59	81	62	18	89
Key Bridge	123	92	104	106	64	86	124	93	103	92
Totals Crossing Potomac	317	307	359	471	366	588	622	456	525	562

N/C - not counted

Numbers in this table are not statistically significant when combined with other Metro Core Cordon Count data

TABLE 2-4
BICYCLE COUNT ON RADIAL TRANSPORTATION FACILITIES CROSSING THE CAPITAL BELTWAY

	Inbound Bicycle Traffic 6:30 - 9:30 A.M.		
Year	**1995**	**1998**	**2001**
Count	**220**	**263**	**214**

Appendix E
Metrorail Origin Station by All Day Walk Mode of Access

Station Name	Walk	Bike	Drive	Drop off	Metrobus	DASH	C. Rail	ART	DC CIRC	FFX CUE	FFX CONN	RIDE ON	Oth. Bus	PG BUS	Carpool	Taxi
CAPITOL SOUTH	95.0%	0.3%	2.1%	0.9%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.3%	0.2%
JUDICIARY SQ.	94.2%	0.4%	2.3%	1.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%
FARRAGUT NORTH	93.7%	0.2%	1.2%	0.9%	2.3%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.6%	0.0%	0.3%	0.0%
FEDERAL CENTER	93.7%	0.2%	2.4%	1.1%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.4%
FEDERAL TRIANGLE	93.2%	0.4%	2.7%	0.6%	1.7%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.8%	0.0%	0.4%	0.0%
ARCHIVES-NAVY MEMORIA	93.0%	0.0%	1.7%	0.7%	3.6%	0.0%	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.2%
FARRAGUT WEST	92.2%	0.4%	1.4%	0.5%	4.2%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.6%	0.0%	0.3%	0.1%
COURT HOUSE	90.7%	0.4%	4.0%	1.5%	1.9%	0.0%	0.0%	0.3%	0.0%	0.2%	0.0%	0.0%	0.4%	0.0%	0.4%	0.2%
MCPHERSON SQUARE	90.4%	0.6%	2.2%	1.2%	4.7%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.2%	0.1%
METRO CENTER	90.4%	0.1%	2.1%	1.8%	3.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	1.6%	0.0%	0.3%	0.3%
GALLERY PLACE	89.9%	0.3%	1.8%	1.6%	5.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.2%	0.4%
SMITHSONIAN	89.7%	0.3%	2.9%	2.3%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	1.2%	0.2%
MT. VERNON SQUARE	88.8%	1.1%	3.5%	3.5%	1.6%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%
WATERFRONT	88.1%	1.2%	3.1%	4.5%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
WOODLEY PARK ZOO	87.8%	1.6%	2.1%	2.8%	3.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	1.5%
U STREET	86.7%	0.5%	2.0%	3.1%	7.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%
FOGGY BOTTOM	86.3%	0.7%	1.9%	2.2%	4.2%	0.0%	0.0%	0.0%	0.5%	0.1%	0.0%	0.0%	3.6%	0.0%	0.3%	0.2%
VIRGINIA SQUARE	86.2%	0.6%	6.4%	4.6%	1.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.4%	0.1%
EASTERN MARKET	85.8%	1.0%	4.5%	3.4%	5.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
DUPONT CIRCLE	85.4%	0.4%	1.0%	1.5%	6.1%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	4.8%	0.0%	0.2%	0.1%
CLEVELAND PARK	84.2%	0.4%	6.1%	1.7%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
NAVY YARD	83.6%	0.0%	2.7%	5.6%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.9%	0.0%
SHAW HOWARD U	83.4%	0.3%	3.3%	3.3%	8.1%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.3%	0.0%	0.6%	0.2%
VAN NESS	82.5%	0.9%	3.8%	4.2%	7.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.7%	0.0%	0.4%	0.1%
CLARENDON	81.8%	1.3%	9.2%	4.6%	1.5%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.9%	0.0%
NEW YORK AVE	81.2%	1.2%	4.1%	4.4%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.3%	0.0%
L'ENFANT PLAZA	79.9%	0.3%	3.1%	2.2%	3.5%	0.0%	4.7%	0.0%	0.3%	0.0%	0.0%	0.0%	5.0%	0.0%	0.8%	0.3%
COLUMBIA HEIGHTS	79.2%	0.4%	1.0%	2.4%	14.6%	0.0%	0.0%	0.3%	1.2%	0.0%	0.0%	0.0%	0.6%	0.0%	0.2%	0.0%
CRYSTAL CITY	79.0%	0.6%	3.5%	2.6%	6.4%	0.0%	5.4%	0.2%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.1%	0.1%
ARLINGTON CEMETERY	75.8%	0.0%	7.4%	6.5%	8.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.9%
BALLSTON	73.0%	0.4%	7.0%	5.3%	9.2%	0.0%	0.0%	2.6%	0.2%	0.0%	0.0%	0.0%	1.6%	0.0%	0.6%	0.2%
EISENHOWER AVENUE	72.7%	0.6%	5.4%	13.3%	0.6%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	1.0%	0.0%
ROSSLYN	71.7%	0.3%	3.2%	7.8%	9.1%	0.0%	0.0%	1.1%	0.1%	0.0%	0.0%	0.0%	6.3%	0.0%	0.5%	0.0%
BETHESDA	70.4%	0.8%	9.3%	7.6%	1.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	8.1%	1.6%	0.0%	0.3%	0.1%
STADIUM ARMORY	69.2%	0.2%	12.2%	4.3%	13.4%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%
MEDICAL CENTER	68.9%	2.0%	3.3%	5.8%	8.1%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	5.8%	5.3%	0.0%	0.6%	0.0%
FRIENDSHIP HEIGHTS	68.5%	0.9%	7.0%	5.7%	10.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	6.2%	1.3%	0.0%	0.3%	0.0%
NATIONAL AIRPORT	65.4%	0.2%	13.7%	7.9%	4.1%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	0.2%	1.8%
KING STREET	65.4%	0.5%	2.5%	8.9%	5.0%	13.8%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	2.9%	0.0%	0.3%	0.3%
BRADDOCK ROAD	63.4%	1.6%	6.1%	8.2%	6.0%	11.8%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	0.3%
WHITE FLINT	62.7%	0.6%	15.8%	8.2%	2.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	9.0%	0.6%	0.0%	0.7%	0.1%
PENTAGON CITY	61.8%	0.7%	7.5%	5.9%	11.8%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	11.2%	0.0%	0.1%	0.2%
GEORGIA AVENUE	61.5%	0.3%	4.0%	4.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
UNION STATION	60.7%	0.5%	2.0%	2.6%	4.5%	0.0%	27.4%	0.0%	0.5%	0.0%	0.0%	0.0%	1.2%	0.0%	0.2%	0.3%
TENLEY TOWN	60.2%	0.8%	7.5%	6.5%	9.3%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	14.7%	0.0%	0.9%	0.0%
POTOMAC AVENUE	54.6%	0.8%	5.0%	3.9%	35.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.3%
BENNING ROAD	52.9%	0.0%	9.4%	11.3%	26.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BROOKLAND CUA	52.3%	0.0%	6.9%	7.0%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.0%	0.0%	0.0%	0.0%
TAKOMA PARK	52.1%	0.9%	9.8%	8.3%	12.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	15.0%	1.2%	0.0%	0.1%	0.1%

SILVER SPRING	51.3%	0.7%	9.2%	5.6%	19.8%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	10.4%	1.5%	0.0%	0.4%	0.1%
DEANWOOD	49.0%	0.7%	23.8%	10.3%	15.8%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TWINBROOK	46.3%	2.7%	32.5%	6.8%	2.3%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	7.2%	0.2%	0.0%	1.6%	0.0%
PRINCE GEORGE'S PLAZA	41.9%	1.3%	22.6%	3.6%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	3.3%	0.3%	0.0%
WEST HYATTSVILLE	41.3%	4.0%	27.9%	9.0%	9.9%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.2%	5.2%	1.5%	0.5%
FOREST GLEN	40.4%	1.8%	37.8%	12.9%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.0%	0.0%	1.2%	0.2%
EAST FALLS CHURCH	39.8%	3.0%	22.3%	17.4%	10.7%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	1.8%	0.4%
WHEATON	38.3%	0.7%	36.6%	9.5%	8.1%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	4.6%	0.3%	0.0%	1.5%	0.0%
PENTAGON	37.3%	0.1%	3.9%	5.9%	42.2%	3.2%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	4.8%	0.0%	1.6%	0.1%
CONGRESS HEIGHTS	36.4%	1.1%	15.1%	12.4%	34.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%
MINNESOTA AVENUE	36.0%	0.0%	12.7%	9.1%	41.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%
CAPITOL HEIGHTS	29.9%	0.0%	33.5%	12.4%	13.9%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.5%	7.0%	1.7%	0.9%
ROCKVILLE	29.5%	1.1%	22.4%	14.8%	5.2%	0.0%	4.4%	0.0%	0.0%	0.0%	0.0%	20.4%	0.7%	0.0%	1.3%	0.2%
GROSVENOR	28.9%	0.5%	48.4%	10.8%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.8%	0.0%	0.0%	2.0%	0.4%
RHODE ISLAND AVENUE	27.1%	0.2%	22.0%	9.2%	39.3%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	1.0%	0.0%	0.8%	0.0%
DUNN LORING	23.8%	1.8%	38.0%	17.1%	8.2%	0.0%	0.0%	0.3%	0.2%	0.0%	4.9%	0.0%	3.9%	0.0%	1.0%	0.8%
FORT TOTTEN	22.8%	0.0%	13.2%	12.9%	49.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.5%
SUITLAND	20.8%	0.0%	42.9%	8.8%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	1.9%	0.6%	1.4%
NAYLOR ROAD	20.6%	0.0%	29.0%	14.9%	29.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	0.4%	0.3%
COLLEGE PARK	20.6%	1.8%	37.2%	9.8%	10.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	0.0%	1.3%	0.2%
CHEVERLY	19.8%	0.8%	43.3%	17.6%	13.3%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%	1.9%	1.8%	0.8%
HUNTINGTON	18.7%	0.7%	46.8%	9.0%	5.1%	0.0%	0.0%	0.0%	0.1%	0.1%	13.6%	0.0%	4.4%	0.0%	1.2%	0.3%
ANACOSTIA	17.8%	0.6%	13.7%	5.3%	55.4%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	6.5%	0.0%	0.1%	0.0%
VAN DORN STREET	14.0%	0.9%	18.4%	17.9%	4.4%	10.6%	0.0%	0.3%	0.0%	0.0%	13.2%	0.0%	18.2%	0.0%	1.4%	0.7%
GLENMONT	12.9%	0.5%	48.6%	17.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.7%	0.7%	0.0%	0.9%	0.2%
LARGO TOWN CENTER	11.4%	0.3%	61.5%	11.8%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	1.4%	0.4%
VIENNA	11.0%	0.6%	52.7%	11.8%	11.0%	0.0%	0.0%	0.0%	0.0%	5.7%	3.4%	0.0%	2.4%	0.0%	1.4%	0.0%
ADDISON RD	10.4%	0.0%	33.6%	12.3%	34.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9%	0.6%	1.4%
SOUTHERN AVENUE	10.2%	0.0%	36.1%	8.0%	39.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	3.5%	1.0%	0.2%
NEW CARROLLTON	9.3%	0.2%	54.2%	12.6%	16.5%	0.0%	2.9%	0.0%	0.2%	0.0%	0.0%	0.0%	0.8%	0.9%	1.3%	1.1%
WEST FALLS CHURCH	8.8%	0.4%	41.4%	12.7%	14.6%	0.0%	0.0%	0.0%	0.2%	0.4%	0.0%	0.0%	18.7%	0.0%	1.4%	1.3%
BRANCH AVENUE	7.4%	0.0%	69.3%	11.8%	7.5%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.4%	1.6%	1.6%	0.3%
LANDOVER	6.7%	0.0%	67.3%	7.5%	16.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.4%	0.6%
FRANCONIA-SPRINGFIELD	6.7%	0.7%	60.7%	10.8%	3.3%	0.0%	1.3%	0.1%	0.1%	0.1%	8.1%	0.0%	5.7%	0.0%	1.8%	0.7%
MORGAN BLVD	6.0%	0.0%	69.0%	21.7%	0.9%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%
GREENBELT	5.2%	0.2%	60.9%	10.4%	16.7%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	2.9%	1.4%	0.3%
SHADY GROVE	3.7%	0.6%	50.7%	11.6%	2.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	21.9%	7.4%	0.0%	1.0%	0.1%
Station Name	**Walk**	**Bike**	**Drive**	**Drop off**	**METROBUS**	**DASH**	**C. Rail**	**ART**	**DC CIRC**	**FFX CUE**	**FFX CONN**	**RIDE ON**	**Oth. Bus**	**PG BUS**	**Carpool**	**Taxi**
Daily Total	62.1%	0.5%	13.7%	5.5%	9.9%	0.4%	1.7%	0.1%	0.2%	0.1%	0.5%	1.5%	2.7%	0.2%	0.6%	0.2%

Appendix F

Metrorail Origin Station by All Day Bicycle Mode of Access

Station Name	Bike	DASH	C. Rail	ART	Drop off	DC CIRC	Drive	FFX CUE	FFX CONN	METROBUS	RIDE ON	Oth. Bus	PG BUS	Carpool	Taxi	Walk
WEST HYATTSVILLE	4.0%	0.0%	0.0%	0.0%	9.0%	0.5%	27.9%	0.0%	0.0%	9.9%	0.0%	0.2%	5.2%	1.5%	0.5%	41.3%
EAST FALLS CHURCH	3.0%	0.0%	0.0%	1.6%	17.4%	0.0%	22.3%	0.0%	0.0%	10.7%	0.0%	3.1%	0.0%	1.8%	0.4%	39.8%
TWINBROOK	2.7%	0.0%	0.0%	0.0%	6.8%	0.4%	32.5%	0.0%	0.0%	2.3%	7.2%	0.2%	0.0%	1.6%	0.0%	46.3%
MEDICAL CENTER	2.0%	0.0%	0.0%	0.2%	5.8%	0.0%	3.3%	0.0%	0.0%	8.1%	5.8%	5.3%	0.0%	0.6%	0.0%	68.9%
FOREST GLEN	1.8%	0.0%	0.0%	0.0%	12.9%	0.0%	37.8%	0.0%	0.0%	1.0%	3.7%	1.0%	0.0%	1.2%	0.2%	40.4%
COLLEGE PARK	1.8%	0.0%	0.0%	0.0%	9.8%	0.0%	37.2%	0.0%	0.0%	10.7%	0.0%	18.4%	0.0%	1.3%	0.2%	20.6%
DUNN LORING	1.8%	0.0%	0.0%	0.3%	17.1%	0.2%	38.0%	0.0%	4.9%	8.2%	0.0%	3.9%	0.0%	1.0%	0.8%	23.8%
WOODLEY PARK ZOO	1.6%	0.0%	0.0%	0.0%	2.8%	0.1%	2.1%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.2%	1.5%	87.8%
BRADDOCK ROAD	1.6%	11.8%	0.0%	0.0%	8.2%	0.3%	6.1%	0.0%	0.0%	6.0%	0.0%	2.2%	0.0%	0.0%	0.3%	63.4%
CLARENDON	1.3%	0.0%	0.0%	0.4%	4.6%	0.0%	9.2%	0.0%	0.0%	1.5%	0.0%	0.4%	0.0%	0.9%	0.0%	81.8%
PRINCE GEORGE'S PLAZA	1.3%	0.0%	0.0%	0.0%	3.6%	0.0%	22.6%	0.0%	0.0%	24.0%	0.0%	3.2%	3.3%	0.3%	0.0%	41.9%
NEW YORK AVE	1.2%	0.0%	0.0%	0.0%	4.4%	0.0%	4.1%	0.0%	0.0%	6.1%	0.0%	2.8%	0.0%	0.3%	0.0%	81.2%
WATERFRONT	1.2%	0.0%	0.0%	0.0%	4.5%	0.0%	3.1%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	88.1%
MT. VERNON SQUARE	1.1%	0.0%	0.0%	0.0%	3.5%	0.9%	3.5%	0.0%	0.0%	1.6%	0.0%	0.6%	0.0%	0.0%	0.0%	88.8%
ROCKVILLE	1.1%	0.0%	4.4%	0.0%	14.8%	0.0%	22.4%	0.0%	0.0%	5.2%	20.4%	0.7%	0.0%	1.3%	0.2%	29.5%
CONGRESS HEIGHTS	1.1%	0.0%	0.0%	0.0%	12.4%	0.0%	15.1%	0.0%	0.0%	34.7%	0.0%	0.0%	0.0%	0.4%	0.0%	36.4%
EASTERN MARKET	1.0%	0.0%	0.0%	0.0%	3.4%	0.1%	4.5%	0.0%	0.0%	5.0%	0.0%	0.2%	0.0%	0.0%	0.0%	85.8%
VAN NESS	0.9%	0.0%	0.0%	0.0%	4.2%	0.2%	3.8%	0.0%	0.0%	7.1%	0.0%	0.7%	0.0%	0.4%	0.1%	82.5%
FRIENDSHIP HEIGHTS	0.9%	0.0%	0.0%	0.0%	5.7%	0.2%	7.0%	0.0%	0.0%	10.0%	6.2%	1.3%	0.0%	0.3%	0.0%	68.5%
TAKOMA PARK	0.9%	0.0%	0.0%	0.0%	8.3%	0.1%	9.8%	0.0%	0.0%	12.4%	15.0%	1.2%	0.0%	0.1%	0.1%	52.1%
VAN DORN STREET	0.9%	10.6%	0.0%	0.3%	17.9%	0.0%	18.4%	0.0%	13.2%	4.4%	0.0%	18.2%	0.0%	1.4%	0.7%	14.0%
BETHESDA	0.8%	0.0%	0.0%	0.0%	7.6%	0.1%	9.3%	0.0%	0.0%	1.7%	8.1%	1.6%	0.0%	0.3%	0.1%	70.4%
TENLEY TOWN	0.8%	0.0%	0.0%	0.0%	6.5%	0.2%	7.5%	0.0%	0.0%	9.3%	0.0%	14.7%	0.0%	0.9%	0.0%	60.2%
CHEVERLY	0.8%	0.0%	0.0%	0.0%	17.6%	0.3%	43.3%	0.0%	0.0%	13.3%	0.0%	0.3%	1.9%	1.8%	0.8%	19.8%
POTOMAC AVENUE	0.8%	0.0%	0.0%	0.0%	3.9%	0.0%	5.0%	0.0%	0.0%	35.0%	0.0%	0.0%	0.0%	0.3%	0.3%	54.6%
PENTAGON CITY	0.7%	0.0%	0.0%	0.8%	5.9%	0.0%	7.5%	0.0%	0.0%	11.8%	0.0%	11.2%	0.0%	0.1%	0.2%	61.8%
SILVER SPRING	0.7%	0.0%	1.1%	0.0%	5.6%	0.0%	9.2%	0.0%	0.0%	19.8%	10.4%	1.5%	0.0%	0.4%	0.1%	51.3%
HUNTINGTON	0.7%	0.0%	0.0%	0.0%	9.0%	0.1%	46.8%	0.1%	13.6%	5.1%	0.0%	4.4%	0.0%	1.2%	0.3%	18.7%
WHEATON	0.7%	0.0%	0.0%	0.0%	9.5%	0.2%	36.6%	0.0%	0.0%	8.1%	4.6%	0.3%	0.0%	1.5%	0.0%	38.3%
FOGGY BOTTOM	0.7%	0.0%	0.0%	0.0%	2.2%	0.5%	1.9%	0.1%	0.0%	4.2%	0.0%	3.6%	0.0%	0.3%	0.2%	86.3%
FRANCONIA-SPRINGFIELD	0.7%	0.0%	1.3%	0.1%	10.8%	0.1%	60.7%	0.1%	8.1%	3.3%	0.0%	5.7%	0.0%	1.8%	0.7%	6.7%
DEANWOOD	0.7%	0.0%	0.0%	0.0%	10.3%	0.4%	23.8%	0.0%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	0.0%	49.0%
CRYSTAL CITY	0.6%	0.0%	5.4%	0.2%	2.6%	0.0%	3.5%	0.0%	0.0%	6.4%	0.0%	2.2%	0.0%	0.1%	0.1%	79.0%
VIRGINIA SQUARE	0.6%	0.0%	0.0%	0.1%	4.6%	0.1%	6.4%	0.0%	0.0%	1.0%	0.0%	0.4%	0.0%	0.4%	0.1%	86.2%
SHADY GROVE	0.6%	0.0%	0.0%	0.0%	11.6%	0.1%	50.7%	0.0%	0.0%	2.9%	21.9%	7.4%	0.0%	1.0%	0.1%	3.7%
EISENHOWER AVENUE	0.6%	5.7%	0.0%	0.0%	13.3%	0.0%	5.4%	0.0%	0.0%	0.6%	0.0%	0.7%	0.0%	1.0%	0.0%	72.7%
MCPHERSON SQUARE	0.6%	0.0%	0.0%	0.0%	1.2%	0.2%	2.2%	0.0%	0.0%	4.7%	0.0%	0.5%	0.0%	0.2%	0.1%	90.4%
ANACOSTIA	0.6%	0.0%	0.0%	0.0%	5.3%	0.7%	13.7%	0.0%	0.0%	55.4%	0.0%	6.5%	0.0%	0.1%	0.0%	17.8%
VIENNA	0.6%	0.0%	0.0%	0.0%	11.8%	0.0%	52.7%	5.7%	3.4%	11.0%	0.0%	2.4%	0.0%	1.4%	0.0%	11.0%
WHITE FLINT	0.6%	0.0%	0.0%	0.0%	8.2%	0.2%	15.8%	0.0%	0.0%	2.2%	9.0%	0.6%	0.0%	0.7%	0.1%	62.7%
GROSVENOR	0.5%	0.0%	0.0%	0.0%	10.8%	0.0%	48.4%	0.0%	0.0%	1.2%	7.8%	0.0%	0.0%	2.0%	0.4%	28.9%
GLENMONT	0.5%	0.0%	0.0%	0.0%	17.0%	0.0%	48.6%	0.0%	0.0%	8.4%	10.7%	0.7%	0.0%	0.9%	0.2%	12.9%
KING STREET	0.5%	13.8%	0.2%	0.0%	8.9%	0.0%	2.5%	0.0%	0.1%	5.0%	0.0%	2.9%	0.0%	0.3%	0.3%	65.4%
U STREET	0.5%	0.0%	0.0%	0.0%	3.1%	0.3%	2.0%	0.1%	0.0%	7.0%	0.0%	0.0%	0.0%	0.4%	0.0%	86.7%
UNION STATION	0.5%	0.0%	27.4%	0.0%	2.6%	0.5%	2.0%	0.0%	0.0%	4.5%	0.0%	1.2%	0.0%	0.2%	0.3%	60.7%
COLUMBIA HEIGHTS	0.4%	0.0%	0.0%	0.3%	2.4%	1.2%	1.0%	0.0%	0.0%	14.6%	0.0%	0.6%	0.0%	0.2%	0.0%	79.2%
FEDERAL TRIANGLE	0.4%	0.0%	0.0%	0.1%	0.6%	0.1%	2.7%	0.0%	0.0%	1.7%	0.0%	0.8%	0.0%	0.4%	0.0%	93.2%
WEST FALLS CHURCH	0.4%	0.0%	0.0%	0.0%	12.7%	0.2%	41.4%	0.4%	0.0%	14.6%	0.0%	18.7%	0.0%	1.4%	1.3%	8.8%
COURT HOUSE	0.4%	0.0%	0.0%	0.3%	1.5%	0.0%	4.0%	0.2%	0.0%	1.9%	0.0%	0.4%	0.0%	0.4%	0.2%	90.7%

DUPONT CIRCLE	0.4%	0.0%	0.0%	0.0%	1.5%	0.4%	1.0%	0.0%	0.0%	6.1%	0.0%	4.8%	0.0%	0.2%	0.1%	85.4%
CLEVELAND PARK	0.4%	0.0%	0.0%	0.0%	1.7%	0.0%	6.1%	0.0%	0.0%	7.4%	0.0%	0.2%	0.0%	0.0%	0.0%	84.2%
BALLSTON	0.4%	0.0%	0.0%	2.6%	5.3%	0.2%	7.0%	0.0%	0.0%	9.2%	0.0%	1.6%	0.0%	0.6%	0.2%	73.0%
JUDICIARY SQ.	0.4%	0.0%	0.0%	0.0%	1.0%	0.0%	2.3%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.2%	0.1%	94.2%
FARRAGUT WEST	0.4%	0.0%	0.0%	0.1%	0.5%	0.2%	1.4%	0.0%	0.0%	4.2%	0.0%	0.6%	0.0%	0.3%	0.1%	92.2%
LARGO TOWN CENTER	0.3%	0.0%	0.0%	0.0%	11.8%	0.0%	61.5%	0.0%	0.0%	12.0%	0.0%	1.2%	0.0%	1.4%	0.4%	11.4%
GALLERY PLACE	0.3%	0.0%	0.0%	0.0%	1.6%	0.3%	1.8%	0.0%	0.0%	5.0%	0.0%	0.4%	0.0%	0.2%	0.4%	89.9%
CAPITOL SOUTH	0.3%	0.0%	0.0%	0.0%	0.9%	0.0%	2.1%	0.0%	0.0%	0.6%	0.0%	0.6%	0.0%	0.3%	0.2%	95.0%
L'ENFANT PLAZA	0.3%	0.0%	4.7%	0.0%	2.2%	0.3%	3.1%	0.0%	0.0%	3.5%	0.0%	5.0%	0.0%	0.8%	0.3%	79.9%
GEORGIA AVENUE	0.3%	0.0%	0.0%	0.0%	4.0%	0.0%	4.0%	0.0%	0.0%	30.0%	0.0%	0.2%	0.0%	0.0%	0.0%	61.5%
SMITHSONIAN	0.3%	0.0%	0.0%	0.0%	2.3%	0.0%	2.9%	0.0%	0.0%	1.8%	0.0%	1.6%	0.0%	1.2%	0.2%	89.7%
ROSSLYN	0.3%	0.0%	0.0%	1.1%	7.8%	0.1%	3.2%	0.0%	0.0%	9.1%	0.0%	6.3%	0.0%	0.5%	0.0%	71.7%
SHAW HOWARD U	0.3%	0.0%	0.0%	0.0%	3.3%	0.5%	3.3%	0.0%	0.0%	8.1%	0.0%	0.3%	0.0%	0.6%	0.2%	83.4%
FEDERAL CENTER	0.2%	0.0%	0.0%	0.0%	1.1%	0.0%	2.4%	0.0%	0.0%	1.7%	0.0%	0.5%	0.0%	0.0%	0.4%	93.7%
RHODE ISLAND AVENUE	0.2%	0.0%	0.0%	0.0%	9.2%	0.3%	22.0%	0.0%	0.0%	39.3%	0.0%	1.0%	0.0%	0.8%	0.0%	27.1%
NATIONAL AIRPORT	0.2%	0.0%	0.0%	0.5%	7.9%	0.0%	13.7%	0.0%	0.0%	4.1%	0.0%	6.1%	0.0%	0.2%	1.8%	65.4%
GREENBELT	0.2%	0.0%	0.9%	0.0%	10.4%	0.0%	60.9%	0.0%	0.0%	16.7%	0.0%	1.1%	2.9%	1.4%	0.3%	5.2%
FARRAGUT NORTH	0.2%	0.0%	0.0%	0.0%	0.9%	0.9%	1.2%	0.0%	0.0%	2.3%	0.0%	0.6%	0.0%	0.3%	0.0%	93.7%
STADIUM ARMORY	0.2%	0.0%	0.0%	0.0%	4.3%	0.4%	12.2%	0.0%	0.0%	13.4%	0.0%	0.0%	0.0%	0.4%	0.0%	69.2%
NEW CARROLLTON	0.2%	0.0%	2.9%	0.0%	12.6%	0.2%	54.2%	0.0%	0.0%	16.5%	0.0%	0.8%	0.9%	1.3%	1.1%	9.3%
PENTAGON	0.1%	3.2%	0.0%	0.0%	5.9%	0.0%	3.9%	0.0%	0.9%	42.2%	0.0%	4.8%	0.0%	1.6%	0.1%	37.3%
METRO CENTER	0.1%	0.0%	0.0%	0.0%	1.8%	0.2%	2.1%	0.0%	0.0%	3.1%	0.0%	1.6%	0.0%	0.3%	0.3%	90.4%
MORGAN BLVD	0.0%	0.0%	0.0%	0.0%	21.7%	1.2%	69.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	1.3%	6.0%
LANDOVER	0.0%	0.0%	0.0%	0.0%	7.5%	0.7%	67.3%	0.0%	0.0%	16.0%	0.0%	0.7%	0.0%	0.4%	0.6%	6.7%
BRANCH AVENUE	0.0%	0.0%	0.0%	0.0%	11.8%	0.2%	69.3%	0.0%	0.0%	7.5%	0.0%	0.4%	1.6%	1.6%	0.3%	7.4%
SOUTHERN AVENUE	0.0%	0.0%	0.0%	0.0%	8.0%	0.0%	36.1%	0.0%	0.0%	39.1%	0.0%	1.8%	3.5%	1.0%	0.2%	10.2%
ADDISON RD	0.0%	0.0%	0.0%	0.0%	12.3%	0.0%	33.6%	0.0%	0.0%	34.8%	0.0%	0.0%	6.9%	0.6%	1.4%	10.4%
NAYLOR ROAD	0.0%	0.0%	0.0%	0.0%	14.9%	0.0%	29.0%	0.0%	0.0%	29.4%	0.0%	0.0%	5.3%	0.4%	0.3%	20.6%
SUITLAND	0.0%	0.0%	0.0%	0.0%	8.8%	0.0%	42.9%	0.0%	0.0%	21.5%	0.0%	2.1%	1.9%	0.6%	1.4%	20.8%
FORT TOTTEN	0.0%	0.0%	0.0%	0.0%	12.9%	0.0%	13.2%	0.0%	0.0%	49.4%	0.0%	0.5%	0.0%	0.7%	0.5%	22.8%
CAPITOL HEIGHTS	0.0%	0.0%	0.0%	0.0%	12.4%	0.2%	33.5%	0.0%	0.0%	13.9%	0.0%	0.5%	7.0%	1.7%	0.9%	29.9%
MINNESOTA AVENUE	0.0%	0.0%	0.0%	0.0%	9.1%	0.9%	12.7%	0.0%	0.0%	41.0%	0.0%	0.2%	0.0%	0.2%	0.0%	36.0%
BROOKLAND CUA	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	6.9%	0.0%	0.0%	22.8%	0.0%	11.0%	0.0%	0.0%	0.0%	52.3%
BENNING ROAD	0.0%	0.0%	0.0%	0.0%	11.3%	0.0%	9.4%	0.0%	0.0%	26.3%	0.0%	0.0%	0.0%	0.0%	0.0%	52.9%
ARLINGTON CEMETERY	0.0%	0.0%	0.0%	0.0%	6.5%	0.0%	7.4%	0.0%	0.0%	8.6%	0.0%	0.9%	0.0%	0.0%	0.9%	75.8%
NAVY YARD	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%	2.7%	0.0%	0.0%	4.5%	0.0%	2.7%	0.0%	0.9%	0.0%	83.6%
ARCHIVES-NAVY MEMORIA	0.0%	0.0%	0.0%	0.3%	0.7%	0.2%	1.7%	0.0%	0.0%	3.6%	0.0%	0.4%	0.0%	0.0%	0.2%	93.0%
Station Name	**Bike**	**DASH**	**C. Rail**	**ART**	**Drop off**	**DC CIRC**	**Drive**	**FFX CUE**	**FFX CONN**	**METROBUS**	**RIDE ON**	**Oth. Bus**	**PG BUS**	**Carpool**	**Taxi**	**Walk**
Daily Total	0.5%	0.4%	1.7%	0.1%	5.5%	0.2%	13.7%	0.1%	0.5%	9.9%	1.5%	2.7%	0.2%	0.6%	0.2%	62.1%

Appendix G
Links and Resources

ADC Regional Bicycle Map
www.adcmap.com

Alexandria Rideshare
www.alexride.org

BikeArlington
www.bikearlington.com

Arlington bicycle information.

BikeWashington
www.bikewashington.org

Bike trails and routes in the Washington region, clubs, and organized rides.

Capital Bikeshare
www.capitalbikeshare.com/

Regional self-service bicycle rental.

Coalition for Smarter Growth
www.smartergrowth.net

An advocacy group for transit-oriented development in the Washington region.

College Park Area Bicycle Coalition
www.cpabc.org

Advocacy group for bicycling in the College Park, MD area.

Fairfax Advocates for Better Bicycling
http://www.fabb-bikes.org/

Advocacy Group for bicycling in Fairfax County, VA. ‘

League of American Bicyclists
1612 K Street NW, Suite 800
Washington, D.C. 20006
(202) 822-1333
www.bikeleague.org

LAB is a national cycling advocacy group founded in 1880.

National Center for Bicycling and Walking
www.bikewalk.org

A national advocacy group for walking and bicycling.

Metropolitan Washington Council of Governments
777 North Capitol Street NE, Suite 300
Washington, D.C. 20002
(202) 962-3200
www.mwcog.org
www.commuterconnections.org

Metropolitan planning organization. Offers ridematching and Guaranteed Ride Home services through its Commuter Connections program, publishes a Bike to Work Guide.

National Association of City Transportation Officials
www.nacto.org/

An association of big city transportation officials oriented towards “smart growth” principles.

National Complete Streets Coalition
www.completestreets.org/

Advocacy group for “complete streets”, or provision of pedestrian and bicycle facilities as part of all transportation projects.

Pedestrian and Bicycle Information Center
www.bicyclinginfo.org
www.walkinginfo.org

National clearinghouse for information on walking and bicycling.

Ride the City
www.ridethecity.com/dc

A bicycle route finding web site.

Safe Routes to School
www.saferoutesinfo.org

The Safe Routes to School programs enables community leaders, schools and parents across the United States to improve safety and encourage more children, including children with disabilities, to safely walk and bicycle to school.

United States Access Board
www.access-board.gov

A federal agency dedicated to design that is accessible to persons with disabilities.

Virginia Bicycling Federation
www.vabike.org

Advocacy group for Virginia bicycling.

WalkArlington
www.walkarlington.com

Arlington walking information.

Washington Area Bicyclist Association
2599 Ontario Rd. NW
Washington, DC 20009 (202) 518-0524
www.waba.org

Advocacy group for cycling in the Washington region. Runs a pedestrian and bicycle safety education program.

Appendix H
Glossary of Terms

BIKE-ON-RAIL PERMIT	Permit issued by the Washington Metropolitan Area Transit Authority permitting transportation of bicycles on Metrorail trains during night and weekend service periods. (no longer required)
BICYCLE LANE (BIKE LANE)	A portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. Consists of a 4'-6' lane in each direction, with bicycle traffic moving in the same direction as motorized traffic.
BICYCLE PATH (BIKE PATH)	A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or within an independent right of way.
BICYCLE PARKING	An area dedicated and designed specifically for storing and locking a bicycle. Includes bicycle racks and bicycle lockers.
BICYCLE ROUTE (BIKE ROUTE)	A segment of a system of bikeways designated by the jurisdiction with appropriate directional and informational markers, with or without specific bicycle route numbers.
BIKE SHARING	Short-term bicycle rental available at a network of unattended locations.
BIKE STATION	A staffed, enclosed bicycle parking facility, usually located at a transit center, which may offer such services as bicycle repair, rental, lockers, and showers.
BIKEWAY	Any road, path, or way which in some manner is specifically designated as being open to bicycle travel, regardless or whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

COMPLETE STREETS	Complete streets are designed and operated to enable safe access for all users**.** Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street
CYCLE TRACK	A bicycle-only facility that provides physical separation within the right of way from vehicle travel lanes.
CLASS I, II or III BIKEWAY	Terms sometimes used to describe different types of bicycle facilities. Class I is a shared-use path, Class II a bicycle lane, and Class III a shared roadway. However, Since there is some disagreement on the exact meaning of these terms, the AASHTO terms (listed above) should be used.
GREENWAY	A linear park or recreation facility of limited width, located along the length of an existing or former public utility or railroad right-of-way, or along a stream bed.
HIKER-BIKER TRAIL	A paved path designed for use by both pedestrians and bicyclists, which is completely separated from vehicular traffic.
METROPOLITAN STATISTICAL AREA	A core area containing a substantial population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. Metropolitan statistical areas comprise one or more entire counties. They are used by the United States Census for the purpose of tabulating, enumerating and publishing data.
RAILS-TO-TRAILS CONSERVANCY	A national membership organization that works to facilitate the acquisition of abandoned railroad lines for use in creating bicycle and pedestrian trails and linear parks.
RAIL-TRAIL	A Shared-Use Path, either paved or unpaved, built within the right-of-way of an existing or former railroad.
REGIONAL ACTIVITY CENTER	A set of locations within the National Capital Region Transportation Planning Board planning area identified by the Council of Government's Planning Director's Technical Advisory Committee as employment centers of regional significance. Five types of Regional Activity Center have been designated, with different

employment and residential density criteria for each.

REGIONAL ACTIVITY CLUSTER — An employment center adjacent to a Regional Activity Center, with a lower density than a Regional Acitivity Center

ROAD DIET — A road diet is a technique whereby a road is reduced in number of travel lanes and/or effective width in order to achieve systemic improvements. An example of a road diet would be the conversion of two travel lanes in each direction to a 3-lane section with one travel lane in each direction, optional bicycle lanes, and a two-way turn lane in the middle.

SHARED ROADWAY — A roadway which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.

SHARED-USE PATH — A bikeway, at least 8' in width, physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared-Use Paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. Also called a multi-use path.

SIDE-PATH — A shared-used path built within the right-of-way of a non limited-access highway.

SIDEWALK — The portion of a street or highway right-of-way, at least 4' in width, designed for preferential or exclusive use by pedestrians.

SIGNED SHARED ROADWAY — A shared roadway that has been designated as a preferred route for bicycle use using warning, directional, and informational signage.

TRAFFIC CALMING — Traffic calming is a way to design streets, using physical measures, to encourage people to drive more slowly.

TRAVELED WAY — The portion of a roadway for the movement of vehicles, exclusive of shoulders.

UNIFORM VEHICLE CODE — The standards for traffic regulations recommended for adoption by state and local jurisdictions, as prepared by the National Committee on Uniform Traffic Laws and Ordinances.

WASHINGTON AREA BICYCLIST ASSOCIATION	A regional membership organization devoted to improving bicycling opportunities and promoting bicycle usage in the metropolitan Washington area.

Appendix I
Glossary of Acronyms

AASHTO	American Association of Highway Transportation Officials
ADA	Americans with Disabilities Act
AFA	Access for All Advisory Committee
CLRP	Financially Constrained Long-Range Transportation Plan
CMAQ	Congestion Mitigation and Air Quality Improvement Program
COG	Metropolitan Washington Council of Governments
DDOT	District of Columbia Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
MDOT	Maryland Department of Transportation
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MTA	Maryland Transit Administration
MUTCD	Manual on Uniform Traffic Control Devices
NACTO	National Association of City Transportation Officials
NCPC	National Capital Planning Commission
NVTC	Northern Virginia Transportation Commission
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users
MDSHA	Maryland State Highway Administration
SOV	Single-Occupant Vehicle
SRTS	Safe Routes to School
TCSP	Transportation and Community and System Preservation Pilot Program
TEA-21	Transportation Equity Act for the 21st Century
TIP	Transportation Improvement Program
TPB	National Capital Region Transportation Planning Board
US DOT	U.S. Department of Transportation
VDOT	Virginia Department of Transportation
VMT	Vehicle-Miles Traveled
WABA	Washington Area Bicyclist Association
WMATA	Washington Metropolitan Area Transit Authority

Appendix J
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