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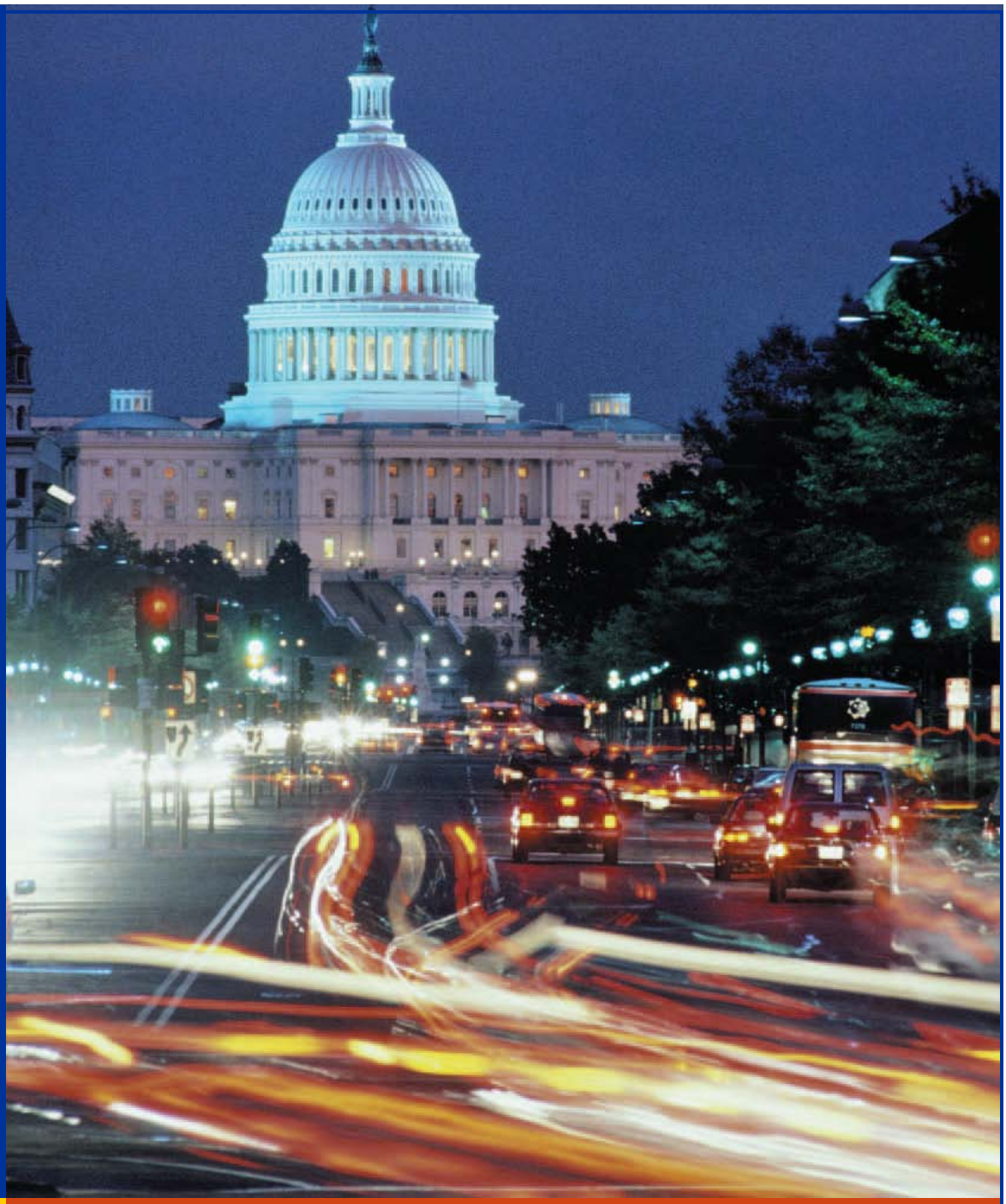

2003 Update to the Financially Constrained

Long-Range Transportation Plan for the National Capital Region

October 1, 2004

ABSTRACT

TITLE: 2003 Update to the Financially Constrained Long-Range Transportation Plan for the National Capital Region Document

DATE: October 1, 2004

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AGENCY: Metropolitan Washington Council of Governments
National Capital Region Transportation Planning Board

ABSTRACT: This official long-range transportation plan for the National Capital Region identifies the capital improvements, studies, actions, and strategies that the region proposes to carry out by the year 2030. It is "financially constrained" to include only projects that the region can afford to build and operate during the 2004-2030 period. The plan is updated at least every three years. The document summarizes regional plans and programs as of December 17, 2003. Major improvements, studies, and actions included in the plan are described in this document. However, detailed descriptions of these major projects as well as descriptions of small-scale projects not shown here are contained in separate supplementary documents titled *Inputs for the FY2004-2009 Transportation Improvement Program and the 2003 Constrained Long-Range Plan (CLRP).* One document includes project descriptions submitted by the District of Columbia and Federal Lands Highway Division, one the Washington Metropolitan Area Transit Authority (WMATA), another document includes Suburban Maryland and a fourth contains project descriptions for Northern Virginia.

The National Capital Region Transportation Planning Board (TPB) at COG is the designated Metropolitan Planning Organization (MPO) for transportation for the region. Members of the TPB include representatives of local governments; state transportation agencies; the Maryland and Virginia General Assemblies; the Washington Metropolitan Area Transit Authority; and non-voting members from the Metropolitan Washington Airports Authority and federal agencies.

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2003 UPDATE TO THE FINANCIALLY CONSTRAINED LONG-RANGE TRANSPORTATION PLAN FOR THE NATIONAL CAPITAL REGION

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1.

INTRODUCTION: A LONG-RANGE TRANSPORTATION PLAN

This document presents the constrained long-range transportation plan (CLRP) for the Washington region through the year 2030. The plan and the process by which it was developed reflect federal planning regulations. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) first established the requirement that metropolitan long-range transportation plans must be financially constrained, among other things. The Transportation Equity Act for the 21st Century (TEA-21), which was enacted in 1998, upheld and streamlined many of the provisions of ISTEA. Federal planning regulations have not been promulgated for TEA-21. To comply with federal regulations, the plan includes only those projects that the region can actually afford to build and operate during the 2004-2030 time frame, once the costs of maintaining the current transportation system have been considered. For this reason, the plan is termed a "financially constrained" long-range plan.

There are unfunded needs for both highway and transit systems that are not included in any of the results shown, because the plan is “constrained” financially to show what can reasonably be expected to be funded in the period through 2030. Expenditures have generally been constrained to match available revenues, even though both highway and transit agencies have substantial and fundamental rehabilitation and expansion needs that cannot be funded with revenues currently expected to be available.

The plan addresses a number of other federal requirements, including meeting national air quality standards, contributing to annual emissions reductions, and considering the relationship between land use and transportation. Extensive opportunities for interested citizens and organizations to participate in each stage of the plan's development were provided.

This introductory chapter highlights how the long-range plan was developed, how it relates to past and ongoing planning efforts, and how it addresses the major federal planning requirements.

DEVELOPMENT OF THE LONG-RANGE PLAN

This plan has been prepared by the National Capital Region Transportation Planning Board (TPB), the federally designated Metropolitan Planning Organization (MPO) for the Washington metropolitan area. 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 1-1.

The TPB meets monthly and receives staff support from the Metropolitan Washington Council of Governments (COG). The TPB advises the COG Board of Directors on transportation matters that affect the region. In addition to preparing long-range transportation plans, the TPB is responsible for developing the annual Transportation Improvement Program (TIP), a federally required budgetary and programming document that shows how specific projects in the CLRP will be implemented during a six-year period. Federal law mandates a "proactive public involvement process . . . that supports early and continuing involvement of the public in developing plans," with a formal comment period of at least 30 days for plan amendments.

Figure 1-2 shows the metropolitan planning area for which the TPB is responsible. This area, when expanded to include Charles and Calvert counties in Maryland and Stafford County in Virginia, comprises the Washington, DC-MD-VA Metropolitan Statistical Area (MSA), and is the focus of air quality plans developed for the Washington Region.

There are several ways that citizens can provide input into the long-range planning process. The Citizens Advisory Committee (CAC) is the main standing body for providing citizen input into the deliberations of the TPB. The CAC was originally established by the TPB in 1993, partly in response to the citizen involvement requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. According to the TPB's 1999 public involvement policy, the CAC's mission statement calls upon the committee to promote public involvement in regional transportation planning and provide independent, region-oriented citizen advice to the TPB. For more information on the CAC, contact TPB staff at (202) 962-3295. Concerned citizens may make a statement during the public comment period at the beginning of each TPB meeting, which is held at 12 noon on the third Wednesday of every month except August. To participate call (202) 962-3315. To provide public comment online, go to <www.mwcog.org/transportation/publiccomment>. It should be noted that the Long-Range plan is updated every three years, and amended almost every year. Citizens are invited to provide public comment on the plan each time the plan is updated or amended. The next major plan update will occur in 2006.

Figure 1-1: TPB Member Jurisdictions

Figure 1-2
TPB Planning Area, Washington DC-MD-VA Metropolitan Statistical Area (MSA)/
Air Quality Planning Area and Surrounding Region

CONTEXT FOR LONG-RANGE PLAN

The Washington region's first long-range transportation plan was prepared in the 1960s, when the region was much smaller. The first plan was an ambitious one, envisioning three ring roads around the central city and an extensive rail transit system linking the suburbs to the downtown core. Through the years, the 1966 plan was pared back, but it continued to serve as the basic blueprint for the region's transportation system. One ring road—the Capital Beltway—was constructed, and the 103-mile Metrorail system is now complete. The set of projects that remained in the plan as of 2000—the most recent update—was comparatively modest.

Since that first plan was developed the Washington area has grown dramatically, becoming the fourth largest metropolitan area in the United States[1]. The population since the 1960s has more than doubled. The number of jobs has surged as well, particularly in suburban areas, and travel on the region's roads has skyrocketed. Recognizing these changes, local and state officials, business and community leaders, members of environmental and civic groups, and many concerned citizens prepared comprehensive reports calling for a new "vision" to shape the region's development.[2] Within the framework of these reports, the TPB began development of a regional transportation Vision in 1995. In 1998, the TPB unanimously adopted its long-range transportation Vision, which is the transportation policy framework intended to guide regional transportation investments into the new century. It contains eight goals and associated objectives and strategies that will help the region reach those goals. The TPB Vision incorporates all of the "planning factors" specified in federal law and regulations.

Policy Goals

In developing the long-range plan, the TPB was guided by the TPB Vision policy goals and objectives. The entire TPB Vision is presented in Chapter 2. The eight broad goals are presented in Table 1-1.

[1] The Washington-Baltimore Consolidated Metropolitan Statistical Area (CMSA) is ranked the fourth largest metropolitan area in terms of population. Census 2000 PHC-T-3. Ranking Tables for Metropolitan Areas: 1990 and 2000. Source: U.S. Census Bureau, April 2, 2001.

[2] MWCOG/Task Force on Growth and Transportation, *A Legacy of Excellence for the Washington Region,* June 1991. See also: Adams, Bruce, et.al., *The Report of the Partnership for Regional Excellence,* presented to MWCOG, July 1993.

Table 1-1
The TPB Vision Policy Goals

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

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 throughout the entire region, including a **healthy regional core and dynamic regional activity centers** with a mix of jobs, housing, services and recreation in a walkable environment.

3. The Washington metropolitan region's transportation system will give priority to **management, performance, maintenance, and safety of all modes and facilities**.

4. The Washington metropolitan region will use the **best available technology** to maximize system effectiveness.

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**.

6. The Washington metropolitan region will achieve better inter-jurisdictional **coordination of transportation and land use planning**.

7. The Washington metropolitan region will achieve **enhanced funding mechanisms** for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.

8. The Washington metropolitan region will support options for **international and inter-regional travel and commerce**.

To develop the plan, each local, state, or regional agency with the authority to construct projects or implement policies submitted to the TPB a set of proposed capital improvements and strategies that, in its view, would best meet one or more of the TPB Vision Policy Goals while remaining within projected revenues. The implementing agencies were asked to describe each proposed project and strategy, as well as its purpose and anticipated contribution to the TPB Vision. Due to their number, these descriptive statements are presented in other volumes. Chapter 5 assesses the anticipated effects of the plan on each of the eight TPB Vision Policy Goals, and documents that each of the required planning factors has been considered.

Project Review and Selection Process

The development of this long-range plan was integrated with the preparation of the region's Transportation Improvement Program (TIP) for fiscal years 2004 to 2009. Those projects included in the previous TIP (2003-2008), for which funds had already been committed, were considered a starting point for both the CLRP and the 2004-2009 TIP. Additional

projects proposed by implementing agencies and local governments were then reviewed for inclusion in the plan. The review process focused on each project's contribution to the TPB Vision and federal regulations—in particular, the likely effects on air quality—and the availability of projected revenues to implement each project. The final plan, which is described in Chapter 4 of this report, includes many projects that were part of earlier plans and have longstanding funding commitments from the region's state and local governments.

Financial Analysis

To address the requirement that the plan be financially realistic, the TPB hired a consultant to conduct a study in 2003.[3] The study projected the revenues that each state would have available for transportation through the year 2030 and compared the projected revenues to the estimated costs of maintaining and operating the current transportation system together with the expected costs of implementing the long-range plan. The total expenditures over the 25 years of the plan are equal to the total expected revenues or $93.3 billion. Overall, almost $72 billion or **77 percent of the total expenditures is for operations and preservation of the region's transportation system**. About $22 billion, or 23 percent is for expanding the transportation system. Transit expenditures are $56 billion or 60 percent of the total and highway expenditures are $37 billion or 40 percent. As mentioned earlier, expenditures have been constrained to match available revenues, even though both highway and transit agencies have substantial and fundamental rehabilitation and expansion needs that cannot be funded with revenues currently expected to be available.

Air Quality Assessment

As required by the Clean Air Act Amendments of 1990 (CAAA), the long-range plan was evaluated for its likely effects on the region's air quality. The proposed facilities and policies in the plan were analyzed with a set of forecasting models maintained by COG. The analysis examined the levels of pollutant emissions from motor vehicles that are projected to occur at specific points in time as the plan is implemented. The air quality analysis shows that the CLRP is in conformity with the requirements of the CAAA. These requirements are discussed in Chapter 2; the plan's impacts on the region's air quality are fully described in a technical report.[4]

Public Involvement

During the preparation of this plan, numerous opportunities were provided for public participation. As required by federal regulations, the TPB has developed a formal policy on public involvement[5]. All changes to the plan have followed this public involvement policy, including 30-day public notice and comment periods for all changes, public comment opportunities at all TPB meetings, and public involvement opportunities at technical

[3] Cambridge Systematics, Inc., Analysis of Resources for the Financially Constrained Long Range Transportation Plan for the Washington Area, prepared for MWCOG/TPB, October 2003.
[4] Air Quality Conformity Determination of the 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Program for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. Metropolitan Washington Council of Governments, December 31, 2003.
[5] The public involvement policy is on-line at <http://www.mwcog.org/transportation/>.

subcommittees of the TPB. The TPB has established two citizen advisory committees to ensure adequate public participation in the planning process. The Citizens Advisory Committee (CAC) is the main standing body for providing citizen input into the deliberations of the Transportation Planning Board. The Access for All (AFA) Advisory Committee specifically provides advice to the TPB on how to involve the concerns of low-income and minority communities and disabled persons in the regional transportation planning process. Both the CAC and the AFA reviewed and commented on the 2003 CLRP. More information on public involvement in the 2003 CLRP is described in Chapter 2.

ORGANIZATION OF REPORT

This chapter has introduced the long-range plan, described how it meets federal planning requirements, and placed it in the context of the TPB Vision. Chapter 2 documents the process used to develop this plan. Chapter 3 provides an overview of transportation facts, trends, and issues in the Washington region. The plan itself is presented in Chapter 4. Chapter 5 is an assessment of the plan in light of the TPB's Vision goals and objectives. Chapter 6 presents summaries of the public comments received on the plan, along with responses. Appendix A includes the TPB resolution adopting the 2003 CLRP and Appendix B presents information on the spatial distribution of low-income communities, minority communities and disabled persons and input on the plan from these groups.

Several types of additional information incorporated by reference in this plan can be found in separate volumes. These include the assessment of the plan's effects on regional air quality, entitled "Air Quality Conformity Determination of the 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Program for the Washington Metropolitan Region" dated December 31, 2003, and hundreds of detailed project description forms that are bound separately in *Inputs for the FY2004 – 2009 Transportation Improvement Program and the 2003 Constrained Long-Range Plan (CLRP).* One document includes project descriptions submitted by the District of Columbia and Federal Lands Highway Division, one the Washington Metropolitan Area Transit Authority (WMATA), another document includes Suburban Maryland and a fourth contains project descriptions for Northern Virginia. All of these documents are available from the COG Information Center; call (202) 962-3200 for more information.

2.
TRANSPORTATION PLANNING PROCESS

Since 1965, the National Capital Region Transportation Planning Board (TPB) has been responsible for developing long-range transportation plans for the Washington region. Such plans are required for each metropolitan region receiving federal transportation funds. The 2003 CLRP has been shaped in response to federal laws and regulations for metropolitan transportation planning. Two pieces of federal authorizing legislation for transportation enacted in the last decade, provide the foundation for many requirements reflected in the plan. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) first established the requirement that metropolitan long-range transportation plans must be financially constrained, among other things. The Transportation Equity Act for the 21st Century (TEA-21), which was enacted in 1998, upheld and streamlined many of the provisions of ISTEA.

The purpose of this chapter is to review the major federal requirements for the long-range plan, describe how the plan meets those requirements, and present the policy framework provided by the TPB Vision. Chapter 5 describes the plan's performance in relation to the TPB Vision.

OVERVIEW OF FEDERAL REQUIREMENTS

Federal regulations cover all aspects of the long-range planning process that the TPB must follow to remain eligible for federal funding. The CLRP must meet federal regulations involving financial constraint, air quality conformity, Title VI, and other requirements including a Congestion Management System (CMS). A financial plan must show how the long-range plan can be implemented with expected revenues. The regulations also affect the programming of projects in the Transportation Improvement Program (TIP) that must accompany the plan, the way in which the air quality impacts of transportation are to be assessed in each document, and the scope of the resulting plan and TIPs.

Some of the major federal planning process requirements include the following:

- Consideration of "planning factors" specified in federal law and regulation that deal with the efficient management of existing facilities, including the effect of transportation policy

decisions on land use and development, the efficient movement of freight, the social, economic, and environmental effects of transportation decisions, and several other issues. The TPB Vision incorporates all of the planning factors;

- A demonstration of conformity with plans for meeting national air quality standards;

- The development of a financial plan that demonstrates how the long-range plan can be implemented with revenues "reasonably expected to be available";

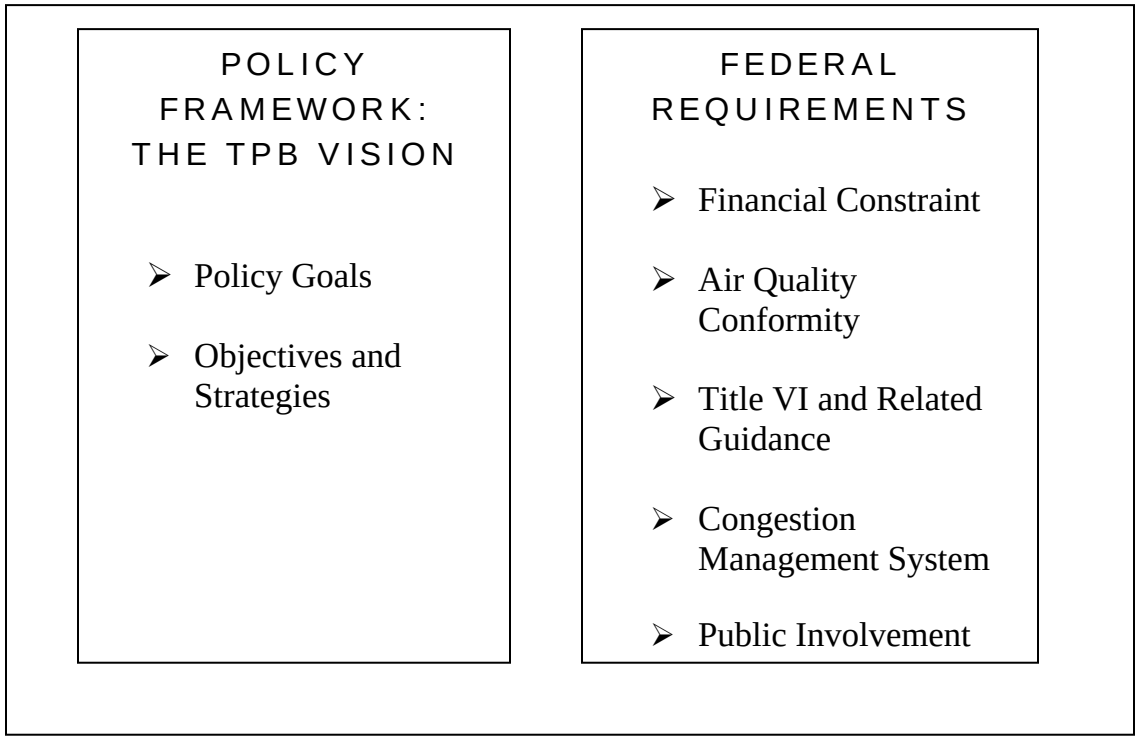
- The development of a Congestion Management System "that provides for effective management of new and existing transportation facilities through the use of travel demand reduction and operational management strategies";

- The inclusion of "a proactive public involvement process...that supports early and continuing involvement of the public in developing plans," with a formal comment period of at least 30 days for plan amendments;

- Review of the formal plan in an annual meeting. The plan must be updated at least every three years; and

- Consideration of the needs of low-income and minority populations and persons with disabilities; and a review of the impacts of the plan on low-income and minority populations as Title VI and related guidance require.

Figure 2-1: Key Criteria for Developing the Constrained Long-Range Plan (CLRP) and Transportation Improvement Program (TIP)



MEETING THE FEDERAL REQUIREMENTS

Air Quality Conformity

The Clean Air Act Amendments (CAAA) of 1990 require that the transportation actions and projects in the CLRP and TIP support the attainment of the federal health standard for ozone, which was violated three times last year. The CLRP and the TIP have to meet air quality conformity requirements as specified in the amended Environmental Protection Agency (EPA) regulations issued in August 1997 and in supplemental guidance issued periodically thereafter.

Background

As the Washington area was classified as a "serious" non-attainment area for ozone in the 1990 CAAA, requirements for the District of Columbia, Maryland and Virginia included submission of State Implementations Plans (SIPs) that demonstrated how the Washington region would reduce emissions sufficiently to ensure the following: a 15 percent reduction in emissions from 1990 levels by 1996, an additional 9 percent reduction between 1996 and 1999, and the attainment of the federal health standard for ozone by 1999. The Washington area developed plans demonstrating achievement of each of these milestones; following approval by the Metropolitan Washington Air Quality Committee (MWAQC), the state air agencies submitted each in turn to the EPA. The Attainment Plan, which demonstrated attainment by 1999 but for ozone transport, was completed and submitted to EPA in April 1998. When the region did not meet the air quality standards in 1999, an updated Attainment Plan, focusing on attainment of the ozone standards by 2005, was approved by MWAQC in March 2000 and subsequently was approved by EPA in January 2001.

In July 2002 a court decision remanded EPA's approval of the region's Attainment Plan to EPA for reconsideration. As a result, in a January 2003 Federal Register notice EPA published a proposed rule which reclassified the region to a "severe" area. The action required the region to re-analyze the rate of progress and other planning requirements, demonstrating attainment of the standards by the year 2005.

Recent SIP Planning Updates

Using EPA's new Mobile6 model, the region addressed these requirements leading to a severe area ozone attainment SIP through the development of two separate SIP documents. The first SIP document was approved by MWAQC in August 2003 and submitted to EPA by the states in September 2003. This plan identified new mobile emissions budgets for VOC and NOx which, following EPA's determination as being adequate for conformity, set maximum allowable emissions levels for TPB's conformity assessments. Specifically, these budgets were used as conformity criteria for assessment of the 2003 CLRP. The second SIP document, approved by MWAQC and submitted to EPA in February 2004, awaits formal action by EPA. Next steps will include air quality planning activities to address eight hour ozone standards and fine particulate matter (PM2.5).

The Results of the Air Quality Conformity Assessment of the Plan

The air quality conformity assessment of the proposed long-range plan was conducted by COG staff and is presented in a technical report[1]. The air quality conformity analysis of the 2003 CLRP and the FY2004-2009 TIP involved tests to determine that future emissions will be within the mobile source emissions budgets for VOC and NOx established as part of the attainment planning. This assessment included the projected emissions for the actions and projects expected to be completed in the 2005, 2015, 2025, and 2030 analysis years. The analysis showed that estimated emissions are within the mobile source budgets for each pollutant and no additional emission reduction measures (TERMs) needed to be programmed to demonstrate conformity. TERMs previously programmed are described further in Chapter 4. Interagency agreements on air quality conformity assessment are spelled out in a set of TPB consultation procedures.[2] The air quality determination found that the 2003 CLRP and FY 2004-2009 conform to the requirements of the Clean Air Act Amendments of 1990.

Financial Feasibility

Under federal planning regulations, the region must be able to implement the projects in the long-range plan within the time frame of the plan with revenues that are reasonably expected to be available. In other words, the plan must be financially realistic about expected transportation costs and revenues and only include new facilities that can be funded while maintaining the existing transportation infrastructure. For this reason, the plan is termed a financially "constrained" long-range plan (CLRP). Specifically, the plan must do the following:

- Forecast the annual revenues from federal, state, local, and private funding sources that can reasonably be expected to be available, such as dedicated tax revenues, bond proceeds, impact fees, transit fares, and tolls;

- Project the annual costs of operating and maintaining the existing system;

- Estimate the annual costs of constructing and operating the improvements and new facilities in the plan; and

- Propose new revenue sources to cover any shortfalls.

In order to update the plan, the TPB requested that the region's transportation agencies and local jurisdictions project the total expected revenues, identify the expenditures to operate and preserve the existing highway, Metrorail, bus, commuter rail, bicycle and pedestrian systems, and then include only those improvements and projects that can be accommodated within the remaining revenues. The state and local transportation agencies worked closely with Cambridge Systematics, Inc., to coordinate the assumptions and

[1] Air Quality Conformity Determination of the 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Program for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. Metropolitan Washington Council of Governments, December 31, 2003.
[2] Transportation Planning Board Consultation Procedures with Respect to Transportation Conformity Regulations Governing TPB Plans and Programs, National Capital Region Transportation Planning Board, Metropolitan Washington Council of Governments, May 20, 1998.

methodologies used to make the 27-year forecasts of revenues and expenditures.[3] The extensive financial analysis and the project submissions were reviewed by the TPB Technical Committee and the TPB at work sessions and meetings during the spring of 2003.

Revenue and cost projections were developed for the District of Columbia, Suburban Maryland, Northern Virginia, and a regional category and then totaled. Projections were not made at the county or city level. All of the revenue and cost projections were made in constant 2003 dollars.

Summary of Revenues in the Long-Range Plan

The total anticipated revenues over the 27-year period of the plan are $93.3 billion. Table 2-1 presents the expected revenues in columns for the District of Columbia, Suburban Maryland, Northern Virginia, and the region. Regional revenues are not allocated to specific jurisdictions and include forecasted WMATA fares and federal funds anticipated for WMATA preservation.

The combined category of federal/state and District revenues account for about 57 percent of the total forecasted revenues. Revenues from local jurisdictions in Maryland and Virginia account for about 11 percent of the total. Private/tolls, including developer contributions, represent about 5 percent of the total. Transit fares provide about 18 percent of the total. Special and regional federal revenues provide about 9 percent of the total. The special federal revenues are anticipated federal grants under the Federal Transit Administration Section 5309 New Starts or other federal grants. These total about $3 billion over 27 years, or an average of $120 million per year, which is about 10 percent of the current level of national spending under the federal transit program.

Summary of Expenditures in the Long-Range Plan

The total expenditures over the 27 years of the plan are equal to the total expected revenues or $93.3 billion. Table 2-2 shows the expenditures in columns for the District of Columbia, Suburban Maryland, Northern Virginia, and a regional category. Regional expenditures not allocated to specific jurisdictions include the use of fares for WMATA transit operation and federal funds for WMATA preservation and system expansion.

Overall, almost $72 billion or **77 percent of the total expenditures are for operations and preservation of the region's transportation system**. About $22 billion, or 23 percent, are for expanding the transportation system. Transit expenditures are $56 billion or 60 percent of the total and highway expenditures are $37 billion or 40 percent.

Funding Limitations Identified

In the previous financial analyses of the 1997 and 2000 CLRPs, issues were raised about the region's projected revenues being sufficient to adequately rehabilitate and preserve the region's transit and highway systems. For this 2003 CLRP update, WMATA identified the funding needed for operating, preserving, and providing the additional equipment and services needed to meet the maximum design capacity of the Metrorail system. As shown at the bottom of Table 2-2, the requests by WMATA for operating, preservation, and system

[3] Cambridge Systematics, Inc., Analysis of Resources for the Financially Constrained Long-Range Transportation Plan for the Washington Area, prepared for MWCOG/TPB, October 2003.

access and capacity are nearly funded over the 27 year period. However, these aggregate expenditures and revenues do not fully address year-by-year expenditure requirements relative to year-by-year availability of revenues. As part of the CLRP financial analysis, WMATA identified a need for a substantial "ramp-up" in preservation funding of $1.5 billion beginning in 2006. A critical issue is how these substantial increases in preservation funding can be made available to meet the cash flow requirements of this early ramp-up in preservation funding.

Addressing Funding Limitations

Since the approval of the 2000 CLRP, the TPB undertook several activities to inform local officials, state legislators, representatives from Congress, and the general public about the region's short-term and longer-term transportation funding needs. In a 2001 booklet titled "A System in Crisis," the TPB publicized the regional unfunded transit and highway needs and identified a $1.74 billion per year revenue gap.[4] Also in 2001, the TPB passed a resolution that declared "unmet preservation, rehabilitation, and capacity expansion for the existing Metrorail system to be a regional priority" and urged that reliable sources of funding be identified by the federal, state, and local governments at the earliest possible time to address the unmet needs.

In 2002, the TPB distributed a brochure titled "Principles for Reauthorization of the Federal Surface Transportation Programs" to publicize the case for increased funding from the reauthorization of the federal surface transportation programs. One of the key TPB principles asked Congress to "address the unmet preservation, rehabilitation, and capacity expansion needs for the existing Metro system, a regional priority."

By 2003 the region had made several serious attempts to increase revenues for transportation, but had not succeeded in securing the funding needed. To address short-term critical funding needs that involve cash flow and ramp-up issues, in fall of 2003 the TPB conducted a six-month study to quantify highway and transit funding needs and recommend specific sources of revenue over the period from 2004 to 2010. The study found that the region must double its anticipated transportation revenues in the next six years in order to fund key transportation priorities. This analysis was compiled in a brochure called "Time to Act." Released by the TPB in February 2004, this brochure was covered by major newspapers and the media and informed federal, state and local funding partners on critical regional transportation needs.

[4] For a description of the analysis and report, see the 2001 *Region* magazine at <http://www.mwcog.org/publications/>.

Table 2-1
Anticipated Revenues for the 2003 Update of the Financially Constrained Long-Range Plan
2004-2030

	Millions of Constant 2003 Dollars				
	District of Columbia	**Suburban Maryland**	**Northern Virginia**	**Regional**	**TOTAL**
Federal/State	$10,151	$26,981	$15,593		$52,725
Local Jurisdictions		4,255	6,258		10,513
Private/Tolls/Bonds	2,383	359	1,981		4,723
Subtotal	*$12,534*	*$31,595*	*$23,832*	*$0*	*$67,961*
Local Transit Fares		$301	$1,458		$1,759
WMATA Fares/Others				$14,985	14,985
Subtotal	*$0*	*$301*	*$1,458*	*$14,985*	*$16,744*
WMATA Fed Preservation (IRP)				*$5,486*	*$5,486*
Special Federal					
New York Avenue	(Incl. Above)				$0
Largo Extension		$141			141
Dulles Corridor			$1,353		1,353
Other Transit					0
Woodrow Wilson Bridge		1,013	618	$0	1,631
Subtotal Special Federal	*$0*	*$1,154*	*$1,971*	*$0*	*$3,125*
GRAND TOTAL	**$12,534**	**$33,050**	**$27,262**	**$20,471**	**$93,317**

Table 2-2
Expenditures of the 2003 Update of the Financially Constrained Long-Range Plan 2004-2030

	Millions of Constant 2003 Dollars				
	District of Columbia	**Suburban Maryland**	**Northern Virginia**	**Regional**	**TOTAL**
Highway					
Operation/Preservation	$4,323	$10,600	$7,259		$22,182
Expansion	452	6,356	4,148		10,956
Other		97	1,116		1,213
Woodrow Wilson Bridge	(Incl. Above)	1,425	1,123		2,548
Highway Subtotal	***$4,775***	***$18,478***	***$13,646***	***$0***	***$36,899***
Transit					
Local/Commuter Rail		$6,629			$6,629
Operations & Preservation			$3,918		3,918
Expansion			1,196		1,196
Local/Commuter Rail Subtotal		*$6,629*	*$5,114*		*$11,743*
WMATA					
Operating[5]	$6,578	$4,724	$4,647	$14,985	$30,934
Preservation (IRP)	619	767	588	5,441	7,415
System Expansion (SEP)	4	4	15	45	68
System Access & Capacity (SAP)	558	973	532		2,063
WMATA Subtotal	*$7,759*	*$6,468*	*$5,782*	*$20,471*	*$40,480*
New Starts					
New York Avenue	(Incl. Above)				$0
Largo Extension		$167			167
Dulles Corridor			$2,720		2,720
Other Projects & Studies					0
Other New Starts – Federal[6]					
MD/BiCounty Transitway		381			381
MD/Corridor City Transitway		871			871
MD/Other New Starts		56			56
New Starts Subtotal	*$0*	*$1,475*	*$2,720*	*$0*	*$4,195*
Transit Subtotal	**$7,759**	**$14,572**	**$13,616**	**$20,471**	**$56,418**
GRAND TOTAL	**$12,534**	**$33,050**	**$27,262**	**$20,471**	**$93,317**
Revenues – Expenditures	$0	$0	$0	$0	$0
WMATA Request					
Operating	$6,578	$6,584	$4,650	$14,985	$32,797
Preservation (IRP)	803	767	588	5,441	7,599
System Expansion (SEP)	4	4	15	45	68
System Access & Capacity (SAP)	1,062	973	765		2,800
TOTAL	*$8,447*	*$8,328*	*$6,018*	*$20,471*	*$43,264*

[5] Maryland forecasts were for the Maryland WMATA operating subsidy growing with inflation.
[6] Please see detailed breakdown for Maryland in Table 2-2A.

Table 2-2A
Details of Maryland/Other New Starts
2004-2030

Maryland Other New Starts	Millions of Constant 2003 Dollars
MD/BiCounty Transitway	
Bethesda to Silver Spring	$371
Silver Spring to New Carrollton – Study Only	10
MD/BiCounty Transitway Subtotal	*$381*
MD/Corridor City Transitway	
Metropolitan Grove to COMSAT	$356
Shady Grove to Metropolitan Grove	515
MD/Corridor City Transitway Subtotal	*$871*
MD/Other New Starts	
Maglev (study only)	$10
Southern Maryland Commuter Bus Initiative	36
Southern Maryland Mass Transportation Analysis (study only)	10
MD/Other New Starts Subtotal	*$56*
Total	**$1,308**

Public Involvement Process

After passage of ISTEA, the TPB took immediate steps toward setting up a new public involvement process. Workshops and special forums were hosted throughout the region. A monthly bulletin, the TPB News, was established. By 2000, the distribution for TPB News was more than 2,500. A 20-minute public comment period is held before every TPB meeting. A Citizens Advisory Committee (CAC) was set up in 1993 to discuss key issues and proposals scheduled for discussion by the TPB.

During development of the Vision, the TPB gained practical experience with active forms of outreach. The TPB conducted public opinion surveys and brainstorming sessions throughout region. Special sessions were held for low-income and minority communities.

The Citizens Advisory Committee (CAC) provides civic-, environmental-, and business-oriented input into the deliberations of the TPB. The CAC has a two-part mission: 1) promote public involvement, and 2) provide independent, region-oriented citizen advice to the TPB. The CAC holds at least six of its monthly meetings outside of the offices of COG—two in each of the three main TPB jurisdictions. The CAC is composed of 15 appointed members. The existing CAC votes for six individuals to serve on the Committee for the following year and the TPB appoints nine additional members. Furthermore, the public involvement process states that CAC members should represent environmental, business, and civic interests in transportation, including appropriate representation from low-income groups, minority groups, and persons with disabilities. For more information on the CAC, go to <http://www.mwcog.org/transportation/committee/>.

In addition to the CAC, the TPB established the Access for All Advisory (AFA) Committee to provide ongoing input to the TPB on transportation issues, programs, policies, and services that are important to low-income communities, minority communities and people with disabilities. The AFA reviewed the 2003 CLRP projects in relation to the spatial distribution of low-income and minority communities, as described in the following section on Title VI requirements.

In 2003, during the preparation of the CLRP, the TPB received numerous public comments. As required, a 30-day period was provided for public comments on the plan. The public comments that were received and information on how these comments were addressed was disseminated in a memorandum that was approved by the TPB. See Chapter 6 for details on the dates of comment periods and the comments received.

Title VI Requirements and Related Guidance

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations*, dated February 11, 1994, requires Federal agencies to identify and address disproportionately high and adverse human health and environmental effects, including interrelated social and economic effects of their programs, policies, and activities on minority and low-income populations.

In December of 1998 the US Department of Transportation/Federal Highway Administration released Order 6640.23 “FHWA Actions to Address Environmental Justice In Minority and Low-Income Populations.” Order 6640.23 “establishes policies and procedures for the

Federal Highway Administration (FHWA) to use in complying with Executive Order 12898".[7] The document states that Executive Order 12898 is "primarily a reaffirmation of the principles of Title VI of the Civil Rights Act of 1964 (Title VI) and related statutes, the National Environmental Policy Act (NEPA), 23 U.S.C. 109(h), and other Federal environmental laws, emphasizing the incorporation of those provisions with the environmental and transportation decision-making processes."

Furthermore, "these requirements will be administered to identify the risk of discrimination, early in the development of FHWA's programs, policies, and activities so that positive corrective action can be taken. In implementing these requirements, the following information should be obtained where relevant, appropriate, and practical:

(1) population served and/or affected by race, or national origin, and income level;
(2) proposed steps to guard against disproportionately high and adverse effects on persons on the basis of race, or national origin; and,
(3) present and proposed membership by race, or national origin, in any planning or advisory body that is part of the program."

The TPB's Unified Planning Work Program for FY 2003 described several activities to address the social, economic, and environmental impacts of candidate projects and actions on minority and low-income populations for the 2003 update of the CLRP.

For the first time, the TPB undertook a special study in 1999 to assess how the long-range plan impacted low-income and minority populations. The study, titled "A Regional Accessibility Analysis of the 1999 Constrained Long-Range Plan (CLRP) and Impacts on Low-Income and Minority Populations", measured the number of jobs in the year 2020 that will be accessible within 45 minutes by auto and transit. Accessibility for low-income and minority citizens was compared with accessibility for the population at large. The study found that high levels of congestion on the major interstates and arterials are expected to contribute to a significant loss in accessibility to jobs by auto for the regional population at large. Accessibility to jobs by transit will generally increase. In general, these trends were roughly the same for low-income and minority groups as for the entire regional population. The results of this study were used as an input to the development of the 2003 CLRP.

To ensure on-going participation from low-income and minority communities and persons with disabilities in 2001 the TPB created the Access for All Advisory (AF) Committee to advise the Board on transportation issues, programs, policies, and services that are important to these communities and individuals. The committee is chaired by a TPB member, currently Mayor Kathy Porter from Takoma Park, MD. The mission of this committee is to identify concerns of low-income and minority populations and persons with disabilities, and to determine whether and how these issues might be addressed within the TPB process. The committee membership is composed of TPB-appointed community leaders from around the region. The committee also includes ex-officio representation from five key transportation agencies that are active in the TPB process— the District Department of Transportation, the Maryland Department of Transportation, the Virginia Department of Transportation, the Washington Metropolitan Area Transit Authority, the Federal Transit Administration, and the Federal Highway Administration.

[7]This order can be viewed online at <http://www.fhwa.dot.gov/legsregs/directives/orders.htm>.

A review of the 2003 CLRP projects and the spatial distribution of low-income and minority communities was conducted in the fall of 2003. The review did not attempt to quantify or identify disproportionate or adverse impacts; this type of analysis occurs at the project planning level and during the environmental assessment process. Maps of the CLRP projects and Census data showing concentrations of Asian, African-American, and Hispanic/Latino as well as the population below the poverty line were reviewed by the AFA committee. The AFA comments from this review were presented to the TPB by Chair Porter in October 2003, and are included in Appendix B along with maps showing the distribution of minority, low-income, and disabled populations within the Washington region.

In 2003, the committee detailed its recommendations in a report to the TPB. The four main categories of recommendations included 1) develop more effective communication of regional transit information; 2) prioritize regional and local transportation services for low-income populations; 3) improve transit services for people with disabilities; and 4) promote more development around transit stations, but take care of the community that is already there. The AFA committee report can be found on the committee's web page at <http://www.mwcog.org/transportation/committee/>.

Congestion Management System

Federal regulations established a set of management systems to enhance the performance of federally funded transportation facilities. The TPB is responsible for developing a Congestion Management System (CMS), defined as a "systematic process that provides information on transportation system performance and alternative strategies to alleviate congestion and enhance the mobility of persons and goods." The CMS is intended to enhance the region's planning procedures by providing information and proposing measures to deal with congestion on major corridors in the region. The CMS component of the CLRP documents that serious consideration has been given to strategies that provide the most efficient and effective use of existing and future transportation facilities, including alternatives to highway capacity increases for single-occupant vehicles (SOVs).

CMS requirements are addressed in both ISTEA and TEA-21; federal regulations published in the *Federal Register* on December 19, 1996 are in effect. Federal regulations require consideration of congestion management strategies in cases where single-occupant-vehicle capacity is proposed. A congestion management documentation form was completed for any project to be included in the CLRP or Transportation Improvement Program (TIP) that significantly increases the single-occupant-vehicle carrying capacity of a highway. The form documents how alternative strategies to reduce congestion were considered as alternatives to single-occupant vehicle capacity expansion in the study or proposal for the project. A sample of the congestion management form is shown in Figure 2-2.

The states of Maryland and Virginia and the District of Columbia also undertake management systems activities that may provide information and input to the region's plans and programs. Pavement Management Systems and Bridge Management Systems keep track of the conditions, reconstruction, and replacement needs of bridges and roadways. Also undertaken are state-level congestion management studies or programs, focusing on congested corridors or traffic management during major construction projects.

Figure 2-2: Questions From the Congestion Management Documentation Form for The 2003 CLRP

Sample Questions From the Congestion Management Documentation Form Used in the Electronic 2003 CLRP Submission Process

a. Description of the traffic congestion conditions that necessitate the proposed project

b. Indicate whether the proposed project's location is subject to or benefits significantly from any of the following in-place congestion management strategies:

- ☐ Metropolitan Washington Commuter Connections program (ridesharing, telecommuting, guaranteed ride home, employer programs)
- ☐ A Transportation Management Association is in the vicinity
- ☐ Channelized or grade-separated intersection(s) or roundabouts
- ☐ Reversible, turning, acceleration/deceleration, or bypass lanes
- ☐ High occupancy vehicle facilities or systems
- ☐ Transit stop (rail or bus) within a 1/2 mile radius of the project location
- ☐ Park-and-ride lot within a one-mile radius of the project location
- ☐ Real-time surveillance/traffic device controlled by a traffic operations center
- ☐ Motorist assistance/hazard clearance patrols
- ☐ Interconnected/coordinated traffic signal system
- ☐ Other in-place congestion management strategy or strategies (briefly describe below)

c. List and briefly describe how the following categories of (additional) strategies were considered as full or partial alternatives to single-occupant vehicle capacity expansion in the study or proposal for the project.

a. Transportation demand management measures, including growth management and congestion pricing
b. Traffic operational improvements
c. Public transportation improvements
d. Intelligent Transportation Systems technologies
e. Other congestion management strategies
f. Combinations of the above strategies

d. Could congestion management alternatives fully eliminate or partially offset the need for the proposed increase in single-occupant vehicle capacity? Explain why or why not.

e. Describe all congestion management strategies that are going to be incorporated into the proposed highway project

f. Describe the proposed funding and implementation schedule for the congestion management strategies to be incorporated into the proposed highway project. Also describe how the effectiveness of strategies implemented will be monitored and assessed after implementation.

National Capital Region Transportation Planning Board
Metropolitan Washington Council of Governments

CMS Forms

RELATIONSHIP OF THE CLRP TO OTHER PLANNING EFFORTS

The development of the long-range plan took place in the context of several interrelated planning efforts, including:

- The development of the Transportation Improvement Program (TIP);
- State and metropolitan air quality planning activities, including identification of transportation control measures;
- The design of a Congestion Management System;
- The preparation of state, local and WMATA transportation plans;
- Revisions to the region's demographic forecasts; and
- Technical improvements to the travel demand forecasting models used to assess the plan and TIP.

The intricate procedural and technical connections among these activities made the development of this plan a highly complex process.

The Transportation Improvement Program

Each year, the TPB prepares a program for implementing the long-range plan and other transportation projects using federal, state or local funds. This document, known as the Transportation Improvement Program (TIP), provides detailed funding and phasing information showing which of the planned projects and strategies will be implemented in the next six fiscal years and how they will be funded and staged.

The TPB Vision, CLRP, TIP and Other Planning Efforts

The TPB Vision is the *policy framework* for long-range regional transportation planning. The TPB Vision includes goals and objectives for the transportation system but does not include specific projects or programs.

The financially **Constrained-Long Range Plan (CLRP)** is a *comprehensive plan of transportation projects* that the TPB realistically anticipates can be funded and implemented over the next 27 years.

The **Transportation Improvement Program (TIP)** provides detailed information showing *projects in the CLRP that will be completed over the next six-year period.*

COG's **Cooperative Forecasts** *measure future population, households and employment growth over the next 20 to 30 years* through a cooperative process with its local governments. These forecasts are used as inputs to the regional transportation models.

The 2000 CLRP was amended to undertake a "**Regional Mobility and Accessibility Study".** The study will *analyze the 2000 CLRP and alternative land use and transportation scenarios* in order to better understand the plans inadequacies to address the goals of the TPB Vision.

Like the long-range plan, the TIP is subject to a federal review process and must meet certain air quality requirements. The TIP includes portions, or phases, of major highway and transit construction projects selected for implementation from the long-range plan, as well as many smaller projects including bicycle trails, bus and rail vehicle rehabilitation, traffic signal systems, park-and-ride lots, and other types of projects. The TIP may also include

Transportation Emissions Reduction Measures (TERMs), which are actions or strategies to reduce emissions from motor vehicles by reducing the number of vehicle trips or the distance traveled. TERMs have a special status within the TIP. Once committed, they must receive funding priority.

Many of the facilities and projects in the TIP are staged over several years. For example, a highway improvement project typically consists of a preliminary engineering phase, a right-of-way acquisition phase, and one or more years of construction. Although the entire project is contained in the long-range plan, in some instances only portions, or phases, of the project are programmed in the six-year TIP.

The preparation of the 2003 CLRP was integrated with the TPB's preparation of the TIP for fiscal years 2004-2009. Those projects included in the previous year's TIP for which funding had already been committed were considered a starting point for the plan and the FY 2004-2009 TIP. Additional projects of interest to the implementing agencies and local governments were selected for inclusion in the CLRP, with particular attention to their contributions to the Vision, their likely effects on air quality, and the availability of projected revenues to implement them.

State, Local, and WMATA Plans

The TPB planning process is integrally linked to transportation planning efforts at the state and local levels. Historically, the TPB's role has been to foster regional consensus on a set of projects developed by state, regional, and local agencies. This process has been termed a combination "bottom up, top down" approach in which most project proposals are developed by the implementing agencies, while regional priority projects and coordinated strategies are encouraged, where appropriate, by the TPB.

This plan reflects the contributions of numerous state and local planning efforts conducted throughout the region. Many of the studies and plans that underlie the proposals in this document were years in the making and themselves reflect consensus-seeking efforts at the local and state levels.

Coordination with Other Metropolitan Areas

The TPB coordinates its technical activities with neighboring metropolitan areas to ensure consistency across regional boundaries. The Baltimore Metropolitan Council is the metropolitan planning organization for the Baltimore region. Some Baltimore region projects are included in TPB analysis networks; TPB travel demand forecasts include demographic inputs for Carroll, Howard, and Anne Arundel counties in Maryland. Similarly, Stafford County, Virginia, is a member of the Fredericksburg Area Metropolitan Planning Organization (FAMPO); FAMPO has transportation planning and programming responsibilities for Stafford County. As part of the Washington air quality non-attainment area, Stafford County projects are included in the transportation networks for air quality conformity analysis and are included in this plan for informational purposes. The urbanized area of St. Charles in Charles County is now part of the TPB. The remaining areas in Charles County and all of Calvert County are also included in the air quality non-attainment area, but are not members of the TPB. The Maryland Department of Transportation conducts transportation planning for these counties.

POLICY FRAMEWORK: THE TPB VISION

In 1998, the TPB unanimously adopted its long-range transportation Vision, which is the transportation policy framework intended to guide regional transportation investments into the new century. It contains eight goals and associated objectives and strategies that will help the region reach those goals. The TPB Vision incorporates all of the "planning factors" specified in federal law and regulations.

The Vision is the product of a three-year development process. Through the “Getting There” outreach component, which included public opinion surveys and brainstorming sessions in every part of the region, the TPB collected more than 2,200 ideas. The outreach brought in low-income people, including those who depend on public transportation, and sought out the participation of minorities, senior citizens and non-English speaking residents. Three citizen task forces met almost every other week for several months to develop three different alternatives for the development of the region’s transportation system over the next 50 years. More than 130 individuals and representatives of interested organizations regularly attended these meetings.

In the final phase of the visioning process a consensus was developed based on the three task force reports, other regional studies, and public input. As chairman of the steering committee overseeing this final phase, Mayor John Mason of Fairfax guided the Vision to completion.

In the 2003 CLRP, the Vision provides the general policy framework for transportation system planning and implementation for the National Capital Region.

To develop the plan, each implementing agency—those state, local, and regional agencies with the authority to fund projects and programs, construct facilities, or implement policies—submitted to the TPB a set of proposed capital improvements and strategies that, in its view, would meet one or more regional goals and objectives. The agencies were asked to describe each project and its anticipated contributions to the TPB Vision goals on project description forms, along with the estimated cost and time frame for completion. Hundreds of forms were prepared. These forms were used by TPB staff in preparing the assessment and documentation of the plan. The major projects submitted for the plan were presented to the TPB and the public in the spring of 2003.

It is important to note that the goals and objectives of the TPB Vision, which include the planning factors, are **designed to guide long-range planning at the system level**. While individual projects contribute to the attainment of these goals, and prospective information on their contributions is useful in reviewing the projects, the objectives have not been used to formally "rank" potential projects and strategies against one another. The TPB Vision, which contains overlapping themes and subjective, non-quantifiable terms, provides broad direction for developing individual projects, but all of the projects together create the plan. Chapter 5 presents a system-level assessment of the plan using the TPB Vision goals and objectives.

The Vision statement is provided below, along with its goals, objectives, and strategies.

The TPB Vision

Vision Statement

In the 21st Century, the Washington metropolitan region remains a vibrant world capital, with a transportation system that provides efficient movement of people and goods.

This system promotes the region's economy and environmental quality, and operates in an attractive and safe setting—it is a system that serves everyone.

The system is fiscally sustainable, promotes areas of concentrated growth, manages both demand and capacity, employs the best technology, and joins rail, roadway, bus, air, water, pedestrian, and bicycle facilities into a fully interconnected network.

Policy Goals, Objectives and Strategies

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

A. Objectives:

(1) A comprehensive range of choices for users of the region's transportation system.

(2) Accurate, up-to-date, and understandable transportation system information which is available to everyone in real time, and is user-friendly for first-time visitor and residents, regardless of mode of travel or language of the traveler.

(3) Fair and reasonable opportunities for access and mobility for persons with special accessibility needs.

(4) Convenient bicycle and pedestrian access.

B. Strategies:

(1) Plan, implement, and maintain a truly integrated, multi-modal regional transportation system.

(2) Plan and implement a tourist-friendly system that encourages the use of transit and provides international signage and information.

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

(4) Plan and implement a uniform fare system for transit and commuter rail.

(5) Adopt a regional transit planning process and plan, with priority to uniformity, connectivity, equity, cost-effectiveness, and reasonable fares.

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 throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, and services in a walkable environment.

A. Objectives:

(1) Economically strong regional core.

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

(3) A web of multi-modal transportation connections that provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections

and creating new connections where appropriate.

(4) Improved internal mobility with reduced reliance on the automobile within the regional core and within regional activity centers.

(5) Efficient and safe movement of people, goods, and information, with minimal adverse impacts on residents and the environment.

B. Strategies:

(1) Define and identify existing and proposed regional activity centers, taking full advantage of existing infrastructure, for the growth and prosperity of each jurisdiction in the region.
(2) Encourage local jurisdictions to provide incentives for concentrations of residential and commercial development along transportation/transit corridors within and near the regional core and regional activity centers, such as zoning, financial incentives, transfer of development rights, priority infrastructure financing, and other measures.

(3) Encourage the federal government to locate employment in the regional core and in existing and/or planned regional activity centers.

(4) Give high priority to regional planning and funding for transportation facilities that serve the regional core and regional activity centers, including expanded rail service and transit centers where passengers can switch easily from one transportation mode to another.

(5) Identify and develop additional highway and transit circumferential facilities and capacity, including Potomac River crossings where necessary and appropriate, that improve mobility and accessibility between and among regional activity centers and the regional core.

(6) Intercept automotive traffic at key locations, encouraging "park once," and provide excellent alternatives to driving in the regional core and in regional activity centers.

(7) Develop a system of water taxis serving key points along the Potomac and Anacostia Rivers.

Goal 3. The Washington metropolitan region's transportation system will give priority to management, performance, maintenance, and safety of all modes and facilities.

A. Objectives:

(1) Adequate maintenance, preservation, rehabilitation, and replacement of existing infrastructure.

(2) Enhanced system safety through effective enforcement of all traffic laws and motor carrier safety regulations, achievement of national targets for seatbelt use, and appropriate safety features in facility design.

B. Strategies:

(1) Factor life-cycle costs into the transportation system planning and decision process.

(2) Identify and secure reliable sources of funding to ensure adequate maintenance, preservation, and rehabilitation of the region’s transportation system.

(3) Support the implementation of effective safety measures, including red light camera enforcement, skid-resistant pavements, elimination of roadside hazards, and better intersection controls.

Goal 4. The Washington metropolitan region will use the best available technology to maximize system effectiveness.

A. Objectives:

(1) Reduction in regional congestion and congestion-related incidents.

(2) A user-friendly, seamless system with on-demand, timely travel information to users, and a simplified method of payment.

(3) Improved management of weather emergencies and major incidents.

(4) Improved reliability and predictability of operating conditions on the region's transportation facilities.

(5) Full utilization of future advancements in transportation technology.

B. Strategies:

(1) Deploy technologically advanced systems to monitor and manage traffic, and to control and coordinate traffic control devices, such as traffic signals, including providing priority to transit vehicles where appropriate.

(2) Improve incident management capabilities in the region through enhanced detection technologies and improved incident response.

(3) Improve highway lighting, lane markings, and other roadway delineation through the use of advanced and emerging technologies.

(4) Establish a unified, technology-based method of payment for all transit fares, public parking fees, and toll roads in the region.

(5) Utilize public/private partnerships to provide travelers with comprehensive, timely, and accurate information on traffic and transit conditions and available alternatives.

(6) Use technology to manage and coordinate snow plowing, road salting operations, and other responses to extreme weather conditions, and to share with the public assessments of road conditions and how much time it will take to clear roadways.

(7) Use advanced communications and real-time scheduling methods to improve time transfers between transit services.

(8) Develop operating strategies and supporting systems to smooth the flow of traffic and transit vehicles, reduce variances in traffic speed, and balance capacity and demand.

(9) Maintain international leadership in taking advantage of new technologies for transportation, such as automated highway systems and personal rapid transit.

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.

A. Objectives:

(1) The Washington region becomes a model for protection and enhancement of natural, cultural, and historical resources.

(2) Reduction in reliance on the single-occupant vehicle (SOV) by offering attractive, efficient, and affordable alternatives.

(3) Increased transit, ridesharing, bicycling, and walking mode shares.

(4) Compliance with federal clean air, clean water, and energy conservation requirements, including reductions in 1999 levels of mobile source pollutants.

(5) Reduction of per capita vehicle miles traveled (VMT).

(6) Protection of sensitive environmental, cultural, historical, and neighborhood locations from negative traffic and developmental impacts through focusing of development in selected areas consistent with adopted jurisdictional plans.

B. Strategies:

(1) Implement a regional congestion management program, including coordinated regional bus service, traffic operations

improvements, transit, ridesharing, and telecommuting incentives, and pricing strategies.

(2) Develop a transportation system supportive of multiple use and higher density (commercial and residential) in the regional core and regional activity centers as a means of preserving land; natural, cultural, and historic resources; and existing communities.

(3) Support regional, state and federal programs which promote a cost-effective combination of technological improvements and transportation strategies to reduce air pollution, including promoting use of transit options, financial incentives, and voluntary emissions reduction measures.

(4) Develop a regional tourism initiative to encourage air and train arrival in the region, and additional transit access and automobile parking at the termini of Metrorail/rail services.

(5) Provide equivalent employer subsidies to employees with the intent of “leveling the playing field” between automobile and transit/ridesharing.

(6) Plan and implement transportation and related facilities that are aesthetically pleasing.

(7) Implement a regional bicycle/trail/ pedestrian plan and include bicycle and pedestrian facilities in new transportation projects and improvements.

(8) Reduce energy consumption per unit of travel, taking maximum advantage of technology options.

Goal 6. The Washington metropolitan region will achieve better inter-jurisdictional coordination of transportation and land use planning.

A. Objectives:

(1) A composite general land use and transportation map of the region that identifies the key elements needed for regional transportation planning—regional activity centers, principal transportation corridors and facilities, and designated "green space."

(2) Region-wide coordination of land-use and transportation planning in accordance with the recommendations of the Partnership for Regional Excellence report approved by the COG Board of Directors in 1993.

B. Strategies:

(1) Develop a regional process to notify local governments formally of regional growth and transportation policy issues, and encourage local governments to specifically address such issues in their comprehensive plans.

(2) Identify an agreed-upon set of definitions and assumptions to facilitate regional cooperation.

(3) Ensure that major corridor studies include options that serve the regional core and regional activity centers shown on the regional map.

(4) Develop, in cooperation with local governments, model zoning and land use guidelines that encourage multiple-use development patterns and reduce non-work automobile dependency.

(5) Plan for development to be located where it can be served by existing or planned infrastructure.

Goal 7. The Washington metropolitan region will achieve an enhanced funding mechanism(s) for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.

A. Objectives:

(1) Consensus on a set of critical transportation projects and a funding mechanism(s) to address the region's growing mobility and accessibility needs.

(2) A fiscally sustainable transportation system.

(3) Users of all modes pay an equitable share of costs

B. Strategies:

(1) Conduct outreach and education activities to promote public participation.

(2) Develop public support and approval for a specific set of regional and local transportation priorities and a funding mechanism(s) to supplement (and not supplant) priorities to be implemented with current and forecasted federal, state, and local funding.

Goal 8. The Washington metropolitan region will support options for international and inter-regional travel and commerce.

A. Objectives:

(1) The Washington region will be among the most accessible in the nation for international and inter-regional passenger and goods movements.

(2) Continued growth in passenger and goods movements between the Washington region and other nearby regions in the mid-Atlantic area.

(3) Connectivity to and between Washington Dulles International, National, and Baltimore/ Washington International airports.

B. Strategies:

(1) Maintain convenient access to all of the region's major airports for both people and goods.

(2) Support efficient, fast, and cost-effective operation of inter-regional passenger and freight rail services.

(3) Support the development of a seamless regional transportation system.

(4) Support coordinated ticketing and scheduling among Amtrak, MARC, VRE, WMATA, local bus, and inter-city bus service.

(5) Develop a regional plan for freight movement.

PROCESS FOR FUTURE PLAN UPDATES

The region's long-range transportation plan is an evolving document reflecting an ongoing consensus-building process. In accordance with federal regulations, the CLRP will be updated at least every three years, and a public meeting will be scheduled at least annually to discuss the plan. In the past, the CLRP has typically been amended annually in a process that includes an air quality conformity determination.

3.
TRANSPORTATION IN THE WASHINGTON REGION

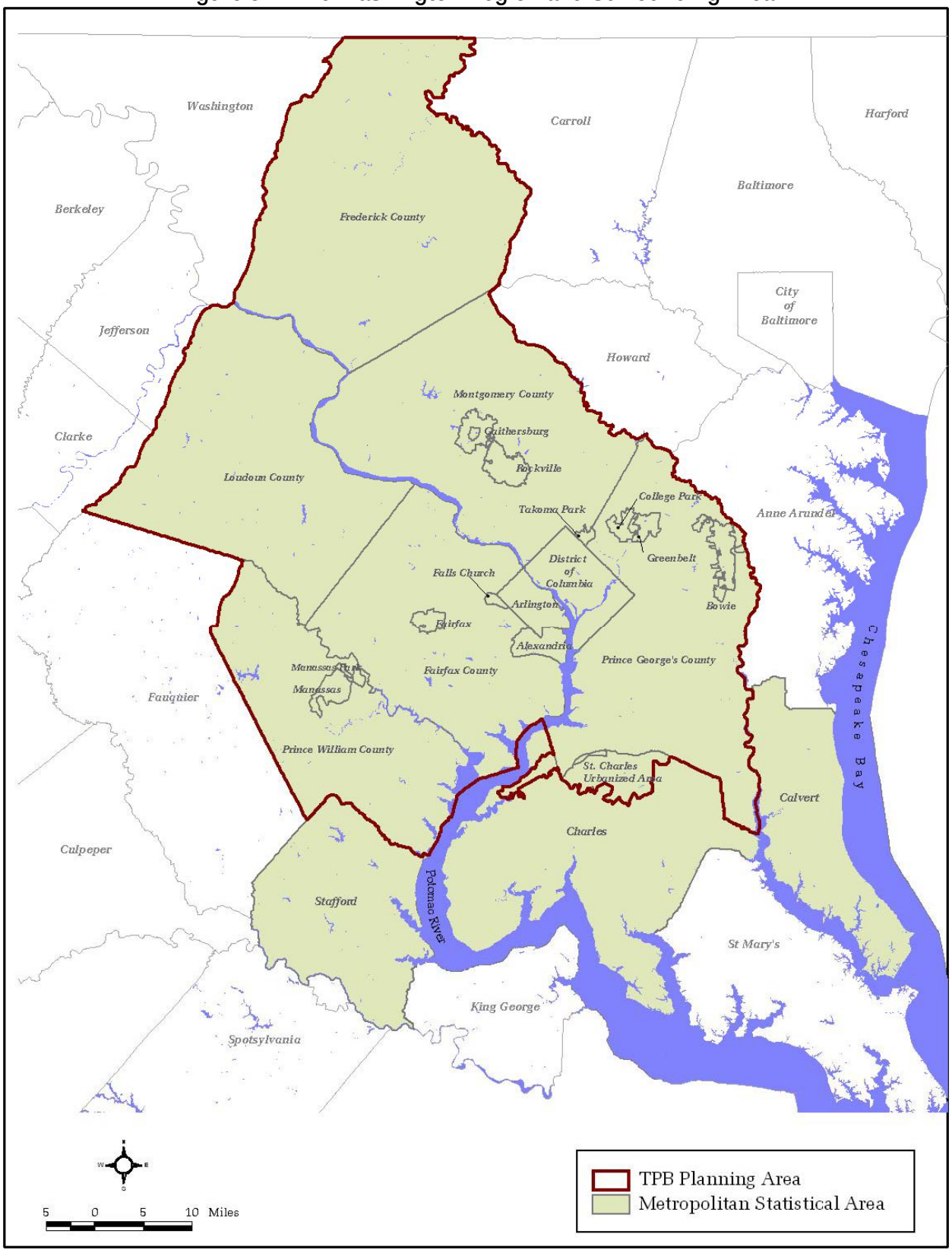
AREA GEOGRAPHY

Flanked by the Blue Ridge Mountains on the west and the Chesapeake Bay on the east, the Washington metropolitan area has grown from a small collection of communities along the Potomac River to a prominent international region of more than four million persons and two million jobs. In the earliest years of this nation's history, settlers sailed up the Potomac River from the lowlands of the Chesapeake Bay estuary to the area where the waters were no longer navigable. This section of the Potomac, known as Little Falls, marks the fall line, the geological feature where the rolling hills of the Piedmont yield to the sprawling flat lands of the tidal waters. It was here that the communities of Georgetown in Maryland (in present-day District of Columbia) and Alexandria in Virginia were established and became ports and trading centers linking the inland settlements with communities along the Bay and other navigable waterways.

In the late 1700s the nation's capital was moved from Philadelphia to this area, thus shaping the destiny of the District of Columbia as a major world capital and, to be sure, the Washington region as a global economic center. Metropolitan Washington is part of the mid-Atlantic region on the eastern seaboard of the nation. It has often been considered the southern terminus of the northeastern "megalopolis," which spans from Washington to Boston and contains other prominent cities including Baltimore, Philadelphia, and New York. The Washington region ranks fourth among all metropolitan areas in the nation in terms of its population.[1]

[1] The Washington-Baltimore Consolidated Metropolitan Statistical Area (CMSA) is ranked the fourth largest metropolitan area. Census 2000 PHC-T-3. Ranking Tables for Metropolitan Areas: 1990 and 2000. Source: U.S. Census Bureau, April 2, 2001.

Figure 3-1: The Washington Region and Surrounding Area



A Multi-State Region

The Washington region consists of the District of Columbia and the jurisdictions of Suburban Maryland and Northern Virginia, and spans the spectrum of regional development: extending from the urbanized central core through the well-established suburbs and ending in the rural fringe. The federal government, based on the results of the 1990 Census, redefined the Washington area to include even more jurisdictions than before, including two counties in West Virginia. In addition, it combined the Washington and Baltimore regions into one "consolidated" metropolitan area. This combined region is the fourth largest in the nation in population terms. The area covered by the long-range plan, as explained in Chapter 1 and shown in Figure 1-2, does not include all of the jurisdictions included in the new definition. Transportation planning in these other jurisdictions occurs almost exclusively at the local and state levels, and in cases where a regional process is already in place, transportation planning is carried out by other regional planning organizations.

The District of Columbia along with the City of Alexandria and Arlington County in Virginia are considered the **regional core** of the Washington area. The **inner suburbs** consist of Montgomery and Prince George's counties in Maryland and Fairfax County and the cities of Fairfax and Falls Church in Virginia. This group of jurisdictions is characterized by heavy growth that has taken place in the past few decades, and it is in this group that the majority of the region's residents live and work. Finally, the **outer suburbs** include Loudoun and Prince William counties, plus the cities of Manassas and Manassas Park in Virginia, and Frederick County in Maryland. (Charles and Calvert counties in Maryland and Stafford County, Virginia, are within the Census-defined Metropolitan Statistical Area (MSA), but are not part of the TPB planning area, with the exception of the St. Charles Urbanized Area of Charles County; See Figure 1-1.)

While officially part of the Baltimore region, Howard and Anne Arundel counties in Maryland act very much like suburbs of the Washington region. A considerable number of the residents of these two counties commute to jobs in the Washington region, and consequently account for a significant level of travel on the area's transportation network.

METROPOLITAN GROWTH AND DEVELOPMENT

Recent Trends

The economy that has evolved in the region is inextricably linked to the role Washington plays as the nation's capital. The federal government is the region's largest employer and, along with the services sector, is the engine that drives the economy of metropolitan Washington. Throughout much of the post-World War II period, the federal government was the single largest employment sector among the major industries. During the 1980s, however, the services sector surpassed the federal government in the number of jobs held in the region, reflecting the tremendous growth in the services sector nationwide. (Although the services sector surpassed the federal government in the number of jobs, it is important to understand that, in the Washington area, the two are closely linked and the growth that occurred was due in large part to federal spending in the region.) In the 1990s the Washington region, along with the rest of the nation, experienced a dynamic economy, finishing the decade with record-low unemployment rates.

Growth during the 1980s and 1990s fueled a surge in commercial construction, and with it came the emergence of suburban employment centers throughout the region. Examples of these centers in the Washington area include Tysons Corner in Virginia and New Carrollton in Maryland. Many of the new jobs that were added in the region were located in these suburban areas, and this resulted in shifting commuting patterns region-wide. In addition to many workers traveling to their jobs in the central core, a significant number of workers now commute to jobs located in the suburbs. In other words, typical commuting is not just radial (suburb-to-core) anymore, but also includes a significant amount of suburb-to-suburb travel.

The dominance of the federal government and the services sector highlights the nature of the regional economy: It is steeped in a long, white collar tradition and, compared to the economies of other major metropolitan areas, has a negligible manufacturing component. While production is not a big component of the regional economy, the distribution and sale of goods account for many jobs in the area. Generally speaking though, the output of the Washington region tends to be intangible items such as services or public policies, not durable goods such as automobiles or widgets.

The composition of jobs in the region (primarily government and services) has resulted in a highly educated labor force with one of the highest participation rates in the nation. Furthermore, the Washington region has one of the highest labor force participation rates among women nationwide. Subsequently, households with more than one member holding a full-time position are very common.

Growth Forecasts

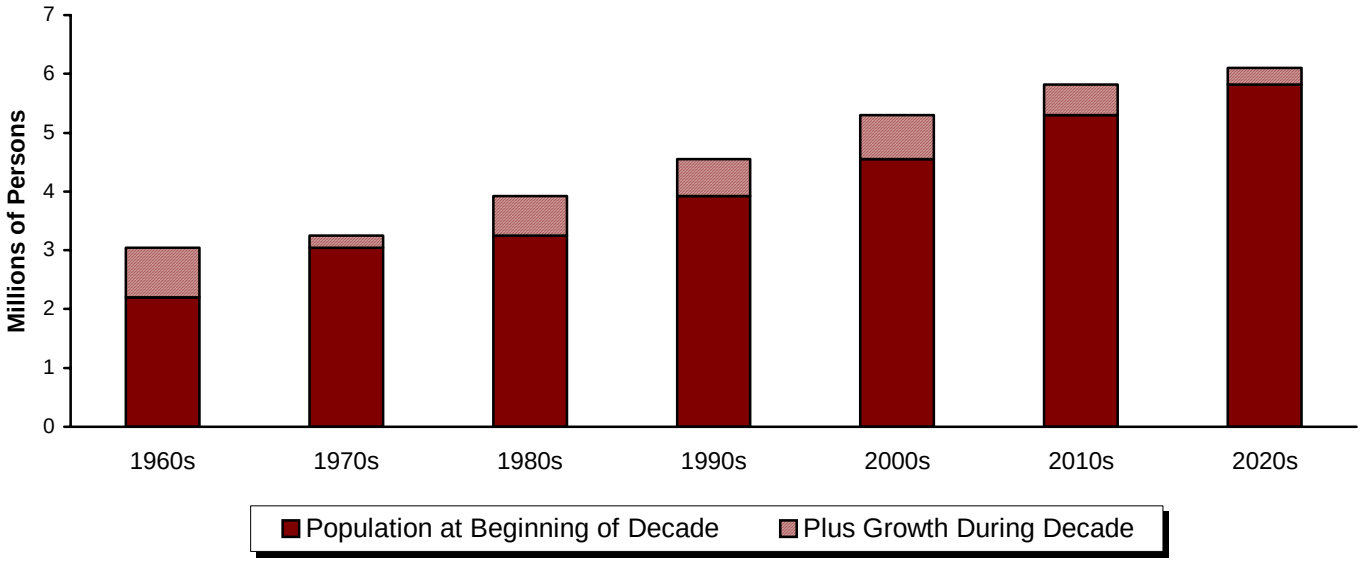
For the most part, the Washington region has enjoyed prosperous times characterized by substantial population and job growth during the second half of the 20th century. The challenge for planners throughout much of this period has been to accommodate the growth that has taken place, and adequately measure and plan for the growth that will occur in the future. COG, through a cooperative process with its local governments, attempts to measure future growth by preparing forecasts of population, households, and employment for the Washington region. These forecasts are both short- and long-term because they cover an approximate 30-year period in five-year increments.

The metropolitan transportation planning process relies on these forecasts as inputs to the regional transportation models, which are technical tools used in the planning process to project the amounts and types of travel by persons and vehicles in the area. The forecasts are updated through an iterative process, and the transportation models are run again to reflect the latest available information. The COG Board of Directors approved the latest forecasts of population, households, and employment in October 2003. This version is known as the Round 6.3 Cooperative Forecasts and covers the period up to 2030, the same period covered by the long-range plan.

Population Growth

The comparatively healthy economy of the Washington region during the past few decades fueled strong population growth in the region. In 1960, the population of the Washington region was 2.2 million, but by 2000, the population had more than doubled, to 4.5 million. This contrasts with what is forecast for the region in 2025. According to the Round 6.3 forecasts, metropolitan Washington is expected to have a population of 6.1 million people by the year 2030, representing a gain of 1.1 million people (23 percent) from the 2005 level. In other words, the population in the Washington region grew at an average annual rate of 1.8 percent between 1960 and 2000, but is expected to increase annually by only 1 percent between 2005 and 2030. Table 3-1 shows the population forecasts for the region and Figure 3-2 shows the growth trends (past and anticipated) for six decades. The rapid growth of the 1960s and the slow growth of the 1970s are clearly shown in Figure 3-2.

Figure 3-2
Population Trends: 1960-2030



Based on Washington, DC-MD-VA MSA data.

Table 3-1
Round 6.3 Cooperative Forecasts of Population by Jurisdiction
(in Thousands)

Jurisdiction	*2005*	*2015*	*2030*	*Absolute Growth 2005-2030*	*Percent Growth 2005-2030*
District of Columbia	607.0	673.7	702.4	95.4	15.7
Arlington County	197.4	209.1	221.9	24.5	12.4
City of Alexandria	136.5	145.9	151.7	15.2	11.1
Central Jurisdictions	**940.9**	**1,028.7**	**1,076.0**	**135.1**	**14.4**
Montgomery County (1)	925.0	1,020.0	1,080.0	155.0	16.8%
Rockville (2)	53.7	62.8	64.4	10.7	19.9%
Prince George's County	856.6	907.7	967.8	111.2	13.0%
Fairfax County (3)	1,045.0	1,149.8	1,197.4	152.4	14.6%
City of Fairfax	23.5	24.4	24.3	0.8	3.4%
City of Falls Church	10.6	11.6	12.2	1.6	15.1%
Inner Suburbs	**2,860.7**	**3,113.5**	**3,281.7**	**421.0**	**14.7%**
Loudoun County	239.3	351.2	441.9	202.6	84.7%
Prince William County	339.9	400.6	433.1	93.2	27.4%
Manassas & Manassas Park	51.0	52.5	53.3	2.3	4.5%
Calvert County (4)	80.6	91.1	104.4	23.8	29.5%
Charles County (4)	134.0	165.2	205.0	71.0	53.0%
Frederick County	216.6	260.0	324.6	108.0	49.9%
Stafford County (5)	107.1	136.4	180.4	73.3	68.4%
Outer Suburbs	**1,168.5**	**1,457.0**	**1,742.7**	**574.2**	**49.1%**
Northern Virginia	**2,150.3**	**2,481.5**	**2,716.2**	**565.9**	**26.3%**
Suburban Maryland	**2,212.8**	**2,444.0**	**2,681.8**	**469.0**	**21.2%**
Washington, DC-MD-VA MSA	**4,970.1**	**5,599.2**	**6,100.4**	**1,130.3**	**22.7%**

Source: Metropolitan Washington Council of Governments

Notes:
(1) Forecasts for years 2005 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Includes Fairfax County group quarters population in the Massey Complex.
(4) Tri-county Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County and Charles County.
(5) Source: Rappahanock Area Development Commission. The estimates for 2030 are control totals provided by the Virginia Employment Commission (VEC) and should only be used for transportation planning purposes. Incremental five-year estimates have been developed for the purpose of transportation modeling and air quality analysis.

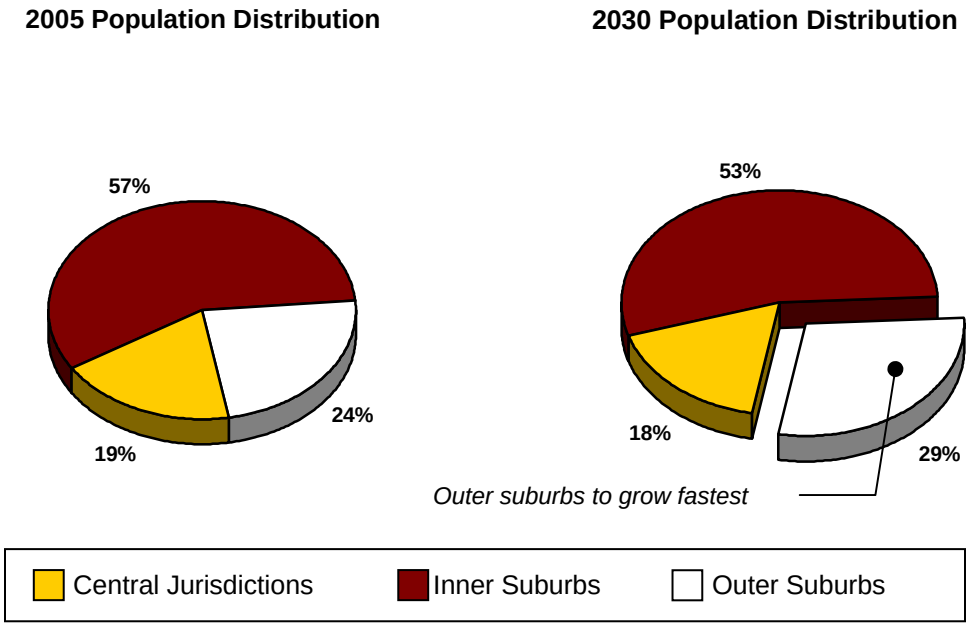
Distribution of Population Growth

The largest increase in population will take place in the region's outer suburbs. Both the absolute growth and percent growth of the outer suburbs will surpass that of the inner suburbs. Loudoun County will grow from approximately 240,000 people in 2005 to approximately 440,000 in 2030, a jump of 85 percent. Prince William County in Virginia and Frederick County in Maryland will grow by 27 percent and 50 percent, respectively.

Although the outer suburbs will bear the largest growth, the inner suburbs will remain the population stronghold. Montgomery, Prince George's and Fairfax counties are projected to grow from a combined total of over 2.8 million residents in 2005 to almost 3.3 million residents in 2030, a 15 percent increase.

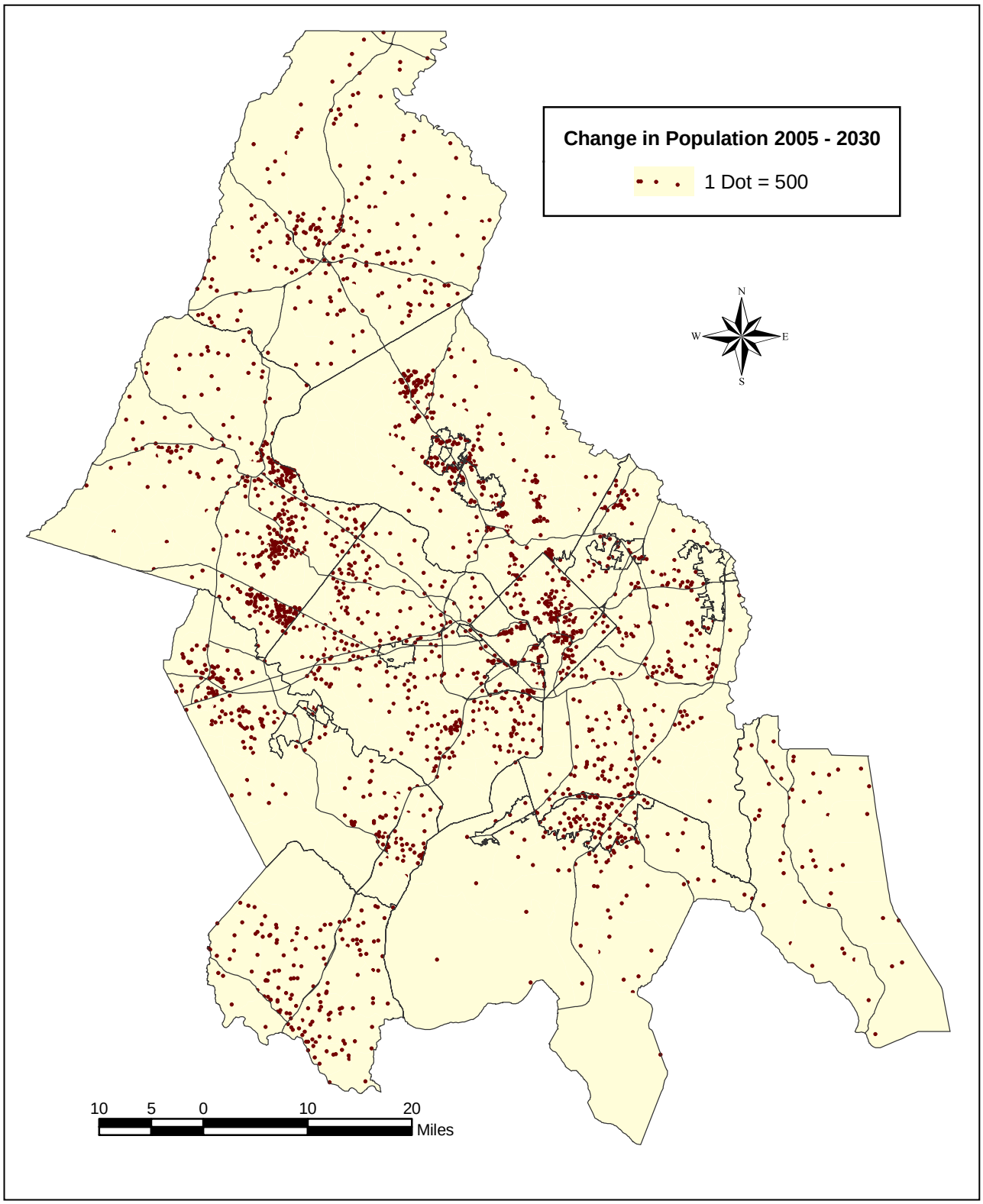
The region's central jurisdictions will grow more slowly. In Arlington County and the City of Alexandria, population will increase by 12 and 11 percent, respectively. The District of Columbia will experience an end of short-term population loss and will grow by 16 percent over the forecast period. Figures 3-3 and 3-4 show how growth between 2005 and 2030 will affect the overall population distribution region wide.

Figure 3-3
Shifts in Population Distribution



Based on Washington, DC-MD-VA MSA data.

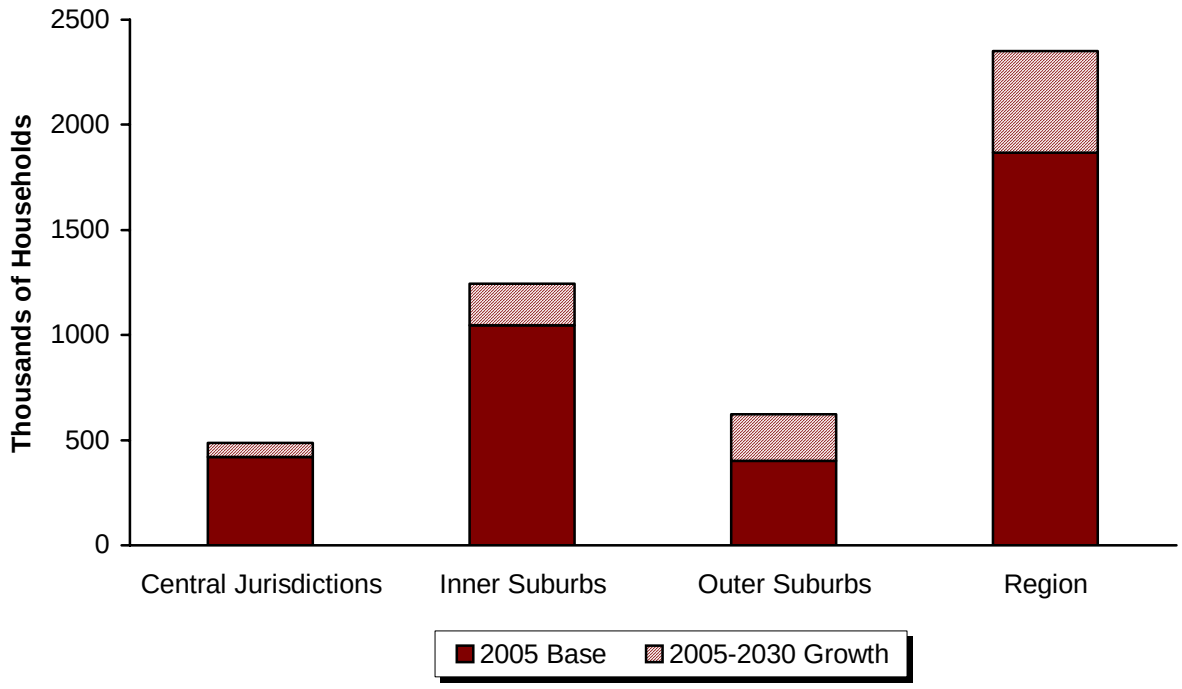
Figure 3-4
Change in Population: 2005 – 2030



Household Growth

The forecast increase of more than 484,000 households during the 2005 to 2030 forecast period reflects the growth in population and in-migration to the region. As shown in table 3-2, the largest number of new households will be in Loudoun, Fairfax, and Montgomery counties, which collectively contribute 46 percent of the household growth during the forecast period. Loudoun County will grow the most rapidly of all jurisdictions, adding nearly 72,000 households to a 2005 base of 85,000 households. Overall, households are forecast to increase at a slightly higher rate than the population, reflecting a continued national and regional trend toward smaller households. Figure 3-5 shows how the household growth is distributed around the region.

Figure 3-5
Distribution of Household Growth



Based on Washington, DC-MD-VA MSA data.

Table 3-2
Round 6.3 Cooperative Forecasts of Households by Jurisdiction
(in Thousands)

Jurisdiction	*2005*	*2015*	*2030*	*Absolute Growth 2005-2030*	*Percent Growth 2005-2030*
District of Columbia	263.9	292.9	304.4	40.5	15.3%
Arlington County	90.9	98.7	106.2	15.3	16.8%
City of Alexandria	66.2	71.8	75.3	9.1	13.7%
Central Jurisdictions	**421.0**	**463.4**	**485.9**	**64.9**	**15.4%**
Montgomery County (1)	346.5	390.0	420.0	73.5	21.2%
Rockville (2)	20.0	24.0	24.7	4.7	23.5%
Prince George's County	304.5	333.6	369.8	65.3	21.4%
Fairfax County (3)	381.2	421.8	438.4	57.2	15.0%
City of Fairfax	9.0	9.4	9.7	0.7	7.8%
City of Falls Church	4.6	5.1	5.4	0.8	17.4%
Inner Suburbs	**1,045.8**	**1,159.9**	**1,243.3**	**197.5**	**18.9%**
Loudoun County	84.9	124.6	156.7	71.8	84.6%
Prince William County	113.4	137.2	152.1	38.7	34.1%
Manassas & Manassas Park	16.5	17.4	17.9	1.4	8.5%
Calvert County (4)	27.3	31.0	36.6	9.3	34.1%
Charles County (4)	46.5	58.9	76.1	29.6	63.7%
Frederick County	76.2	93.2	120.2	44.0	57.7%
Stafford County (5)	36.1	46.9	63.5	27.4	75.9%
Outer Suburbs	**400.9**	**509.2**	**623.1**	**222.2**	**55.4%**
Northern Virginia	**802.8**	**932.9**	**1,025.2**	**222.4**	**27.7%**
Suburban Maryland	**801.0**	**906.7**	**1,022.7**	**221.7**	**27.7%**
Washington, DC-MD-VA MSA	**1,867.7**	**2,132.5**	**2,352.3**	**484.6**	**25.9%**

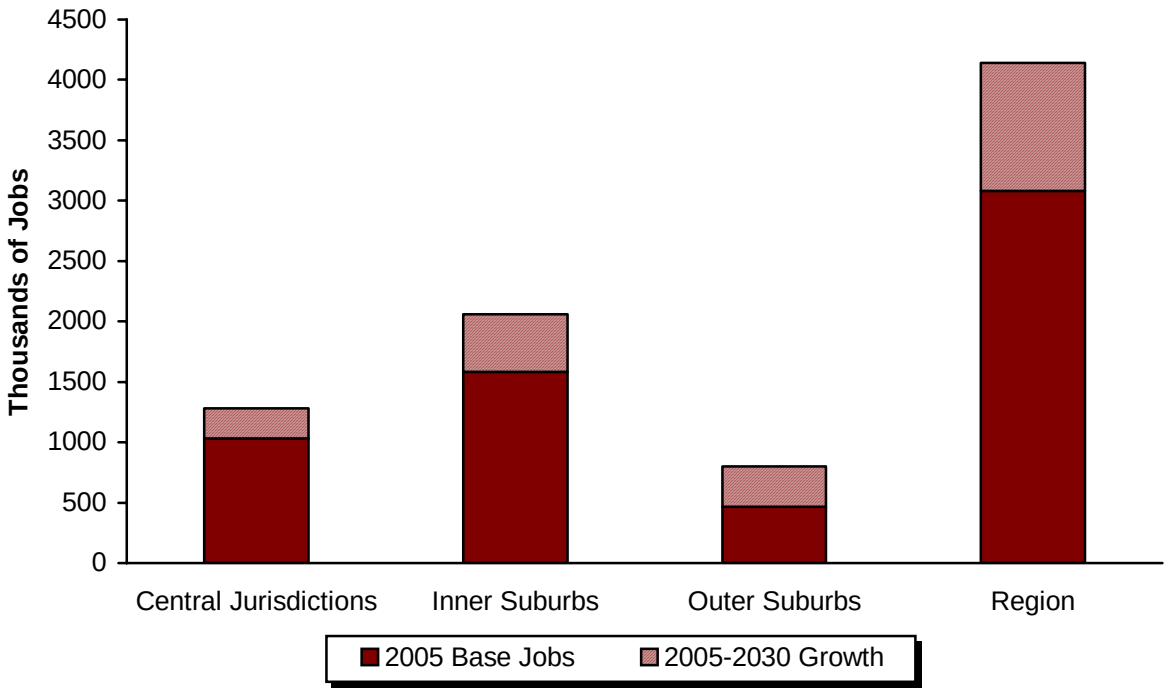
Source: Metropolitan Washington Council of Governments
Notes: (1) Forecasts for years 2005 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Includes Fairfax County group quarters population in the Massey Complex.
(4) Tri-county Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County and Charles County.
(5) Source: Rappahanock Area Development Commission, March 2003.

Employment Growth

Employment in the region is forecast to grow by 34 percent between 2005 and 2030. As shown in Table 3-3, the central jurisdictions will gain 247,000 jobs by the year 2030.

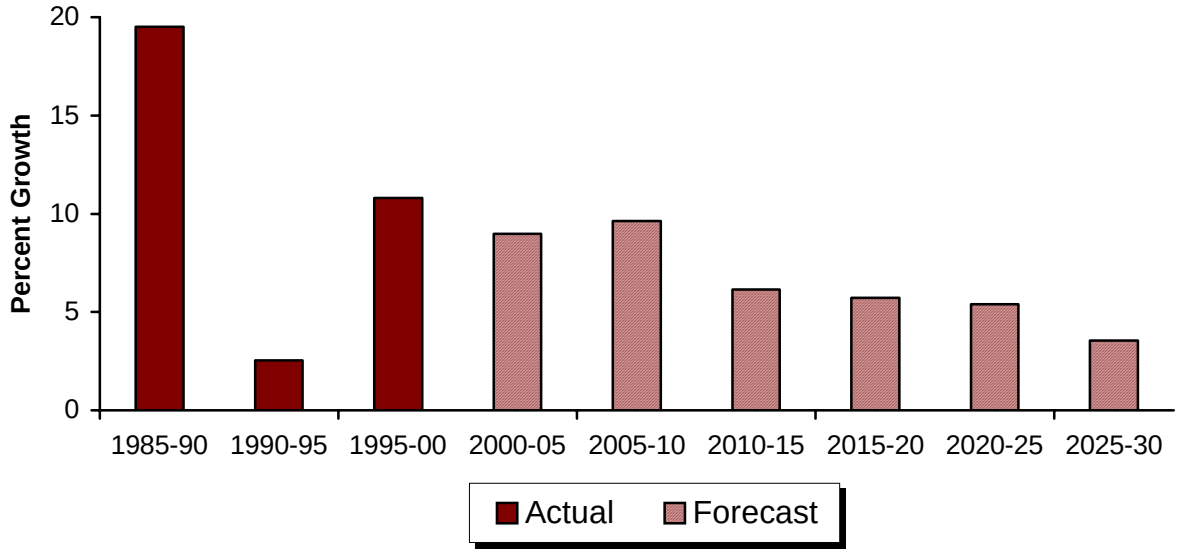
Noteworthy is the fact that while the District of Columbia will maintain the largest number of jobs of any single jurisdiction, collectively the jurisdictions outside the traditional central business core will witness the largest percentage growth and maintain the lion's share of jobs. Employment in the inner suburbs will increase from approximately 1.6 million in 2005 to over two million in 2030, an increase of 30 percent. Figure 3-6 illustrates the distribution of employment growth throughout the region.

Figure 3-6
Distribution of Employment Growth



Based on Washington, DC-MD-VA MSA data.

Figure 3-7
Employment Growth Rates



Based on Washington, DC-MD-VA MSA data.

Although employment in the outer suburbs will remain below that of the central jurisdictions and inner suburbs, it will increase 70 percent, from 468,000 jobs in 2005 to almost 800,000 jobs in 2030. Figure 3-7 compares past employment growth rates to those that are anticipated in the future and Figure 3-8 illustrates the changes in employment across the region by 2030.

Figure 3-8
Change in Employment: 2005 – 2030

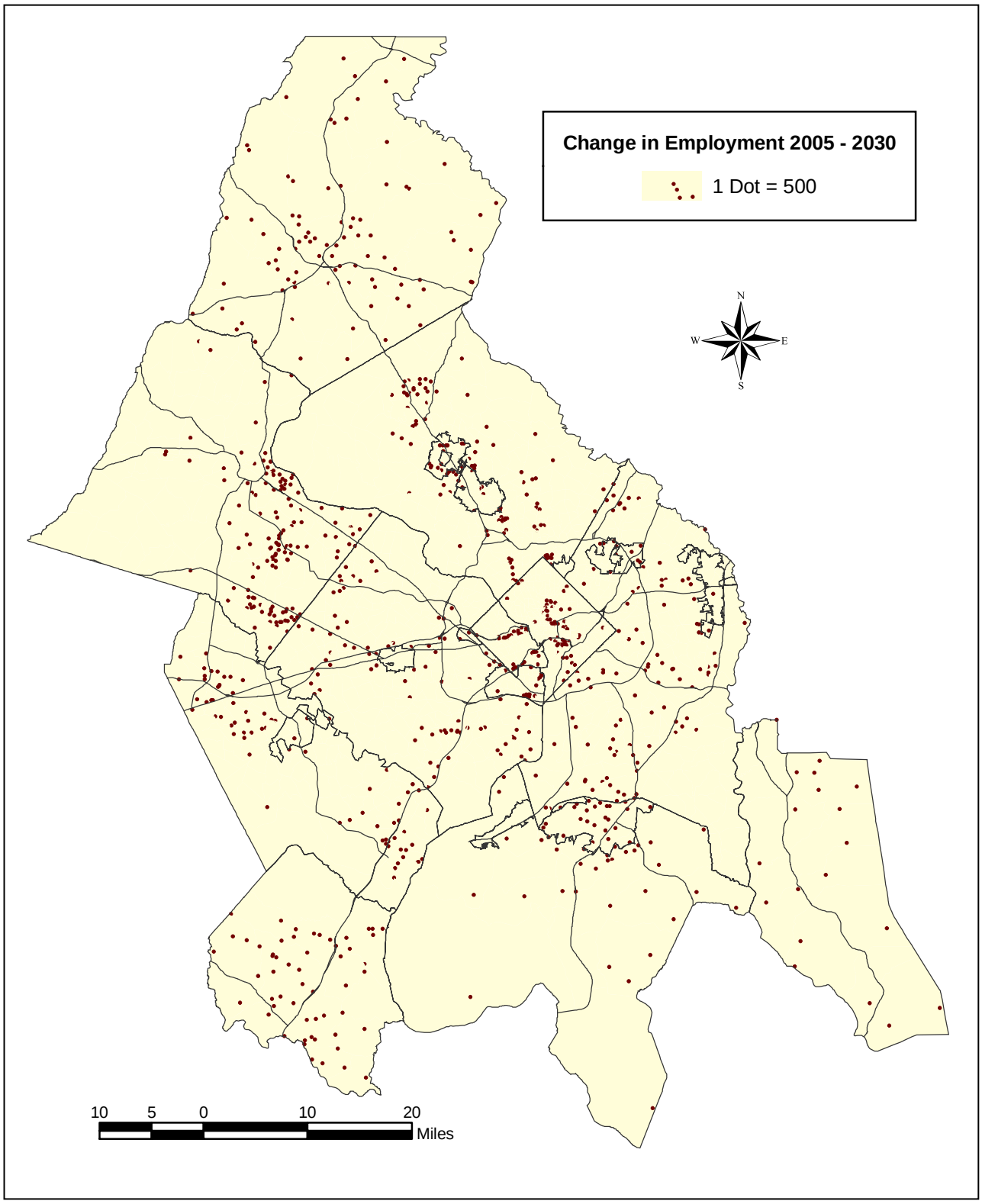


Table 3-3
Round 6.3 Cooperative Forecasts of Employment by Jurisdiction
(in Thousands)

Jurisdiction	*2005*	*2015*	*2030*	*Absolute Growth 2005-2030*	*Percent Growth 2005-2030*
District of Columbia	720.4	783.7	831.2	110.8	15.4%
Arlington County	209.7	255.0	301.9	92.2	44.0%
City of Alexandria	104.1	128.3	148.1	44.0	42.3%
Central Jurisdictions	**1,034.2**	**1,167.0**	**1,281.2**	**247.0**	**23.9%**
Montgomery County (1)	585.0	660.0	705.0	120.0	20.5%
Rockville (2)	80.6	98.3	103.5	22.9	28.4%
Prince George's County	357.9	426.4	550.0	192.1	53.7%
Fairfax County (3)	595.0	678.4	758.9	163.9	27.5%
City of Fairfax	33.1	33.9	33.8	0.7	2.1%
City of Falls Church	9.5	10.3	10.7	1.2	12.6%
Inner Suburbs	**1,580.5**	**1,809.0**	**2,058.4**	**477.9**	**30.2%**
Loudoun County	109.9	166.2	253.6	143.7	130.8%
Prince William County	106.3	139.4	173.5	67.2	63.2%
Manassas & Manassas Park	24.5	28.6	5.2	2.2	73.3%
Calvert County (4)	29.4	33.7	29.4	4.9	20.0%
Charles County (4)	56.5	64.8	35.6	6.2	21.1%
Frederick County	109.2	134.6	69.1	12.6	22.3%
Stafford County (5)	31.8	43.8	177.8	68.6	62.8%
Outer Suburbs	**467.6**	**611.1**	**798.7**	**331.1**	**70.8%**
Northern Virginia	**1,223.9**	**1,483.9**	**1,769.6**	**545.7**	**44.6%**
Suburban Maryland	**1,138.0**	**1,319.5**	**1,537.5**	**399.5**	**35.1%**
Washington, DC-MD-VA MSA	**3,082.3**	**3,587.1**	**4,138.3**	**1056.0**	**34.3%**

Source: Metropolitan Washington Council of Governments
Notes: (1) Forecasts for years 2005 to 2030 include all of Takoma Park.
(2) Included in Montgomery County total.
(3) Includes Fairfax County group quarters population in the Massey Complex.
(4) Tri-county Council for Southern Maryland develops ten-year incremental population, housing unit and employment forecasts for Calvert County and Charles County.
(5) Source: Rappahanock Area Development Commission, March 2003.

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TRAVEL OPTIONS

The Washington region offers a rich array of options for both personal travel and goods movement. The major types of transportation facilities and transportation services in the area are described briefly in the sections that follow.

Highways

The road network is the foundation of the transportation system in the Washington region. This network consists of freeways, principal arterials, minor arterials, collectors, and local streets, each designed to provide a specific type of service. A large portion of the monies available for the transportation system are used to maintain and utilize this infrastructure as efficiently as possible.

The region has a designated portion of the National Highway System (NHS), illustrated in Figures 3-9 and 3-10. This system includes all of the interstate highways and other major roads in the region. The region's NHS is part of a nationwide system approved by Congress and the Federal Highway Administration (FHWA). The roadways designated on this system are eligible for NHS funds and transit facilities in NHS corridors may also be eligible for NHS funds.

HOV Facilities

The region's highway system includes a number of facilities that are reserved for high-occupancy vehicles (HOVs). The exclusive bus and carpool lanes on I-395 opened in the early 1970s and are among the most effective people moving facilities in the country. HOV lanes also can be found on I-66, I-270, US 1 and Washington Street in Alexandria, the Dulles Toll Road (VA 267), and I-95. HOV lanes increase the capacity of the highway network, moving more people in fewer cars. The HOV facilities currently operating in the region are presented in Figure 3-11.

Metrobus/Metrorail

The Washington Metropolitan Area Transit Authority (WMATA) operates the Metrorail and Metrobus service in the region. The Metrorail system radiates out from the downtown core, and Metrobuses feed into the Metrorail stations, creating a comprehensive mass transit network covering more than 1,500 square miles. About one million trips were made on Metrorail and Metrobus, collectively, on an average weekday in 2000.

Figure 3-9
National Highway System
Inside the Beltway

Legend

- Airports
- Eisenhower Interstate System
- Other NHS Routes
- STRAHNET Route
- Intermodal Connector
- Unbuilt NHS Routes

1 0 1 2 3 4 5 Miles

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W E
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Figure 3-10
National Highway System
Washington Region

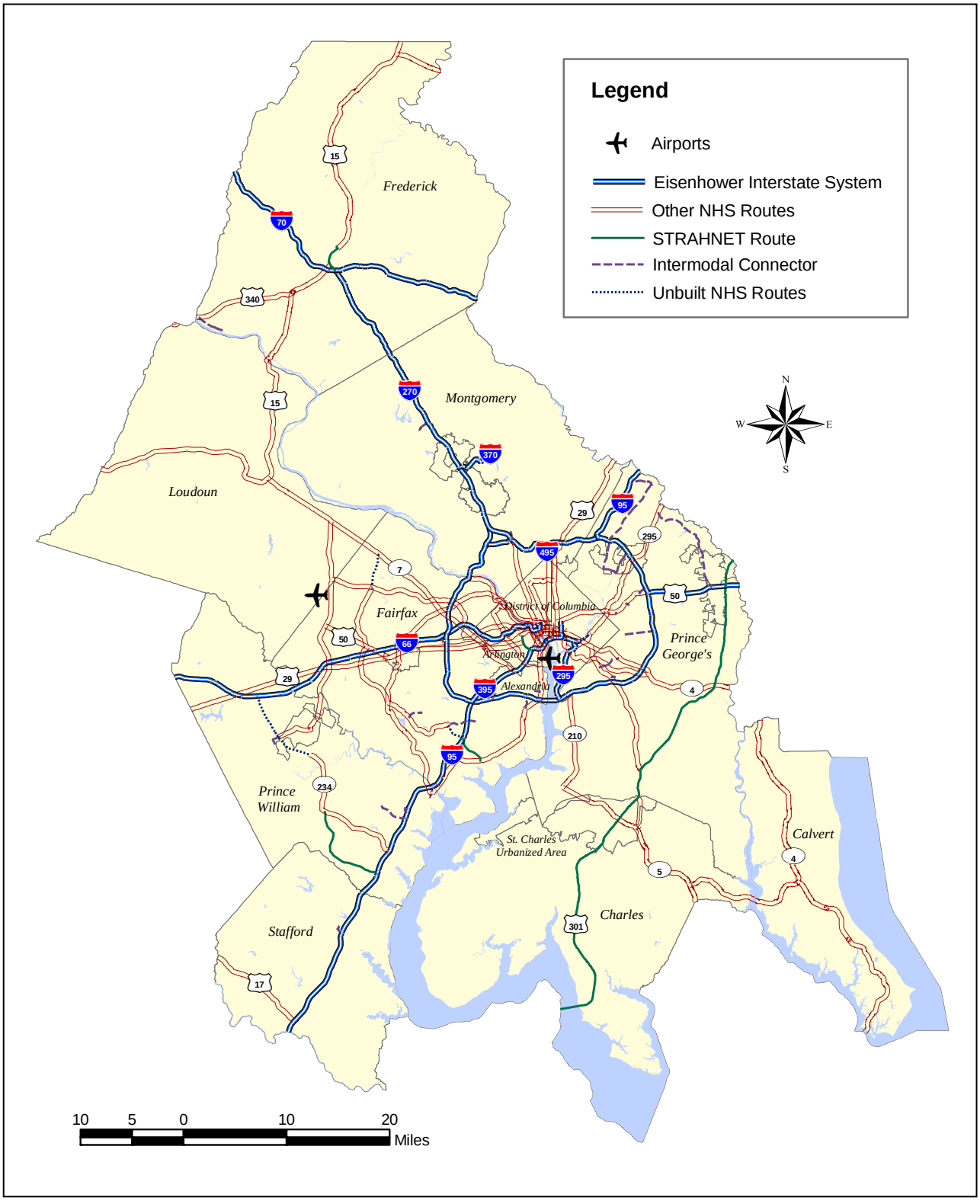
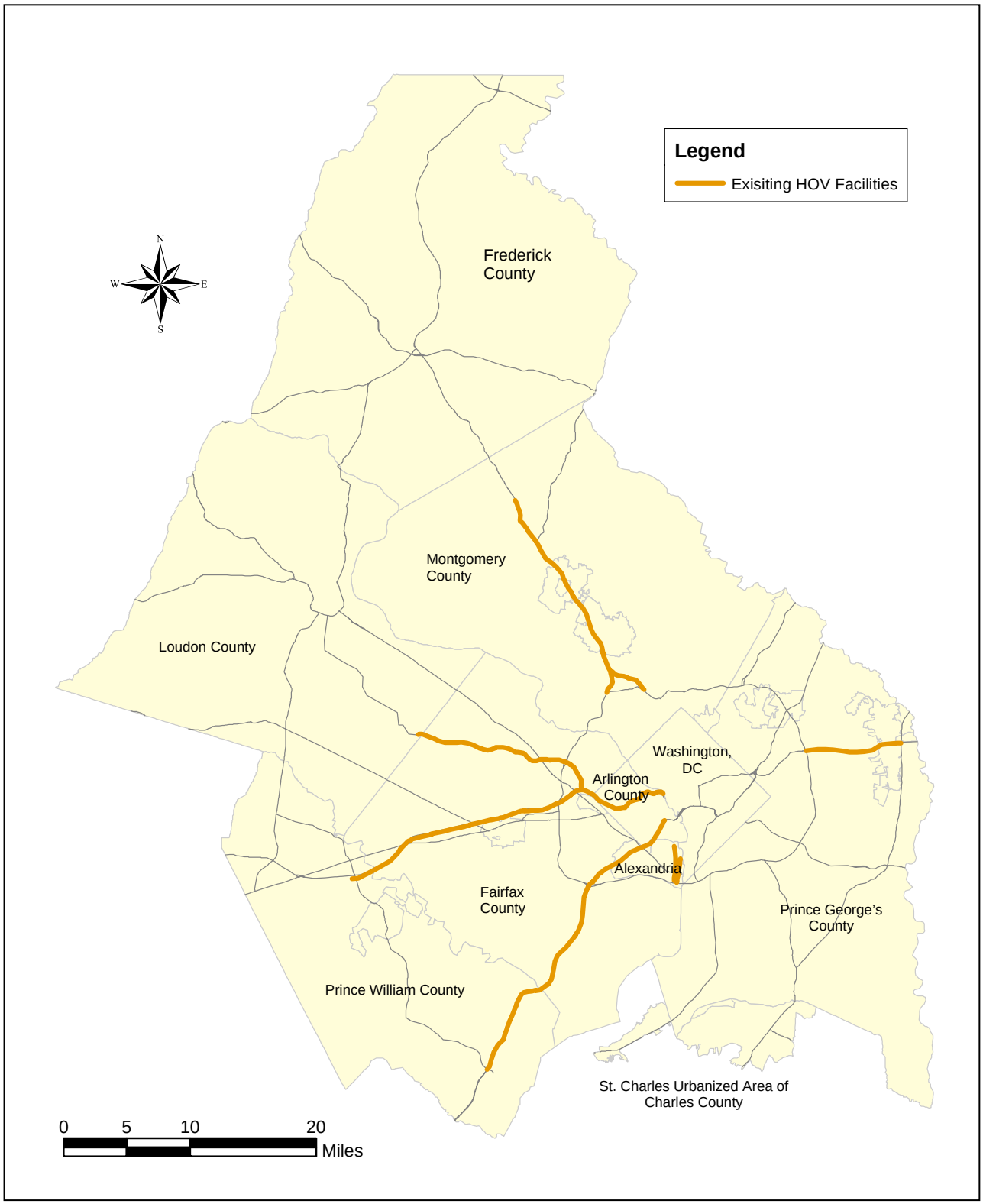


Figure 3-11
Existing High-Occupancy Vehicle (HOV) Facilities in the Washington Region



The originally planned 103-mile Metrorail with a total of 83 stations, shown in Figure 3-12, was completed in 2001. Metrorail's 764 heavy-rail trains operate with three- to six-minute intervals between trains during peak periods and with six- to sixteen-minute intervals during off-peak periods. In 2000, an average of 620,000 trips per weekday were made on Metrorail. The number of commuting trips on Metrorail is increasing, but Metrorail's overall share of the total work travel is expected to remain relatively flat as more jobs are located outside of the central core.

WMATA operates approximately 1,400 Metrobuses with routes in the District of Columbia, Alexandria, and Arlington, Fairfax, Montgomery, and Prince George's counties. Since 1975, the Metrobus system has been transformed from a predominantly radial system serving the District of Columbia to a feeder network serving the Metrorail system. Metrobus also provides regional route service for trips not served by the rail system. Each time a new segment of the rail system has been opened, bus routes in the affected corridor or corridors have been modified either to serve or to turn back at the new stations. In 2000, an average of 510,000 trips per weekday were made on Metrobus.

Other Bus Services

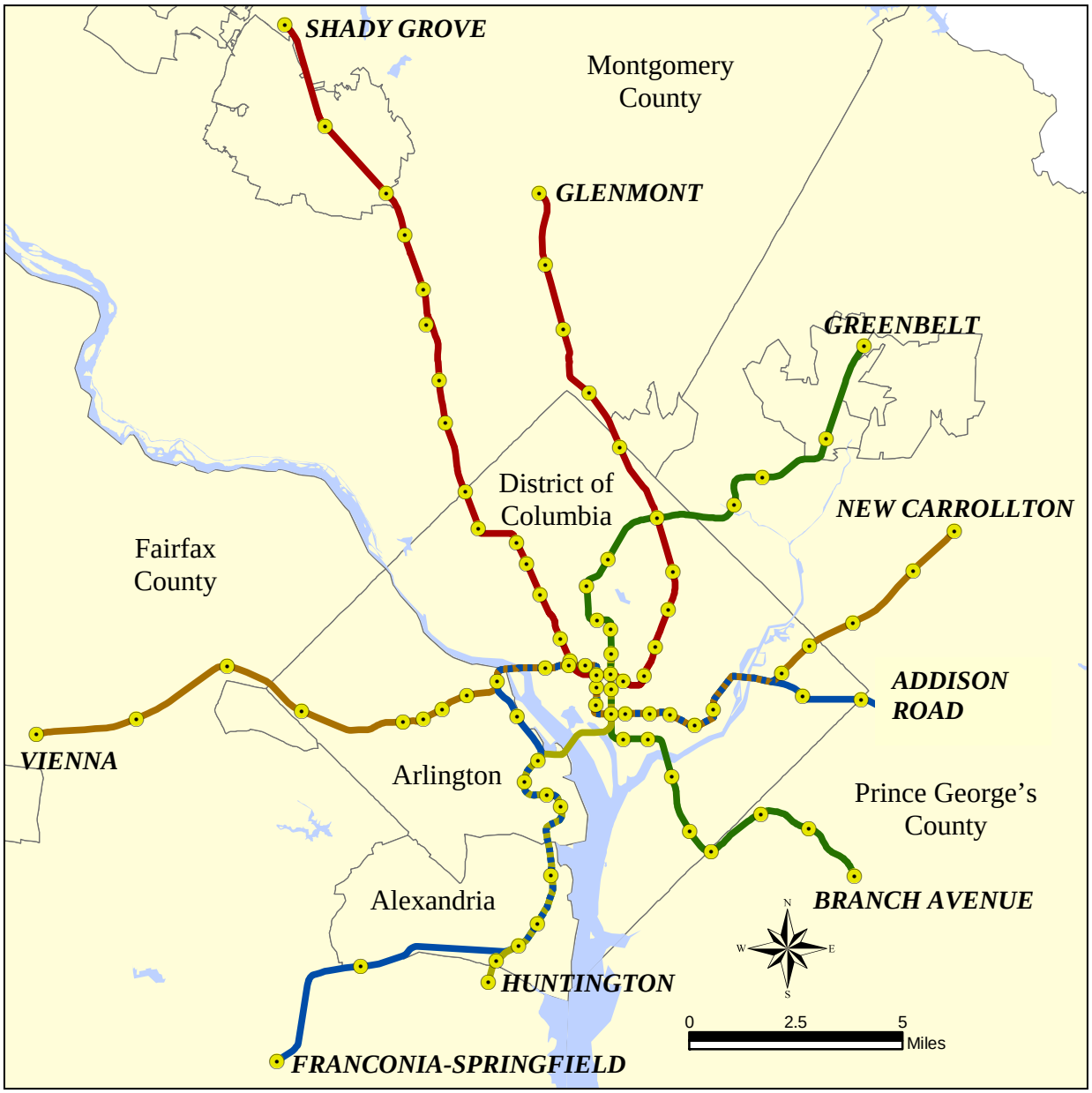
In addition to Metrobus service, several jurisdictions have their own local bus service. These include Montgomery County's Ride-On, Alexandria's DASH, Prince George's County's The Bus, Fairfax County's Connector, Loudoun Transit, and the City of Fairfax's CUE systems. In addition, the CommuteRide system operates within Prince William County, Manassas, and Manassas Park. Several private commuter bus companies exist as well.

Commuter Rail

Two commuter rail services operate in the region, Virginia Railway Express (VRE) and Maryland Rail Commuter (MARC). The Virginia Railway Express provides commuter rail service to Union Station in Washington, D.C. on two routes, the Manassas and Fredericksburg lines. VRE runs 9 trains each way every weekday on the Manassas Line, and 6 trains each way every weekday on the Fredericksburg Line. VRE provides about 9,300 trips per day.

MARC also provides commuter rail service to Union Station. Its service operates three routes, the Brunswick, Camden, and Penn lines. A total of 81 trains on these three lines provide morning, midday, and evening service. On an average weekday, about 20,000 persons board MARC trains, the majority of these trips being commuting trips to or from downtown Washington.

Figure 3-12
The Metrorail System



Ridesharing

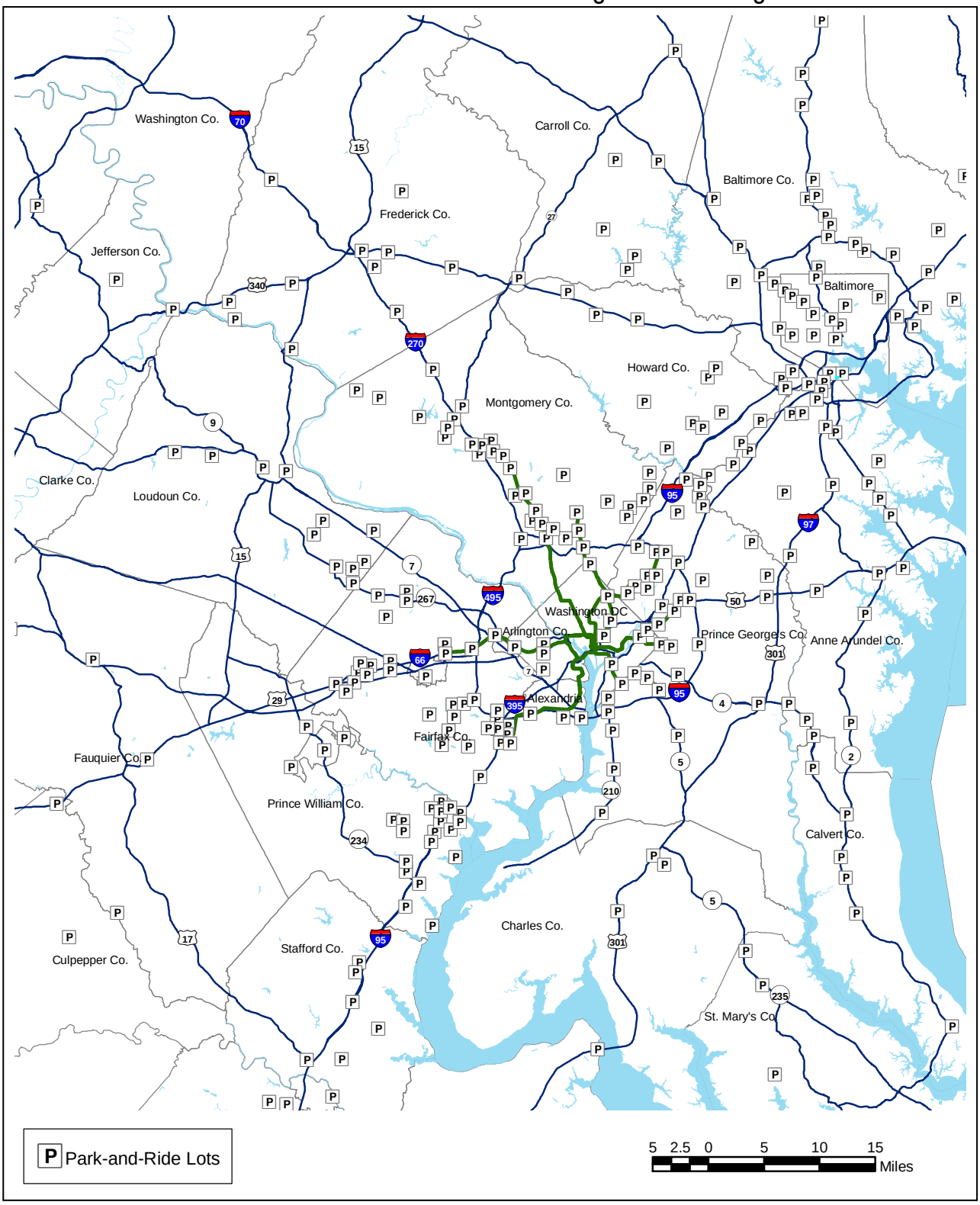
The Washington region is the carpool capital of the nation. According to the 2000 Census, 13 percent of Washington commuters used car or van pools to get to work. The high rate of ridesharing is encouraged by a number of factors, including the area's successful HOV lanes and an abundance of park-and-ride lots, which enable commuters to access a car or van pool or bus or rail service for their commute to work. The locations of park-and-ride lots within the Washington commuting area are illustrated in Figure 3-13.

Another resource that has helped the region attain such a high rate of carpooling is the Commuter Connections Program. Commuter Connections is a network of Washington metropolitan commuter transportation organizations coordinated by COG and TPB. It was known for more than 20 years as Ride Finders. As Commuter Connections, it has expanded its services to help businesses find transportation solutions vital to not only their own success, but to the economic development and quality of life of the entire region.

Commuter Connections assists businesses by identifying many opportunities for voluntarily complying with the Clean Air Act guidelines to reduce vehicle emissions. It promotes and facilitates telecommuting programs and other pollution reduction activities. Using a Geographic Information System software program, Commuter Connections matches commuters for ridesharing. Through its Commuter Operations Center, Commuter Connections provides support to 31 federal, state, and local government agencies and large employers.

In January 1997, Commuter Connections launched a regional Guaranteed Ride Home (GRH) program to "take the worries out of ridesharing." COG works with area businesses to guarantee that employees registered in their company rideshare program or with Commuter Connections have a ride home in case of an unexpected personal or family emergency, personal or family illness, or when required to work unscheduled overtime (a supervisor’s verification is required). GRH cannot be used for weather emergencies or acts of God. Eligible commuters may use the GRH program a maximum of four times per year. The GRH program is designed specifically for unexpected emergencies. It may not be used for personal errands, scheduled appointments, business-related travel, or working late without a supervisor's request. Such programs are proven inducements for commuters to use alternatives to driving alone. Employees eligible for the GRH program include ridesharers (carpoolers, vanpoolers), mass transit users (bus, train), bicyclists, and those who walk to work.

Figure 3-13
Locations of Park-and-Ride Lots in the Washington Commuting Area



Additionally, Commuter Connections is currently planning a regional system of Traveler Information kiosks, and coordinates regional programs for teleworking as further encouragement to alternatives to the single-occupant vehicle. With teleworking, also known as telecommuting, employees work at home or perhaps at a satellite teleport center one or more days per week. Communications to their office is accomplished by phone, fax, modem, and teleconferencing, saving many hours of time, congestion, and energy consumption on the region's highways.

Overall, Commuter Connections provides one-stop shopping for commuters and businesses as a primary commuter information resource for Maryland, Virginia, and the District of Columbia.

Bicycle and Pedestrian Facilities

The Bicycle Plan for the National Capital Region is a component of the CLRP. A separate document outlines in greater detail the region's plan for building and improving bicycle facilities, summarized in Chapter 4 of the CLRP.

Both for the benefit of the environment and for the people they serve, bicycle and pedestrian facilities are important components of the region's transportation system. The Washington region currently enjoys more than 900 miles of on-street and off-street bikeways. Most jurisdictions in the area have developed bicycle transportation plans and have planners on staff to coordinate the bicycle/trail programs of the particular locality.

A trend in recent years has been to establish bicycle routes or multi-use trails along the rights-of-way of abandoned railroad corridors. An example of this type of design is the 45-mile long Washington & Old Dominion trail, which is now used by more than one million people annually. The recently completed Capital Crescent Trail from Georgetown to Bethesda is already very popular. In the District of Columbia, another rail-trail, the Metropolitan Branch Trail, is planned. When finished, it will go from Union Station to Silver Spring, Maryland.

Action has also been taken to encourage bicycling to Metrorail stations. Improved bicycle access, bicycle storage facilities, installation of bike racks on buses, and policies allowing bikes on Metrorail trains during low ridership periods are current policies linking transit use with bicycling. As part of transportation air pollution controls, two new bicycling initiatives have been authorized. The first will provide 2,000 new bicycle racks in Maryland and Virginia. The second will develop materials on bicycle commuting for use in the Commuter Connections Employer Outreach program.

Transit for Persons with Disabilities

Great strides have been made to make the Metrorail system accessible to people with disabilities. Metrorail stations have elevators for riders who are unable to use the escalators. When an elevator is not working, Metrorail has a van service to transport patrons to the next closest station. Metrorail runs a telephone information line that details the stations without operating elevators so passengers with disabilities may plan their route in advance.

WMATA also provides an on-call bus service as part of its Metrobus system. Currently, about 90 percent of the Metrobus fleet is equipped with wheelchair lifts. If riders require a lift-equipped bus, they may call ahead with their itinerary and WMATA will ensure that a lift-equipped bus will be on the route at the requested time. As Metrobuses are retired from the fleet, they are replaced with lift-equipped vehicles. WMATA expects to have a 100 percent wheelchair-accessible fleet by 2006. In addition, WMATA operates a paratransit system exclusively for persons with disabilities; over 14,000 persons are registered and use the system. Those who qualify are issued an identification card and are able to schedule curb-to-curb travel service.

Airports

Residents of the region have an abundance of airport capacity to meet their travel demands. Three major commercial airports are located in the Washington region. Washington National Airport, located in the central core of the region, serves domestic travel needs, while Washington Dulles International Airport, located in Loudoun County, Virginia, serves both domestic and international routes. Baltimore/Washington International Airport, located in northern Anne Arundel County, Maryland, near the city of Baltimore, is also accessible to many area residents and provides access to domestic and international destinations. In 2000, these three airports served 55.6 million arriving and departing air passengers. In addition to the major commercial airports, the region features a number of general aviation airports to serve non-commercial air activity such as corporate travel. The three major commercial airports also include general aviation facilities.

Intercity Rail

Amtrak offers intercity passenger service for the Washington region with approximately 60 trains per day. Washington, D.C., is the southern anchor of Amtrak's Northeast Corridor, which extends north to Boston. High-speed trains run between Washington's Union Station and New York's Pennsylvania Station in this corridor. Amtrak is the largest passenger carrier between New York and Washington.

Movement of Goods

Most of the Washington region's economy consists of government agencies and service and tourism industries. Freight movement in the region is therefore oriented towards delivery of office supplies, equipment, and retail goods rather than heavy manufacturing materials. The freight sector plays an important part in the area's economy and is dominated by four modes: trucking, shipping, air cargo, and freight rail. Package express and postal services are also important to the region's economy.

Trucking is the backbone of the freight sector. On a tonnage basis, trucks carry about 71 percent of the inbound freight and 96 percent of the outbound freight in the region. Even when materials initially arrive by rail or water, trucks are often used to transport them to their final destinations.

Trucks represent between 3 percent and 8 percent of the traffic on most of the major routes in the Washington area. On the southern portion of I-495/I-95, however, between 12 and 15 percent of the traffic is comprised of trucks. Because trucks move in the general traffic stream, the region's trucking industry is vitally concerned with issues of congestion and access.

Water cargo accounts for 24 percent of the inbound freight and less than 1 percent of the outbound freight in the region. An additional 1 percent of the inbound freight and 4 percent of the outbound freight are transported by air. Trains carry about 4 percent of the inbound freight and less than 1 percent of the outbound freight.

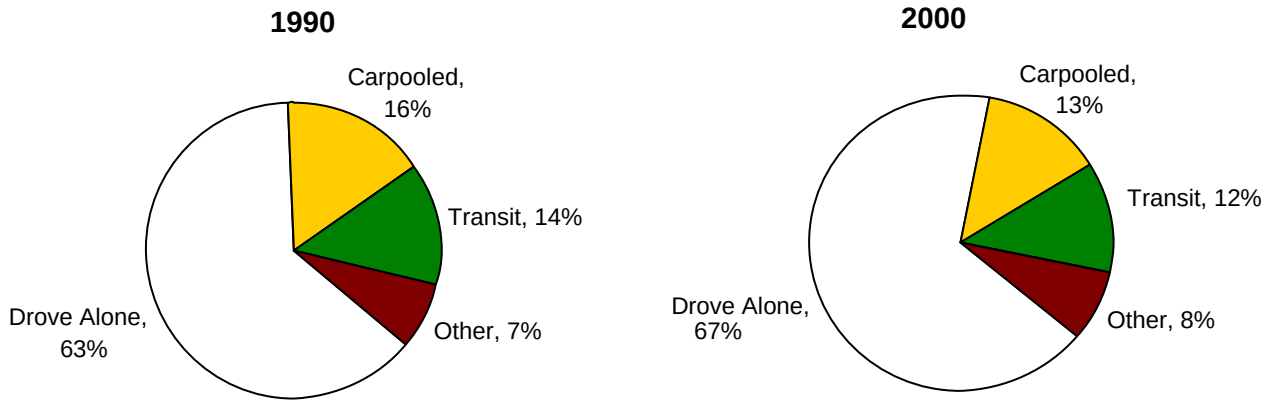
TRAVEL PATTERNS

The tremendous growth experienced by the Washington region since 1960, coupled with the increasing suburbanization of both people and jobs as discussed earlier, has had profound implications for travel. Not only has there been an explosion in the overall number of trips made on the region's highways and transit facilities, but travel has shifted away from a predominantly suburbs-to-downtown orientation as trip-making between the suburbs has surged.

Travel to Work

Approximately one quarter of all person trips involve travel to and from work. According to the 2000 Census, nearly 2.4 million workers live in the Washington region, up from 2.2 million in 1990. Figure 3-14 shows the different transportation options that residents used to get to work in 1990 and 2000. Driving alone was the predominant commuting mode, and the percent of workers who drove alone increased from 63 percent in 1990 to 67 percent in 2000. Carpooling decreased during the same time period, from 16 percent to 13 percent. Similarly, public transit use decreased from 14 percent to 12 percent. Other forms of commuting, which include walking, biking, and working from home, remained relatively constant. Average commute time increased from approximately 30 minutes in 1990 to approximately 33 minutes in 2000.

Figure 3-14
Commuting in the Washington Region
by Transportation Mode



Source: 2000 U.S. Census; numbers are for the Washington DC-MD-VA MSA

Measures of Congestion

The latest travel estimates for the highway system indicate that, for the region as a whole, the volume of traffic on the area's roadways outstripped the available highway capacity.

The amount of travel on the region's highways is typically measured in vehicle miles of travel (VMT). VMT is sometimes thought of as the "demand" for highway travel and is often compared to a similar measure, lane miles of roadway, which is used to indicate the

highway "supply," or the ability of the road system to accommodate potential travel. As the imbalance between travel demand and capacity increases, certain roadways or travel corridors will experience greater levels of congestion. Between 2005 and 2030, VMT is forecast to increase 32 percent and lane miles only 12 percent.

Some "real-world" data collected in aerial surveys of the region's freeways illustrate where highway congestion is occurring. The survey, sponsored by the TPB in spring 2002, used density—the number of passenger cars per lane, per mile, at a given time—to measure congestion. Figures 3-15 and 3-16 show the sections of the highway system that are congested during the morning and evening rush hours.

Figure 3-15
Locations of Peak-Period Congestion on Washington Region
Limited-Access Highways, Weekday Mornings, Spring 2002

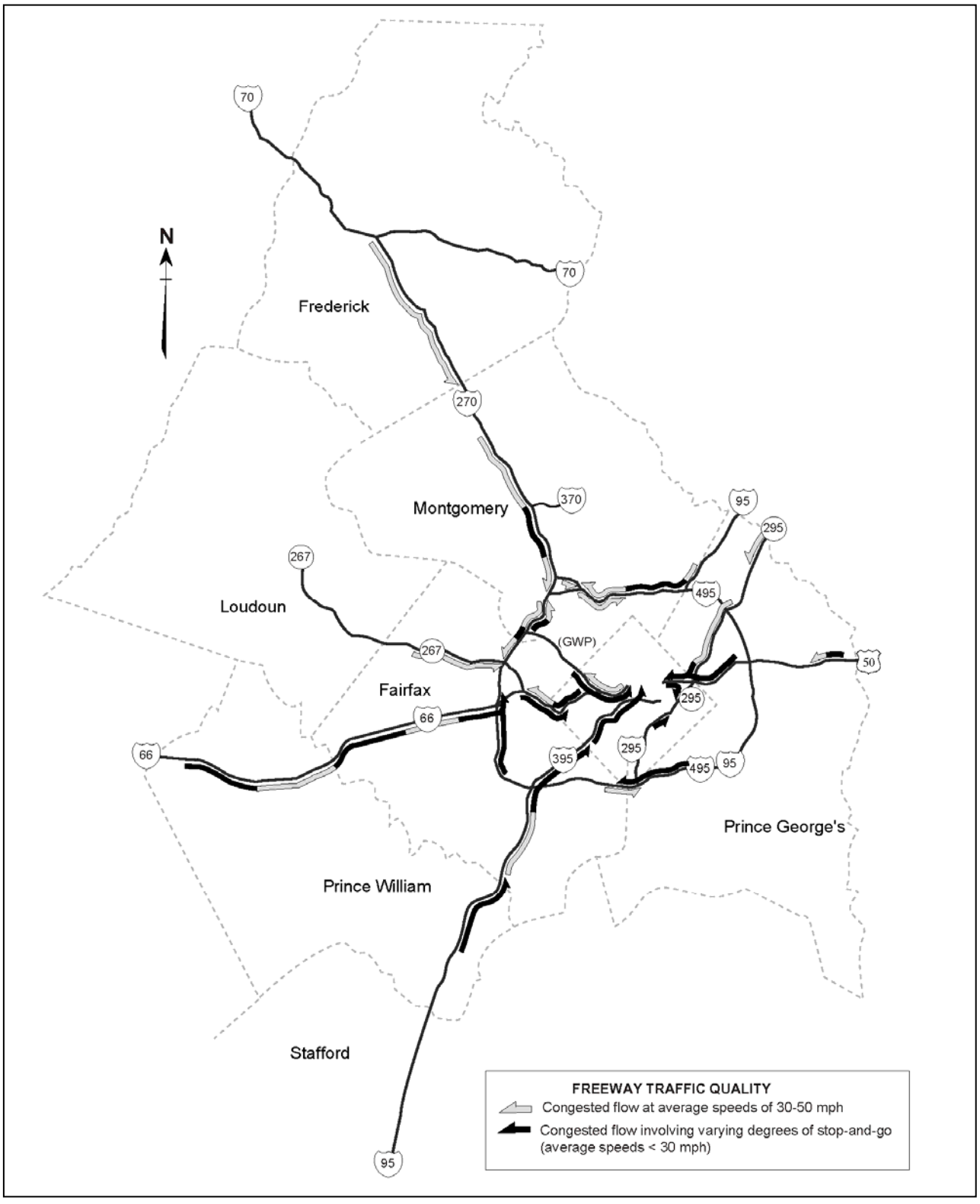
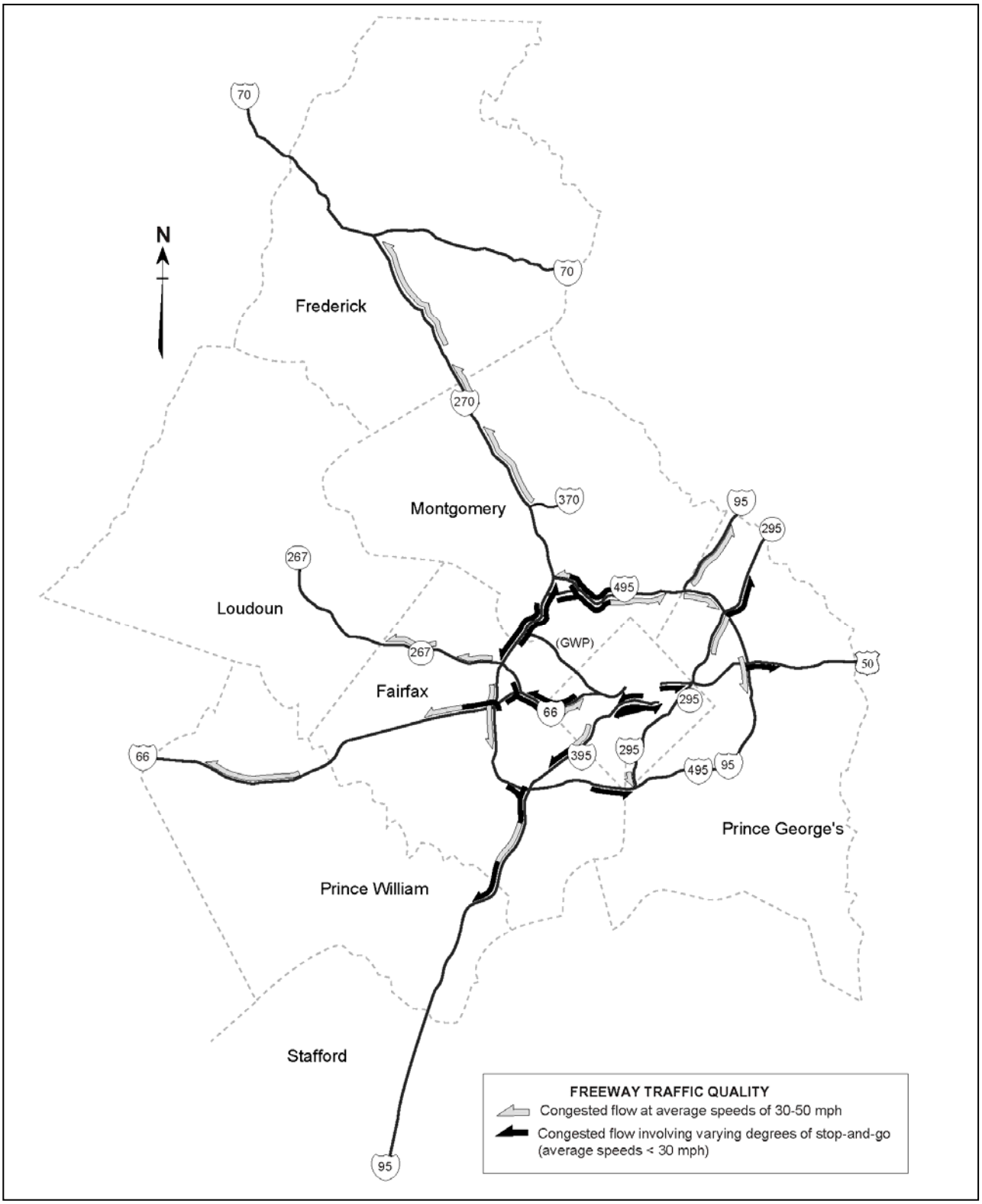


Figure 3-16
Locations of Peak-Period Congestion on Washington Region
Limited-Access Highways, Weekday Evenings, Spring 2002



KEY ISSUES FACING THE REGION

What transportation policies and investments will best serve the region through the year 2030 and beyond? This challenging question has now been posed by state and local officials, by the TPB and other regional agencies, and by numerous citizen organizations. Many thoughtful suggestions have been put forward by individual residents, private associations, and citizens' groups.

A variety of complex issues are involved in planning a regional transportation system for the 21st Century. These include financing, land use and transportation relationships, congestion, air quality, coordination of transportation modes, and strategies to manage the overall demand for travel. To the extent possible, these issues have been considered in developing this plan.

This section will briefly describe some of the key issues that were identified in developing this plan and that will need to be more fully considered in future updates to the long-range plan.

Maintaining, Operating, and Managing Our Transportation System

At or near the top of the transportation agenda for every jurisdiction in the region is the challenge of maintaining the extensive transportation system in place today. During the next two decades, the operation and maintenance of the current highway and transit systems will consume about 77 percent of the available transportation revenues for Suburban Maryland and Northern Virginia, and almost all of the District's transportation revenues.

Once relatively minor issues in discussions of long-range planning, maintenance and operations costs are now central. They limit the region's ability to finance facility expansions. Indeed, unless major new funding sources are developed, it must be assumed that most of our future transportation system is in place today. The challenge then becomes how to manage that system—and modify it where necessary—for the greatest future benefit.

Actions to better manage existing highway facilities can take many forms, ranging from relatively simple capital investments such as traffic signal improvements, to regulatory approaches such as carpool lane restrictions or congestion pricing, which involves the use of fees to discourage unnecessary travel on congested facilities. This plan includes several new HOV facilities to encourage ridesharing, as well as promotional measures described in Chapter 4. It also includes a substantial investment in intersection and traffic signal improvements. The region’s Congestion Management Systems (CMSs), as well as the states’ pavement and bridge management systems, provide the region's implementing agencies with comprehensive information to better manage and operate these systems in the future. To encourage greater use of existing transit services, the plan includes park-and-ride lots at selected commuter rail stations, transit information and marketing initiatives, and bicycle connections at several Metrorail stations. Other measures with the potential to increase transit use are pedestrian improvements in areas served by bus or rail and financial incentives.

Limiting Traffic Growth and Reducing Automobile Emissions

It is well understood that automobile traffic has been increasing throughout the region, with negative effects on air quality, on travel time in many corridors, and in some instances, on the safety of both vehicle users and pedestrians. Beyond these impacts, many residents consider high volumes of automobile traffic generally detrimental to the quality of life in their communities.

Faced with large population and job growth forecasts, the challenge of limiting traffic growth, or mitigating its effects, is an enormous one. Not only will the region house more families and individuals than at present, but on average, their activities will be spread over a larger radius as both housing and employment centers become more decentralized.

Meanwhile, as travel demand grows, it is no longer possible (nor, would many argue, desirable) to increase the supply of roadway capacity to commensurate levels. Many factors tend to constrain new road construction to a minimal level, as evidenced by the modest construction program in this plan. First, most state and local governments cannot afford to build major new roads. Second, environmental and community concerns about new road construction and regulatory restrictions have reduced the political viability of large-scale road building as a way of "solving" traffic congestion problems.

In place of infrastructure solutions, it will be necessary to consider a larger range of demand management options that reduce the need for vehicular use in the first place. These include travel reduction methods such as telecommuting (working in or near the home), transit and ridesharing incentives, improved transit services, innovative land development and site planning techniques, and more controversial regulatory methods such as increased parking charges, employer-based controls on solo commuting, or direct pricing of road use. Some studies suggest that public subsidies for automobile use be removed. These and other approaches—including technological improvements to automobiles and fuels—can also help to reduce automobile emissions levels as required by the Clean Air Act Amendments of 1990 discussed in Chapter 4.

This plan features demand management through the inclusion of a telecommuting initiative, new HOV lanes, and ridesharing incentives. These measures are described in more detail in Chapter 4.

A question for future plans is to what extent should more ambitious demand management strategies be pursued? Direct strategies to curb automobile use, such as user charges or restrictive parking taxes, though potentially the most effective tools available to reduce congestion and automobile emissions, may not be acceptable to the public in the near term. Any policies involving user charges for driving would need to be carefully developed, with special attention given to their potential impacts on low-income residents.

Serving Diverse Markets

The Washington region is a diverse international community that includes persons of numerous ethnic backgrounds and occupations. Table 3-4 shows the distribution of various population groups across the region. Over 40 percent of the region's population is non-

white, a figure which includes many recent immigrants to the region.[2] Individuals with limited English proficiency make up 5 percent of the population. African Americans are the region's largest minority group, representing 27 percent of the population. Despite the region's overall affluence, over 328,000 residents in 2000 were below the poverty level. In 2000, an estimated 320,000 persons had physical or sensory disabilities that may make them eligible for specialized transportation services (paratransit).

Table 3-4
Demographic Profile of the Washington Region
(in Thousands)

Population Group	*Central Jurisdictions*	*Inner Suburbs*	*Outer Suburbs*	*Washington Region*	*Percent of Region* (8)
African American	389.9	719.3	134.9	1,244.1	27%
Asian (1)	39.4	260.6	29.8	329.7	7%
Two or More Races (2)	27.1	87.4	24.4	139.0	3%
Hispanic/Latino (3)	99.1	268.4	56.2	423.7	9%
Below the Poverty Level (4)	135.1	152.3	40.9	328.3	7%
Low Income (5)	258.1	393.6	123.7	775.3	17%
Limited English Proficiency (6)	46.0	129.3	18.3	193.6	5%
Disabled Persons (7)	81.4	177.3	61.4	320.0	8%
Total Population	889.8	2,676.5	978.7	4,544.9	100%

Source: 2000 U.S. Census; numbers are for the Washington DC-MD-VA MSA

Notes:
(1) Includes Native Hawaiian and Pacific Islander.
(2) For the first time in the 2000 Census, respondents could identify themselves as belonging to more than one race.
(3) Hispanic/Latino is considered an ethnicity, not a race, and therefore a Hispanic/Latino person can be of any race and included in the counts for other categories.
(4) Official poverty level depends on family size. For a family of four, the poverty level is an annual income of $17,000.
(5) "Low income" is defined as twice the poverty level. For example, for a family of four an annual income of $34,000 is considered low income.
(6) Limited English Proficiency includes individuals who speak English "not well" or "not at all."
(7) Disabled persons include individuals with physical and/or sensory disabilities.
(8) Population groups do not total to 100% because groups are not discrete.

Given the diversity of the region's households and their travel needs, how can future transportation systems best serve all of the region's residents? A number of issues deserve consideration, such as how to ensure that funds will be available to sustain adequate bus and paratransit service for those who depend on them; how best to provide services for the region's working parents, many of whom "commute" to day care centers before and after work; and what enhancements in highway design and automobiles will be needed to ensure the safety of elderly drivers, who represent a growing segment of the population. Another issue is identifying what transportation policies and investments can best serve the increasing number of non-work and weekend trips and multiple purpose trip "chains" (for example, a person routinely picking up a child and some groceries on the way home from work).

[2] Our Changing Region. Census 2000. Metropolitan Washington Council of Governments. Volume 1, Number 1. Figures provided are for the TPB Planning Area.

The movement of goods within and through the region also presents special issues to consider, including how to ensure efficient delivery to businesses, reduce truck accidents, and minimize the risks involved in the transportation of hazardous materials.

Serving Dispersed Population and Employment Centers

The decentralization or "suburbanization" of travel mentioned earlier and the emergence of "edge cities" are phenomena seen throughout the United States, and pose long-term challenges from every angle.

Serving such a far flung set of activities will be increasingly difficult without the ability either to expand the road system or to concentrate the trip ends into workable passenger loads for transit service. Will suburban growth continue unabated as congestion increases, or will transportation conditions inhibit housing and commercial real estate markets in the affected areas? Could local governments encourage alternative forms of residential and commercial development that might allow more trips to be made on foot, bicycle, or public transit? Will extending rail service toward the edges of the region encourage more population dispersion? What type of circumferential (suburb-to-suburb) transportation services should be incorporated into future plans?

Moving Towards Intermodalism

Throughout the United States, each mode of transportation has historically been viewed in isolation from the others. The planning, construction, and operation of each mode was often conducted by separate agencies with little communication or cooperation among them. A similar situation prevailed in the private sector, in which rail and motor freight carriers and airlines guarded their own niches in the market and were also restricted from many possible forms of collaboration by federal regulations. This situation has been changing very gradually during the past 20 years into one in which multi-modal planning of public facilities, and some forms of intermodal cooperation in the private sector, could begin to take place. Federal laws explicitly acknowledge the value of a more coordinated approach to the planning and operation of the various modes through several of its planning and management provisions.

This plan is multi-modal in its approach to developing a future transportation system. Highway, transit, bicycle, and pedestrian improvements are included to improve transportation within the region; several ground access improvements have also been identified for the region's airports. An example of a multi-modal improvement is Metro’s recently implemented program that allows bikes on Metrorail and the installation of bike racks on transit buses. A multi-modal approach will also be used to implement the studies included in the plan. As discussed in Chapter 4, each such study must consider the role alternative modes could play in solving the problems for which the study has been developed.

Of particular interest to many in the region are opportunities to expand the region's rail transit system, either by extensions to Metrorail or initiatives using other technologies such as light rail. Rail transit provides new people-moving capacity, generally with fewer environmental impacts than new highways, and in the right circumstances it can attract sufficient patronage to mitigate traffic growth on area roads. Rail transit is understood to work best in locations of relatively high density development. A problem in implementing effective rail service is obtaining the needed density soon enough—ideally, before or in

tandem with facility construction—to justify the large public expenditures that are involved in both construction and operation. Coordinated development approaches can overcome this problem but are often difficult to arrange.

Financing New Facilities

As mentioned earlier, one of the key issues that will need to be addressed in future plans is how to finance proposed facilities that go beyond those included in this plan. There are proposed major projects in the region that have been identified or desired in the past, but exceed the financial constraints on the plan required by federal regulations. Many of these projects are in the plan under a "study" category.

Depending on the specific modal configuration and design chosen, the cost of these proposed projects could be more than twice that of implementing this plan. To implement many of these projects would involve billions of dollars, requiring the region to identify major new sources of funding. This could mean substantial increases in transportation user fees, such as tolls, gas taxes, and parking charges. An effort to develop major new revenues would require substantial cooperation among the states and local jurisdictions in the region, and much greater public commitment to transportation improvements.

4.

THE LONG-RANGE TRANSPORTATION PLAN

SUMMARY OF PLAN FEATURES

The long-range plan consists of capital improvements, studies, actions, and strategies proposed for implementation by the year 2030. Because the majority of the projected revenues during this period are devoted to the operation and preservation of the region's existing intermodal transportation system, the capital improvements included in this financially constrained plan do not expand the system capacity greatly from previous plans.

Some **major capital improvements** are summarized as follows:

- Corridor Cities Transitway — A rail line roughly following the I-270 corridor in Montgomery County has been slated for construction in two phases: 1) by 2012, a segment costing $515 million will be completed between the Shady Grove Metro and Metropolitan Grove; 2) by 2020, the line will be extended to the COMSAT site, costing an additional $356 million. This project was previously included in the CLRP as a study.

- Rail to Dulles — This 23.1–mile extension of Metrorail will run from East Falls Church to Dulles Airport and into Loudoun County. Estimated at $3.14 billion, the project will include 11 new Metrorail stations, four of which will be in Tysons Corner. In the CLRP, the project is slated for completion by 2010. This project has been in the CLRP since 1999.

- Tri-County Parkway — This north/south road will link Manassas and the area west of Dulles Airport. Estimated in the CLRP at $68 million, the project is currently scheduled to be completed in two stages in 2015 and 2020.

- Capital Beltway — The 2003 CLRP includes a project to widen the Beltway in Virginia with HOV lanes. Running between the American Legion Bridge and the Springfield Interchange, the project is estimated at $2.99 billion and will be completed in three stages ending 2011, 2012, and 2013. This project was included in previous updates to the CLRP; the 2003 CLRP also includes studies for Beltway improvements in both Maryland and Virginia.

- Springfield Interchange (*Under Construction)* — One of the largest construction projects in the nation, this reconstruction will alleviate the severe congestion and safety problems at the interchange of I-95 and the Capital Beltway. The project began in 1999 and is scheduled for completion in 2007. The CLRP lists the total cost as $700 million. This project was included in previous updates to the CLRP.

- Intercounty Connector (ICC) — The 2003 CLRP includes funding for study and "hardship and protective" right-of-way acquisition for this road, which would run approximately 20 miles between I-270 near Gaithersburg and I-95 near Laurel, Maryland. Governor Robert Ehrlich of Maryland has named the ICC his "number-one transportation priority." This study was previously referred to as "East- West Link Improvements" in the CLRP.

- Bi-County Transitway — Part of what is commonly called the Purple Line, this project is broken into two parts in the CLRP: 1) Construction is slated to be completed by 2012 for the 4.4-mile segment between Bethesda and Silver Spring. The cost of this portion, which has been in the CLRP since the late 90s, is estimated at $371 million; 2) A study will be conducted for a 10-mile stretch between Silver Spring and New Carrollton. The study segment was new to the CLRP in 2003.

- New York Avenue Metro Station, DC (*Under Construction*) — This infill Metrorail station, on the existing Red Line in Washington between Union Station and Rhode Island Avenue, is the product of a unique public/private collaboration. Costing $91 million, the station is scheduled to open in 2005. This project was included in previous updates to the CLRP.

- K Street Busway— By 2005, two dedicated transit lanes are planned to be built and operating on K Street between 7th and 23rd Streets, NW. This project was new to the CLRP in 2003.

- Largo Metrorail Extension (*Under Construction*) — The 3.1 mile, two-station, $456 million extension of the Blue Line to Largo Town Center is expected to be completed by the end of 2005. This project has been in the CLRP since 1994.

- Anacostia Light Rail — Running 2.7 miles between Pennsylvania Avenue, SE, and Bolling Air Force Base, this light rail line is scheduled to be completed by 2005. This demonstration project, costing $28 million, is intended to be the first step in a wider light rail system. This project was new to the CLRP in 2003.

- Woodrow Wilson Bridge (*Under Construction*) — This massive feat of engineering, costing $2.56 billion, will ease one of the worst bottlenecks in the region. The project covers a 7.5-mile corridor and includes four interchanges and two new drawbridges. Expected to be completed in 2007, the project has been designed to permit future reconfiguration for an additional two lanes for HOV or transit. This project was included in previous updates to the CLRP.

In addition to the facilities that are shown to be built in the plan, numerous corridors are identified for study. After a study is completed, the project for the corridor will be sufficiently specified, and then can be *considered* for inclusion in the constrained plan. Only those projects for which funding can be identified can be considered for the plan. Thirty-five multi-

modal transportation studies, including several potential Metrorail extensions, are included in the plan.

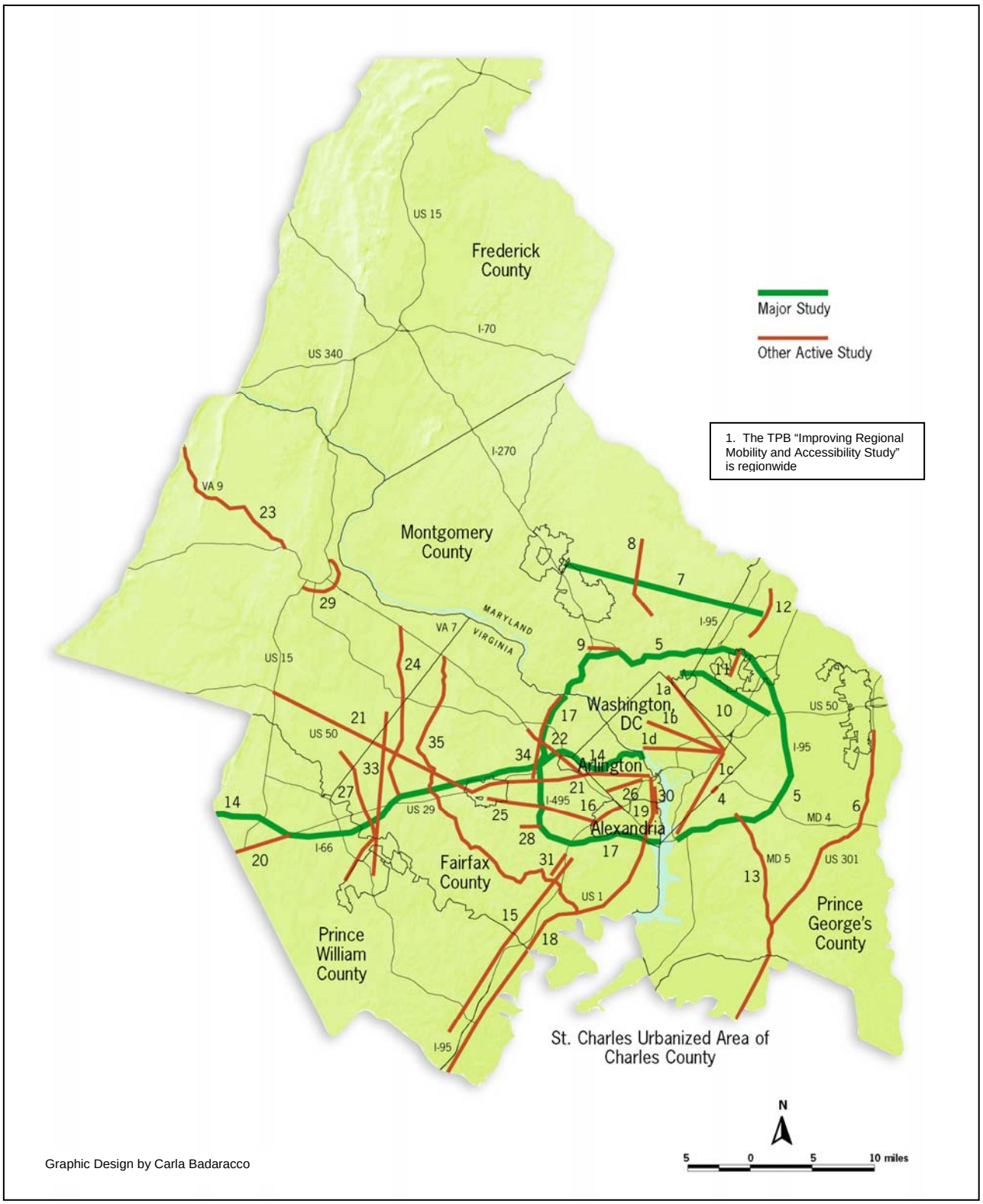
STUDIES

The TPB included a new region-wide study, "Improving Regional Mobility and Accessibility Study," in the 2000 CLRP. This study is continued in the 2003 CLRP, and will evaluate alternative options to improve mobility and accessibility between and among regional activity centers and the regional core. The study will examine the impacts of alternative land use scenarios on the environment, the performance of the regional transportation system, and the region's economy. The TPB resolution R12-2001 approved on November 15, 2000 calls for:

> "The study will include the identification of 'additional highway and transit circumferential facilities and capacity, including Potomac River crossings where necessary and appropriate, that improve mobility and accessibility between and among regional activity centers and the regional core' (Vision Goal 2, Strategy 5) and that take into consideration the adopted land use plans of individual jurisdictions. The study will also include the development of 'a regional congestion management program, including coordinated regional bus service, traffic operations improvements, transit, ridesharing, and telecommuting incentives, and pricing strategies.' (Vision Goal 5, Strategy 1.)
>
> The study will include short and long term analyses of primary and secondary impacts of any new facilities, both circumferential and within the regional core, on land use including on established communities and open space; on transit ridership; on total vehicle miles traveled and numbers of single occupancy vehicles; and on economic shifts within the region, especially to or from the regional core."

A map of the studies in the plan is shown in Figure 4-1.

Figure 4-1: Major Studies in the Long-Range Plan
As of December 2003



Key to Figure 4-1
Major Studies

I. TPB Improving Regional Mobility and Accessibility Study (not shown)

District of Columbia

1. DC Transit Development Study
    a. Silver Spring to Minnesota Avenue Metro Station
    b. Woodley Park Metro Station to Minnesota Avenue Metro Station
    c. Minnesota Ave. Metro Station to National Harbor, Prince George's County
    d. Georgetown to Minnesota Avenue. Metro Station
2. Bus Shuttle services (not shown)
3. Metrorail extensions (not shown)
4. Southern Avenue

Maryland

5. I-95/I-495 Capital Beltway from American Legion Bridge to Woodrow Wilson Bridge
6. US 301
7. Intercounty Connector (ICC)
8. Georgia Avenue Transitway
9. North Bethesda Transitway
10. Bi-County Transitway, Silver Spring to New Carrollton
11. University of Maryland Connector
12. MD 201 Extended
13. Southern Maryland Mass Transportation Analysis

Virginia

14. I-66, HOV and transit service improvements
15. Metrorail, I-95 from Springfield to Potomac Mills
16. I-395 ramp connections
17. I-495/I-95 Capital Beltway, HOV and transit service improvements from Woodrow Wilson Bridge to American Legion Bridge
18. US 1, priority bus south of the Beltway, priority bus to BRT to LRT north of Beltway
19. US 1, light rail, King Street Metro to Pentagon
20. US 29 improvements
21. US 50, transit service improvements
22. VA 7, transit service improvements
23. VA 9 improvements
24. VA 28 improvements
25. VA 236 priority bus
26. VA 244 (Columbia Pike) transit service improvements
27. Tri-County Parkway
28. HOV, Braddock Road
29. Battlefield Parkway
30. Transitway from Crystal City to Potomac Yard
31. People Mover from Fort Belvoir Proving Grounds to Franconia/Springfield
32. Techway Study from Dulles Toll Road to Maryland line (not shown)
33. Light rail from Manassas to Dulles
34. Metrorail, Dunn Loring to American Legion Bridge
35. VA 7100, priority bus

Studies Include Alternative Strategies

If people and goods are to travel efficiently throughout the region as population and economic activity continue to outpace the expansion of the transportation system, more effective management of the existing system will be necessary. The plan contains **a set of transportation emissions reduction measures (TERMs)** designed to reduce automobile emissions. It also contains **congestion management system (CMS)** components for the region. The CMS supports decision making by identifying and monitoring congestion problems (including projections of future congestion) and examining strategies that might help alleviate them. The results of these analyses can be used in developing plan updates. The other federally required management systems (pavement and bridge) also can provide information for updating the plan.

In addition to these plan components, **many existing local, state, and regional strategies have had and will continue to have an important influence on travel**. For example, the District of Columbia tax on commercial parking encourages commuters to consider transit and carpooling, and the regional Metrochek program helps employers provide subsidies to workers who commute by transit. A range of strategies that are currently adopted and in place are described at the end of this chapter. The most promising types of strategies, possibly expanded or modified, can be considered for future updates to the plan.

THE MAJOR HIGHWAY, HOV, TRANSIT AND BICYCLE FACILITIES IN THE PLAN

Location and Description of Key Facilities

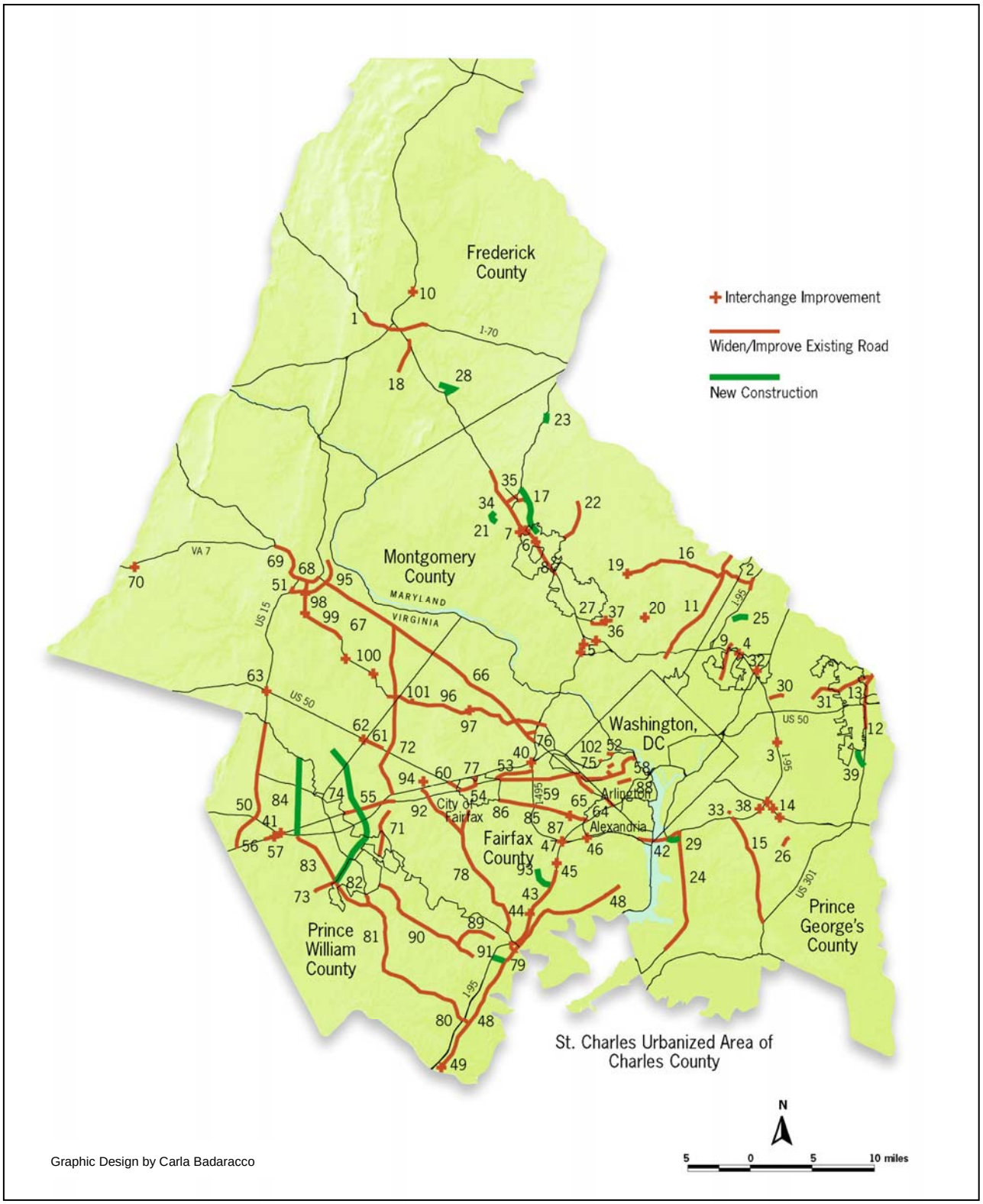
This section describes the major highway, HOV and transit facilities in the plan. Major bicycle facilities are also described. The locations of the major highway improvements[1], HOV facilities, and transit facilities included in the plan are indicated in Figure 4-2 (Highway Improvements) and Figure 4-3 (HOV and Transit Improvements). Following each map, and keyed to the numbers on the map, are brief descriptions of the proposed improvement or study, including the year by which an improvement is expected to be completed.

The projects shown on these maps are major or larger-scale facility improvements, but do not represent all of the projects in the plan. A complete listing of all projects is contained in several tables in the report on the results of the air quality conformity analysis.[2] For each project in the plan, these tables provide the specific project limits, the type of facility, the nature of the improvement (such as construct, upgrade, or widen), and the time frame for completion.

1 All projects that are on interstates or on principal arterials are shown. Improvements on minor arterials are not indicated.

2 Air Quality Conformity Determination of the 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Program for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. Metropolitan Washington Council of Governments, December 31, 2003.

Figure 4-2: Major Highway Improvements in the Long-Range Plan
As of December 2003



Key to Figure 4-2
Major Highway Improvements

Maryland

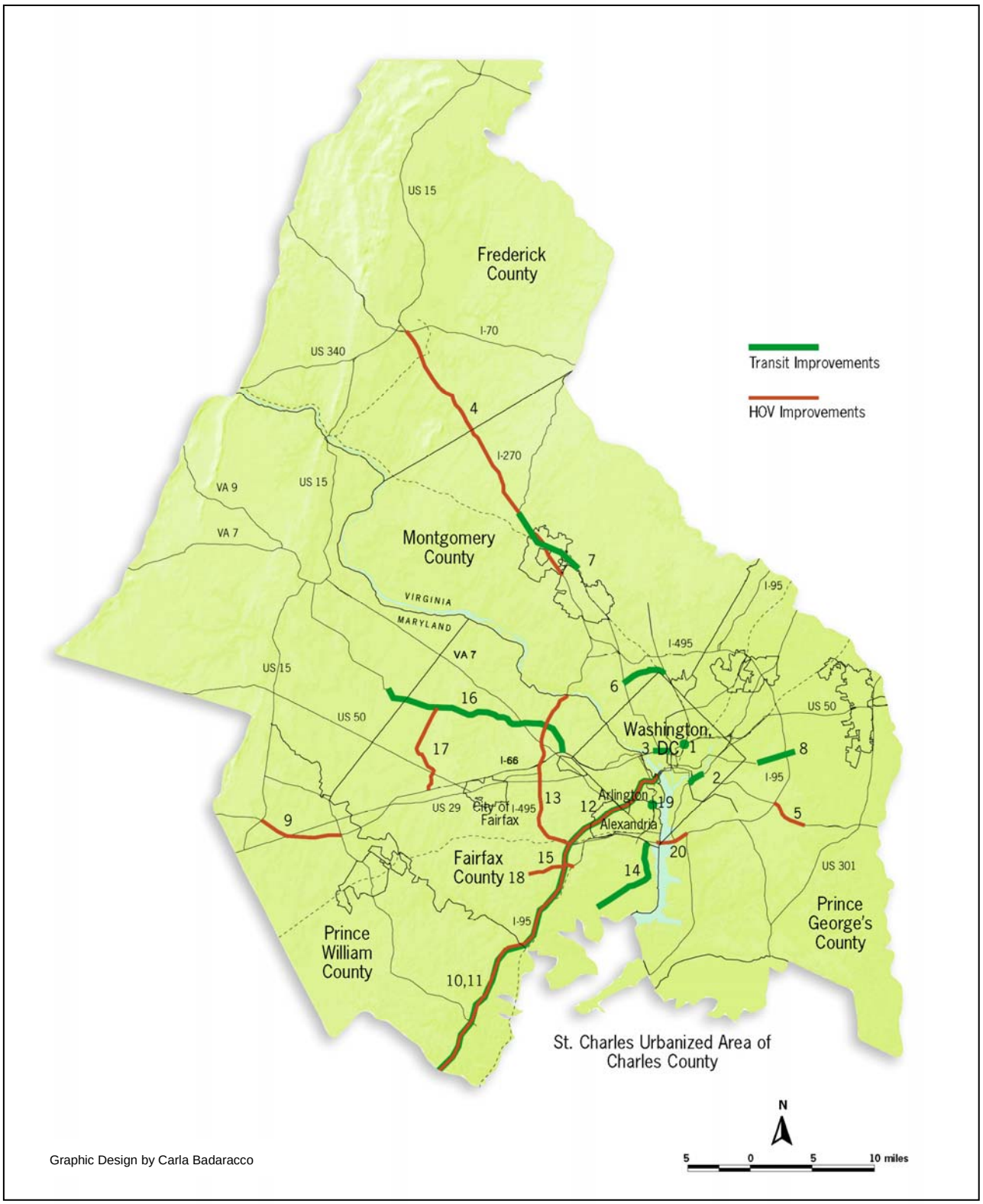
1. I-70, widen to 6 lanes, including interchange reconstruction at I-270, 2005, 2010
2. I-95, interchange and CD lanes at Contee Road, 2015
3. I-95/495, interchange at Arena Drive, 2010
4. I-95/495, interchange at Greenbelt Metro, 2010
5. I-270 Spur, interchange improvements, 2004
6. I-270, reconstruct interchange at MD 117, including park-and-ride lot, 2004
7. I-270, interchange at Watkins Mill Road, 2025
8. I-270, widen, 2025
9. US 1, reconstruct, widen to 6 lanes, 2010, 2025
10. US 15, interchange at MD 26, 2010
11. US 29, upgrade, including intersections/interchanges, 6 lanes, 2005, 2006, 2010, 2020, 2025
12. US 301, upgrade, widen to 6+2 lanes, 2030
13. MD 3, upgrade, 6 lanes, 2030
14. MD 4 interchanges at Westphalia Road, Suitland Parkway and Dower House, 2015
15. MD 5, widen to 6 lanes, interchange upgrades, 2010
16. MD 28/MD 198, widen, construct 4, 6 lanes, 2025
17. M-83, construct 6 lanes, 2010, 2020
18. MD 85, widen to 4, 6 lanes, 2025
19. MD 97, upgrade intersection at MD 28, 2010
20. MD 97, upgrade intersection at Randolph Road, 2010
21. MD 118 extended, construct 6 lanes, 2020
22. MD 124, widen to 6 lanes, 2010
23. MD 124 extended, construct 2 lanes, 2006
24. MD 210, upgrade 6 lanes, 2007
25. MD 212, construct 4 lanes, 2005
26. MD 223, widen to 4 lanes, 2007
27. MD 355, reconstruct 6 lanes, construct interchange at Montrose/Randolph Road, 2015
28. MD 355, Urbana Bypass, construct 4 lanes, 2005
29. MD 414 Extended, construct 4 lanes, 2006
30. MD 450, widen to 4 lanes, 2006, 2025
31. MD 450, widen to 5 lanes, 2005
32. Baltimore/Washington Parkway, southbound ramp from Greenbelt Road, 2025
33. Branch Avenue Metro Access, construct 4 lanes, 2010 lanes from Middlebrook Road to MD 124, 2015
34. Father Hurley Boulevard, construct, widen, 4, 6 lanes, 2010, 2020
35. Middlebrook Road Extended, construct 6 lanes, 2010
36. Montrose Parkway East, construct 4 lanes, 2010, 2015
37. Randolph Road, widen to 5 lanes, 2015
38. Suitland Parkway, interchange at Rena/Forestville Road, 2025
39. Willowbrook Parkway, construct 4 lanes, 2010

Virginia

40. I-66/I-495, reconstruct interchange, 2011
41. I-66, reconstruct interchange at US 29, 2011
42. I-95, Woodrow Wilson Bridge, build 12 lane bridge, 2007
43. I-95, widen to 8 lanes, 2010
44. I-95, reconstruct interchange at VA 642, 2010
45. I-95, construct interchange at VA 7900, 2015
46. I-95, reconstruct interchange at VA 613, 2015
47. I-95/I-395/I-495, interchange reconstruction, 2007
48. US 1, widen to 6, 7 lanes including interchange at VA 123, 2005, 2008, 2010, 2015
49. US 1, reconstruct interchange at Russell Road, 2010
50. US 15, widen to 4 lanes, 2006, 2020
51. US 15, widen to 4 lanes, 2005
52. US 29, Lee Highway, widen to 6 lanes, 2015
53. US 29, widen to 6 lanes, 2012, 2015, 2020
54. US 29, widen to 6 lanes, 2010, 2012
55. US 29, widen to 6 lanes, 2010
56. US 29, widen to 5, 6 lanes, 2011
57. US 29, interchange at VA 55, 2011
58. US 50, reconstruct 6 lanes including interchanges, 2007, 2010, 2015, 2020
59. US 50, widen to 6 lanes, 2020
60. US 50, widen to 5, 8 lanes, 2020
61. US 50, widen to 6 lanes, 2020

62. US 50, reconstruct intersection at VA 609, 2005
63. US 50, construct round-about at US 15, 2010
64. VA 7, reconstruct 4 lanes, 2008
65. VA 7, Leesburg Pike, widen to 6, lanes, 2020
66. VA 7, Leesburg Pike, widen to 6, 8 lanes, 2008, 2012, 2013
67. VA 7, upgrade with interchanges, 2005, 2015
68. VA 7/US 15 Bypass, widen to 6 lanes, 2015
69. VA 7, widen, upgrade 6 lanes, 2015
70. VA 7, intersection improvement, 2006
71. VA 28, widen to 6 lanes, 2025
72. VA 28, widen to 8 lanes, with interchanges, 2004, 2005, 2006, 2015
73. VA 28, widen to 6 lanes, 2015
74. VA 411, (Tri-County Parkway), construct 4, 6 lanes, 2015, 2020
75. VA 120, Glebe Road, widen to 6 lanes, 2030
76. VA 123, widen to 8 lanes, 2010
77. VA 123, widen to 6 lanes, 2010
78. VA 123, widen to 4, 6 lanes, 2004, 2005, 2015, 2020
79. VA 123, widen to 6 lanes, 2008, 2015
80. VA 234, widen to 6 lanes, including interchange at US 1, 2011
81. VA 234, widen to 4 lanes, 2005, 2006
82. VA 234, widen to 4 lanes, 2010
83. VA 234 Bypass, widen/upgrade, 6 lanes, 2020
84. VA 234 Bypass, construct 4 lanes, 2010
85. VA 236, widen to 6 lanes, 2020
86. VA 236, intersection improvements, 2008
87. VA 236, reconstruct intersection at Braddock Road, 2005
88. VA 244, reconstruct to 5 lanes, 2010
89. VA 641, widen to 6 lanes, 2020
90. VA 3000, widen to 6 lanes, 2025
91. VA 3000, construct 4 lanes, 2004
92. VA 7100, widen to 6 lanes, 2015
93. VA 7100, construct 6 lanes, 2007
94. VA 7100, interchange at Fair Lakes Parkway, 2010
95. Battlefield Parkway, construct 4 lanes, 2005, 2006, 2009, 2010
96. Dulles Access Road, widen to 6 lanes including interchange reconstruct at I-495, 2010
97. Dulles Toll Road, reconstruct interchange at VA 674, 2010
98. Dulles Greenway, construct interchanges at VA 653, Battlefield Parkway, 2004
99. Dulles Greenway, widen to 6 lanes, 2004, 2006
100. Dulles Greenway, widen interchanges at VA 606 and VA 772, 2004
101. Elden Street/Centreville Road, widen to 6 lanes, 2007
102. Wilson Boulevard, reconstruct 4 lanes, 2004, 2010

Figure 4-3: Major Transit and HOV Improvements in the Long-Range Plan
As of December 2003



Key to Figure 4-3
Major Transit and HOV Improvements

District of Columbia

1. New York Avenue Metro Station, 2005
2. Anacostia Demonstration Rail Line, 2005
3. K Street Busway, 2005

Maryland

4. I-270, HOV, 2025
5. MD 4, HOV from MD 223 to I-495, 2015
6. Bi-County Transitway, Bethesda to Silver Spring, 2012
7. Corridor Cities Transitway, from Shady Grove to COMSAT, 2012, 2020
8. Metrorail extension from Addison Road to Largo, 2005

Virginia

9. I-66 HOV, includes interchange reconstruction at US 15, 2010, 2015
10. I-95 HOV, extend HOV lanes from Quantico Creek to Stafford County line, 2015 and restripe to 3 lanes from Quantico Creek to I-495/I-395 intersection, 2010
11. I-95, transit service improvements, 2021
12. I-395 HOV, restripe to 3 lanes, 2010
13. I-495 HOV, 2011, 2012, 2013
14. US 1, widen for bus right turn lanes, 2025
15. Franconia/Springfield Parkway HOV, 2010
16. Dulles Corridor Rail from express bus to rail, 2010
17. Fairfax County Parkway HOV, widen, upgrade, 6 lanes, 2010
18. Fairfax County Parkway HOV, construct 2 lanes, 2015
19. Potomac Yard Metrorail station, 2015
20. Woodrow Wilson Bridge/I-95, HOV, 2007

For full project descriptions of the 2003 CLRP projects, see <www.mwcog.org>. Go to "transportation" and search for the 2003 CLRP.

Descriptions for all CLRP projects are available for review in COG's Information Center in four separate supplementary documents titled "Inputs for the FY 2004-2009 Transportation Improvement Program and the 2003 Update to the Constrained Long-Range Plan". These four documents include project descriptions submitted by the Washington Metropolitan Area Transit Authority, the District of Columbia and Federal Lands Highway Division, Suburban Maryland, and Northern Virginia.

Pedestrian and Bicycle Facilities

In addition to the transit, highway, and HOV facilities, the long-range plan includes a number of new bicycle facilities, many of which will also serve pedestrians. Projects in various phases of planning and construction include the following:

- The Metropolitan Branch Trail, the Anacostia River Trail, and the Watts Branch Trail Reconstruction in the District of Columbia;
- Sixty miles of on-street bicycle lanes in the District of Columbia;
- The Cross-County Trail between Great Falls and Fort Belvoir in Fairfax County;
- The Ballenger Creek Trail in Frederick County
- The Northwest Branch Greenway in Montgomery County, which will extend the existing Northwest Branch Trail to Olney;
- The Potomac Heritage National Scenic Trail, following the Potomac River in Prince William, Fairfax, Loudoun, and Prince George's counties;
- The Prince George's Connector Trail which will connect the Northwest Branch Trail in West Hyattsville with the Metropolitan Branch Trail in Fort Totten; and
- Trails along Prince William Parkway and other roads in Prince William County.

In 1995, the TPB approved the *Bicycle Plan for the National Capital Region*[3] as part of the CLRP. This bicycle plan portion of the CLRP includes both funded, committed improvements and bicycle/pedestrian corridors under study (but not committed for funding). This bicycle plan is further described later in this chapter. The bicycle plan is scheduled to be updated in 2005.

[3] MWCOG, *The Bicycle Element of the Long-Range Transportation Plan for the National Capital Region*, July 1995.

THE COSTS OF THE FACILITIES IN THE PLAN

The financial analysis[4], the project description forms, and the FY2004-09 TIP provide the projected capital costs for the projects included in the plan. The highway, high-occupancy vehicle (HOV), transit, and bicycle/pedestrian facilities in the plan are estimated to cost $22.5 billion for the region through the year 2030. System expansion costs of the plan are shown in Table 4-1.

Transit costs, which include about $2.7 billion for the Metrorail extension to Dulles Airport in Virginia and about $1.5 billion for the Bicounty Transitway and Corridor City Transitway in Maryland, account for about 40 percent of the total. Highway, bridges, and HOV costs account for about 60 percent. Bicycle and pedestrian costs are not shown in the table since totals are not available for these projects, many of which are specified as components of larger road or transit projects.

[4] Cambridge Systematics, Inc., *Analysis of Resources for the Financially Constrained Long-Range Transportation Plan for the Washington Area*, prepared for MWCOG/TPB, October 2000

Table 4-1
System Expansion Costs of the Plan's Major Facilities
(Millions of 2003 dollars)

	Highways, Bridges, HOV	Transit	Woodrow Wilson Bridge	TOTAL 2001 - 2025
District Of Columbia	452	562		1,014
Suburban Maryland	6,356	4,042	1,425	11,823
Northern Virginia	4,148	4,463	1,123	9,734
Total Expansion Cost	10,956	9,067	2,548	22,571

TRANSPORTATION EMISSIONS REDUCTION MEASURES

The plan includes a set of regional Transportation Emissions Reduction Measures (TERMs), previously designed to offset a slight increase in mobile emissions that are otherwise projected to occur during the implementation period of the plan. This section summarizes several regional TERMs included in the plan. Many of the TERMs are intended to reduce either the number of vehicle trips (VT), vehicle miles of travel (VMT), or both. TERMs such as Taxicab Replacement and Signal System Optimization reduce emissions by technology or by the way vehicles are driven. Most TERMs have been implemented, are ongoing, or are under development to be implemented in the near term. However, the following TERMs have been adopted for a long-term time frame, to help reduce emissions in the years of the CLRP beyond the closest six years (those contained in the region's Transportation Improvement Program, or TIP). Additionally, there are a number of state, regional, and local programs and activities that contribute to the region's air quality as TERMs.

Employer Outreach

The Employer Outreach TERM aims to market and implement employer-based Transportation Demand Management (TDM) programs to the private sector. This measure was launched as part of Commuter Connections in tandem with the Guaranteed Ride Home program (see below). A Transportation Demand Management Specialist coordinates the regional outreach efforts of the program. An Employer Outreach Ad-Hoc Group was also formed to address specific concerns of the participating jurisdictions and to develop the details for the implementation of the program. A regional employee commuter survey tabulation effort and TDM sales training and technical assistance for Employer Services sales representatives have been undertaken. Also developed was a software system to be used by all jurisdictions as a contact management system, providing access to a database of the region's employers.

An additional component of employer outreach focuses on bicycles. This TERM was designed to provide information on bicycling to Commuter Connections representatives, and within Commuter Connections literature and Internet website, to encourage bicycling as an alternative to automobile trips.

Guaranteed Ride Home

The Guaranteed Ride Home (GRH) TERM offers commuters using alternative transportation (rideshare, transit, bicycle, or walking) a ride home in the event of an unexpected personal emergency or unscheduled overtime. This measure includes the following:

- A GRH operations software system to keep track of registrants and program usage;
- Contracts with various cab companies and a car rental company to provide services;
- A contracted vendor to provide daily operations services that include eligibility verification, dispatching accepted and verified rides, and entering and tracking information on the GRH software system; and

- A marketing campaign including printed and radio media, and mailings to all employers and residents in the Washington metropolitan region.

Telecommuting

Telework is one of the most cost-effective measures for significantly reducing nitrogen oxides (NOx) emissions; thus the region established Commuter Connections as a Regional Telework Resource Center. The center performs the following functions:

- Education for employers and employees on the benefits of telecommuting through seminars;

- Encouragement of both public and private sector employers to establish telecommuting programs for their employees, and provision planning and technical assistance to help them successfully implement telecommuting programs and make use of telework centers around the region;

- Coordination of local, state, and federal telecommuting and telework initiatives within the region; and

- Exchange of information with other telecommuting programs around the nation and world to ensure that the most effective new concepts and approaches are fully known and utilized in the Washington region.

Continuing activities in this measure include marketing efforts, the coordination of a regional Telecommuting Ad-Hoc Group, and evaluation of teleworking in the region.

Integrated Rideshare

This measure incorporates detailed transit service information from all major providers in the Washington Metropolitan Area Transit Authority (WMATA) and Maryland Transit Administration (MTA) service areas into a Geographic Information System (GIS) database that is compatible with the Commuter Connections ridematching software. This enhanced information is available to applicants to the Commuter Connections program.

Additionally, several kiosks in the District of Columbia and Virginia have been opened that display Commuter Connections information, bus and train information, rideshare information, traffic conditions, and other related traveler information. Kiosks have been located at a number of key sites in the region, including major office developments, shopping malls, and at Union Station in the District of Columbia. Additionally, two of the kiosks purchased under this program are mobile units that can be placed temporarily at key locations.

Bicycle Parking

This TERM was designed to increase trips by bicycle, and therefore decrease trips by automobile, by providing 2,000 additional bicycle parking racks in Suburban Maryland and Northern Virginia. State bicycle coordinators for Maryland and Virginia have worked with

local planners to determine the best rack types and locations. The targets of this TERM are neighborhood developments that often do not have bicycle parking (such as shopping centers and employment sites), enabling and encouraging shoppers, workers, and other visitors to access these developments by bicycle instead of by automobile.

Taxicab Replacement

This TERM was designed to replace old, polluting taxicab vehicles. Older vehicles tend to emit a disproportionate amount of pollutants, both because older technology was not as effective in removing pollutants, and because of age-induced failures of antipollution equipment on individual vehicles. Also, taxicabs drive much greater distances in the region than do most other vehicles, thereby compounding the problem of pollution from an aging taxi fleet. Some jurisdictions around the region already had age limits on their licensed taxicabs before this TERM was adopted. Among those jurisdictions that did not previously have such age limits, a near-term program was adopted for Prince George's County, Maryland, and a long-term program for the District of Columbia. The program has expanded to allow participation by light- or heavy-duty vehicles (such as airport shuttles and transit buses) meeting mileage or fuel use criterion.

Traffic Signal Optimization Program

The TPB adopted the traffic signal "optimization" program in 2002 as a Transportation Emissions Reduction Measure (TERM). In addition to cutting emissions, signal optimization has been touted as a cost-effective way to reduce congestion. Nearly 600 traffic signals have been retimed and coordinated in the past year as part of this regional program. More regularized traffic flow also improves safety for drivers and pedestrians, and improves accessibility to bus stops and Metro stations. The TPB in 2002 adopted a goal of optimizing 856 signals by 2005. The goal is likely to be exceeded by that target date. Out of 1,390 total signals that were counted in June 2002, the District of Columbia had optimized approximately 400 signals by September 2003. The District plans to optimize all its signals by the end of 2004. The Maryland Department of Transportation has optimized all signals in the Washington region under its control. MDOT is now working with the counties to optimize their signals. Suburban Maryland had approximately 1,509 total signals as of June 2002. According to current estimates, about 75 percent of Northern Virginia's 1,641 traffic signals (the number from June 2002) have been optimized. The signals under VDOT's control were all optimized prior to 2002. After the 272 local jurisdiction signals have been adjusted by 2005, 92 percent of the traffic signals in Northern Virginia will have been optimized.

Mass-Marketing Campaign

In 2003, the TPB's Commuter Connections program launched a million-dollar mass-marketing campaign aimed at changing a deeply ingrained travel behavior—driving alone. The campaign, an integrated communications plan including broadcast and Internet media, is an ongoing multi-year program reaching above and beyond the past marketing efforts of Commuter Connections. The campaign promotes a range of alternatives for commuting such as ridesharing, public transit, and telecommuting. The marketing also is intended to reinforce the behavior of people already using alternative commuting modes. It aims to help commuters understand that options are available to them and that Commuter Connections can assist them in finding a personalized solution that works best for each individual. In the language of advertising, the "brand promise" of the campaign is that Commuter Connections

is the one-point solution to the aggravation of commuting alone by car. Radio was selected as the primary medium for this campaign because it is the most efficient way to target single-occupant vehicle (SOV) commuters during drive times when commuter frustration is at its peak. Television advertisements were designed to complement the radio testimonials' call to action and to reinforce the Commuter Connections message to a broader audience.

Other TERMs

The TERMs described above were adopted by the TPB through a special regional planning process. A number of other activities undertaken by state, regional, and local agencies as part of their ongoing responsibilities for the region's transportation systems contribute a major share of emissions reductions. The impacts of these activities are vital to the region's air quality conformity with Clean Air Act targets. General categories of these TERMs include traffic signal system improvements, park-and-ride facility construction or expansion, purchase of new transit vehicles (buses or trains), bicycle trails or facilities, bus shelters and other bus stop improvements, ridesharing support, alternative fuel vehicle programs, and transit center developments.

GROUND ACCESS ELEMENT OF THE REGIONAL AIRPORT SYSTEM PLAN

A critical and often overlooked component of the airport system is the transportation linkage between the airports and the surrounding communities. Airport ground access has become an increasingly severe problem at major U.S. airports during recent years.

The TPB prepared the first phase of a Regional Airport System Plan[5] in 1988 that focused on demand forecasts for the region's commercial airports. Volume II of the Regional Airport System Plan[6] has been developed to address ground access to Ronald Reagan Washington National and Washington Dulles International Airports, as well as access for air passengers in the Washington metropolitan area to Baltimore/Washington International Airport. The plan approaches the issue from a regional, multimodal perspective, examining the total transportation system in the metropolitan area. A modeling approach consistent with the COG regional travel demand models formed the methodology for the plan. The TPB approved the ground access element of the Regional Airport System Plan on September 21, 1994. The plan is now incorporated by reference in this long-range transportation plan.

The ground access element includes the following recommendations concerning facility improvements:

Highway Improvements

- All airport-serving facilities in the Highway Element of the Long-Range Plan be built in a timely manner;

[5] MWCOG, *Washington-Baltimore Regional Airport System Plan*, Volume I (Commercial Airports), 1988
[6] MWCOG, *Washington-Baltimore Regional Airport System Plan*, Volume II (Airport Ground Access), 1993

- Transportation improvements be constructed in the corridor between Laurel and Gaithersburg that are consistent with the results of the corridor study to be done;

- Highway facilities be upgraded in the Western Study Corridor, and the construction of a complete limited-access bypass-type facility be studied by Virginia and coordinated with Maryland; and

- Further study be undertaken to determine the improvements needed in the Dulles Airport Access Highway Corridor.

Transit Improvements

- High-quality transit service that can be implemented quickly and that maximizes the use of available resources be instituted in the Dulles International Airport Access Highway Corridor.

Paratransit Improvements

- The existing Washington Flyer service be more fully integrated into the region's overall transit service program;

- The Washington Flyer system institute a shared-ride door-to-door super-shuttle type of service;

- A study be done to assess the possibility of establishing a system of remote airport terminals; and

- A regional taxicab licensing system be studied for implementation at Ronald Reagan Washington National Airport.

The ground access component also includes several policy recommendations of relevance to the long-range plan:

- Future high-quality access to Washington Dulles International Airport be assured by continuing operational policies that preserve free-flow travel for the airport traveler for the entire extent of the Access Highway, in both directions.

- A coordinated effort be undertaken to encourage airport employees and those making "other" trips to the airport to use bicycles, transit, or other high-occupancy modes of travel.

CONGESTION MANAGEMENT SYSTEM

The definition of a CMS is a systematic process for managing congestion that provides information on transportation system performance, on alternative strategies for alleviating congestion, and on enhancing the mobility of persons and goods to levels that meet state and local needs. The CMS results in serious consideration of implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities.

The CMS is not intended to be a preemptive requirement and will not impose decisions. Instead, it will provide information to guide decisions for regional planning and programming. One exception to this, however, is that, for an air quality nonattainment area such as Washington, federal regulations have the following stipulation: for any proposed project that increases single-occupant-vehicle (SOV) capacity, federal funds can be used only if all reasonable travel demand and operational strategies, as identified in the CMS, are incorporated into the SOV project and implemented.

The Washington region integrates, and therefore addresses, the CMS requirements in the overall regional transportation planning process. These generally are elements that are wholly incorporated in the planning process as described throughout this CLRP; the CMS is not a separate or parallel process. The Washington region addresses these requirements in a number of ways, including ongoing programs, corridor studies, and CMS analyses.

The region has committed to and has ongoing a robust number of congestion management strategies and alternatives. These services and programs support one of the highest rates of transit use and ridesharing of any metropolitan area in the country. Examples of ongoing programs that have a congestion management impact include Metrorail, Metrobus, commuter rail, local transit services, and the Commuter Connections ridesharing and alternative commute program.

The TPB has identified locations with major transportation issues as study corridors. These studies have looked at a full range of CMS alternatives, and may be the source of future commitments by the region to increasing the already-robust set of congestion management strategies underway. Examples of congestion management strategies considered in the region include land use changes around new rail transit stations in the I-270 Corridor in Montgomery and Frederick counties, and new transit services in the corridor of I-66 and US 301. The numerous corridor studies included in the plan are shown in Figure 4-1.

A number of CMS analyses have been performed on a region-wide basis or on a location-specific basis. Examples of the strategies that have been analyzed on a region-wide basis include the potential impact of programs for bicycle and pedestrian improvements, parking surcharges and transit subsidies, and sensitivity analyses of the interaction of transportation improvements and land use changes (such as compact development versus sprawl). Many strategies with potential congestion management benefits have been reviewed and adopted in the region's air quality planning program to reduce emissions for mobile (motor vehicle) sources. The TPB Regional Mobility and Accessibility Study is analyzing a regional congestion management scenario which will include coordinated regional bus and transit service, traffic operations improvements, increased management of freeway and arterial

road systems, increased incentives for ridesharing and telecommuting, and bicycle and pedestrian improvements.

One component of the CMS is monitoring transportation system performance and usage. The TPB and its member agencies undertake a wide variety of activities that monitor the performance and usage of the transportation system. Every three years the TPB conducts an aerial freeway congestion survey through Skycomp, Inc. The first survey was performed in 1993, and was repeated in 1996, 1999, and in the Spring of 2002. Regional maps with results from the 2002 survey are located in Chapter 3. In addition, the TPB uses global positioning systems (GPS) to conduct an arterial travel time survey to find out where and when traffic bottlenecks occur. Overall, 363 arterial miles were studied.

Federal planning regulations require that if single-occupant-vehicle (SOV) capacity is needed, then all reasonable strategies to manage the SOV facility (or to facilitate its management in the future) shall be identified and committed for implementation. This CLRP serves as evidence of the commitment of the region to implementing alternatives. A substantial portion of the region's transportation funding has been devoted to maintaining and increasing transit services, expanding the number of park-and-ride lots, expansion of the region's Commuter Connections alternative commuting program, and bicycle and pedestrian improvements.

MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems (ITS) are the application of current and evolving technology (particularly computer and communications technology) to transportation systems and the careful integration of system functions to provide efficient and effective solutions to multi-modal transportation problems. In the past, ITS was a major emphasis area for improving capacity and efficiency of transportation systems. However, the opportunities and benefits seen from ITS have uncovered another key proponent of transportation systems—management and operations (M&O). As a new directive for transportation agencies, the focus on management and operations is emphasized by the TEA-21 metropolitan planning factor that requires state and regional plans to "promote efficient system management and operations."

Management and operations can be defined as the consideration of the day-to-day actions and agency responses to the region's transportation system. Examples of management and operations include routine or recurring activities such as reconstruction and maintenance, snow plowing and salting, coordination among public safety and transportation agencies, and traffic signalization. Non-recurring activities such as traffic plans for special events, severe weather, or major disasters also fall under the umbrella of M&O.

By focusing on the evolving technology of ITS and the day-to-day activities of M&O, transportation planners have a greater opportunity of providing more efficient and effective solutions to the region's transportation problems.

In order to maximize the benefits of transportation technology, the TPB has promoted regional coordination of planning and projects through it's Management, Operations and Intelligent Transportation Systems (MOITS) Policy & Technical Task Forces. These two

task forces—focusing on policy and technical coordination—meet regularly to discuss coordination and to share experiences about ways in which transportation technology can be deployed to improve congestion, safety, maintenance, and system efficiency. For more information on the TPB task forces, go to <http://www.mwcog.org/transportation/committee/>.

Management and operations took on a new urgency in the aftermath of the September 11, 2001 attacks. The TPB quickly began working on a transportation emergency management plan for the region. The first step was to implement improvements in interjurisdictional communications and coordination. The solution was developing a telephone/radio conference call protocol, supported by e-mail and electronic text messaging systems, that would be implemented in the event of future emergencies. The TPB adopted this framework for coordinated decision-making, which would use a conference call system for communication. In the event of future emergencies, the lead agency in the area where the incident occurred would initiate a conference call with other key agencies throughout the region.

Local and state officials and agency representatives have worked to enhance transportation components of the Regional Emergency Coordination Plan (RECP).[7] Approved by the COG Board on September 11, 2002, the RECP included a transportation component and a transportation evacuation coordination annex, which were largely developed through the TPB's MOITS Task Forces and an Emergency Transportation Work Group. The Emergency Transportation Work Group conducted workshops to study different potential emergency situations, such as region-wide evacuation, shelter-in-place, or widespread power failure.

BICYCLE AND PEDESTRIAN IMPROVEMENTS

Importance of Bicycle and Pedestrian Facilities

The many problems associated with a transportation system dependent primarily on single-occupant automobiles have long been recognized, including traffic congestion, environmental pollution, and dependence on uncertain energy reserves. Thus modal alternatives to the single-occupant automobile are encouraged; bicycling and walking are such alternatives that must be developed as an integral part of the transportation network.

Many commuting trips are five miles or less in length; this average distance can be effectively covered by means of bicycle transportation. For longer trips, bicycles can provide greater access to transit stations and services from adjacent neighborhoods. Bicycling and walking are indeed applicable in the home-to-work commuter market, in addition to serving recreation and trips to schools, shopping, recreational facilities, and other intra-neighborhood destinations. Bicycling and walking are energy efficient, economical, healthy for the user, and minimally impact physical surroundings and public budgets. Bicycle and pedestrian transportation modes, either alone or combined with mass transit modes, are some of the most cost-effective, viable alternatives to the increasing use of the automobile.

[7] The "Partners in Preparedness: The Regional Emergency Coordination Plan at Work" report published in 2004 can be viewed at <www.mwcog.org>.

Regional issues related to pedestrian access and safety have been highlighted in the last several years. In recognizing the importance of pedestrian facilities, the TPB's Bicycle Subcommittee changed its name and focus to the Bicycle and Pedestrian Technical Subcommittee. The Subcommittee sponsored a workshop on designing pedestrian facilities for accessibility in February, 2003. In November 2003 the Subcommittee co-sponsored a Transportation Safety Workshop with the COG board, and sponsored a one-day workshop on real intersection design in Riverdale Park, Maryland. In the first week of May, 2004, the Subcommittee sponsored a series of eight half-day walkable communities workshops throughout the region. The Subcommittee and the Bicycle and Pedestrian coordinator also oversee the Street Smart Pedestrian and Bicycle Safety campaign, a mass-media campaign aimed at raising awareness and reducing behavior that contributes to pedestrian and bicyclist deaths and injuries. Several jurisdictions have studied pedestrian safety issues and developed public education campaigns to reduce pedestrian related accidents. Maryland conducted an in-depth study on bicycle and pedestrian access to rail transit to determine improvements needed to ensure safe and effective access.[8]

An updated Regional Bicycle and Pedestrian Plan is currently under development by the Subcommittee. The new plan will include a statement of policy principles and a database of all planned bicycle and pedestrian projects, along with reference information on where and how much people are walking and bicycling in the region. The last regional bicycle plan was approved in 1995.

Priority Unfunded Regional Bicycle and Pedestrian Projects

The TPB endorsed nine unfunded pedestrian and bicycle projects as regional priorities in December, 2002. The projects, estimated to cost $26.2 million over six years, range from new trail construction to safety improvements. Developed by the Bicycle and Pedestrian Technical Subcommittee in the Fall of 2002, the list of projects reflects the growing regional emphasis on pedestrian safety. In addition to pedestrian safety, key criteria in selecting the projects included transit access and bicycle network connectivity. The projects can all be completed by 2009 and are considered priorities by the jurisdictions where they are located. Although some projects have already been funded for study, none has received a full funding commitment. The biggest project is the Metropolitan Branch Trail, which would run nearly eight miles from Union Station to Silver Spring, where it would connect with the Capital Crescent Trail and create a complete arc around the District of Columbia. At Fort Totten, the trail would connect with the Prince George's Connector Trail. The TPB forwarded the list of priority projects to local and state jurisdictions with the recommendation that they should be funded in the region's Transportation Improvement Program (TIP).

The nine priority projects are the following:

- **Metropolitan Branch Trail** (D.C.) stretching 7.7 miles from Union Station to Silver Spring, parallel to the Metro's Red Line.
- **Matthew Henson Trail** (Montgomery County) running four miles from Rock Creek Trail to the Northwest Branch Park.

[8] *Access 2000: Bicycle and Pedestrian Access to Rail Transit Stations in Maryland.* June 1997. Prepared for the Mass Transit Administration, Maryland Department of Transportation by Rummel, Klepper and Kahl, LLP Consulting Engineers.

- **Henson Creek Trail** (Prince George's County) extending north and south of the existing trail.
- **Holmes Run Stream Crossing** (Alexandria) connecting the north and south ends of Chambliss Street at the Holmes Run Trail. Regionally, the trail crossing will connect to Fairfax County's Stream Valley Trail system.
- **Pentagon Area Bicycle Access Improvements** (Arlington County) including the East Wall of Arlington Cemetery. The improvements would provide access to the Route110 Trail, the Washington Boulevard Trail, the Mount Vernon Trail, and Boundary Drive.
- **Route 1 Pedestrian and Bicycle Safety Improvements** (Fairfax County) including sidewalks, pedestrian crossing, and other pedestrian safety improvements.
- **Centreville Road Underpass at Dulles Airport Access Road** (Herndon) connecting the existing sidewalk networks in Fairfax County and the Town of Herndon.
- **Trail construction parallel to Loudoun County Parkway** (Loudoun County) from Route 7 to Waxpool Road, a distance of 4.4 miles.
- **Trail construction along Dumfries Road** (Prince William County), 1.2 miles, from the Lake Jackson Drive intersection to the Prince William Parkway West intersection.

The Subcommittee's previous set of priorities, developed in 2000, has been more than 90 percent funded. A total of $17.6 million, out of $19.3 million requested, has been spent on eight out of the 11 projects on the 2000 list. The subcommittee emphasized that many other worthy projects deserve funding. In the fall of 2004, the Subcommittee will develop a new list of priority projects for the TPB's endorsement and will report on the progress of the nine priority projects listed above.

Bicycling and Bicycle Facilities in Metropolitan Washington

Over the past 25 years, a great deal of progress has occurred in the area of improving bicycling conditions in the Washington metropolitan region. Planning efforts have accelerated notably over the last several years. Most area jurisdictions have now adopted, or are developing, bicycle transportation plans and/or multi-use trails master plans. Most levels of government have bicycle coordinators, trail coordinators, and/or bicycle or trail facility planners on their staffs. Master plans call for the establishment of thousands of miles of bikeways, bicycle routes, and multi-use trails. In 2003 the Virginia Department of Transportation announced that in the future all new highway construction or reconstruction projects will incorporate bicycle and pedestrian accommodations, barring special circumstances or a formal request by the local governing body that bicycle or pedestrian *not* be included. While these new policies and plans can be expected to have a significant effect in the future, only a small fraction of the planned facilities have been built so far.

Most of these facilities have been built at public expense. In recent years, however, a growing share of bicycle route mileage has been obtained from private land developers who have assumed responsibility for the construction of bicycle trails and routes that are called for in county plans and that pass through their development sites. This trend suggests that the provision of such facilities is viewed by the private sector as a desirable transportation and lifestyle amenity to offer prospective residents and office tenants.

One key area of development in recent years has been the establishment of bicycle routes along the right-of-way of railroad corridors no longer in use. Assisted by the Washington

Area Bicyclist Association, the Rails-To-Trails Conservancy, and other private organizations, several jurisdictions have converted or proposed conversion of abandoned railroad lines into multi-use trail facilities. Examples of this design include the 45-mile long Washington & Old Dominion (W&OD) trail, which now serves more than two million users each year, the Bluemont Junction trail, the Washington, Baltimore & Annapolis (WB&A) Trail in Prince George's County, and the Capital Crescent Trail, along the CSX Railroad's Georgetown Branch in Montgomery County and the District of Columbia. Several additional rails-to-trails projects have been proposed for the region, including the Metropolitan Branch rail line in the District and the Chesapeake Beach line, which has been included in the Prince George's County Master Plan. Another highlight of the regional bike network is the accessibility to bicycles of the Chain, Key, Roosevelt, Memorial, and Mason Bridges, which provide links between established bicycle routes on both sides of the Potomac River.

Efforts have also been made to encourage bicycling to Metro stations. The Washington Metropolitan Area Transit Authority now includes bicycle storage facilities at most of its stations throughout the region, and allows bicycles to be carried on board trains during evening and weekend periods, as well as during midday off-peak hours, when ridership is moderate. It is estimated that 2,000 or more people a day currently use a bicycle to get to Metro. Bike on Rail is also popular, with 8,000 people taking bicycles on Metrorail in a two week period in August, 2001.

Despite these achievements, there is still a need for bicycle transportation planning to be conducted in a comprehensive and functional manner. Bicycles need to become more fully integrated into all transportation efforts, particularly with respect to highway and road development. Many roadways fail to provide sufficient lane width for bicycles and motor vehicles to safely coexist. Bicycling hazards also have resulted from roadway narrowing, intersection design, and poor maintenance of road surfaces. At the same time, jurisdictions should provide for the development of separate bicycle rights-of-way along such routes, whenever possible. The use of land corridors, such as greenways, rail lines or utility right-of-ways, should be considered as bicycle route opportunities.

While a great deal of highway planning and construction is done at the state level, bicycle route design has traditionally been performed by local jurisdictions. To facilitate the development of a truly regional bicycle route network, consistent standards for design, construction and signage should be applied by each jurisdiction. Such common standards should also apply to sidewalks, hiking/equestrian paths, and all-terrain bicycle trails. Bicycle planning activities should include a high degree of community input, and should encourage the active participation of citizens and bicycle advocacy groups. A bicycle advisory committee is recommended for each jurisdiction, as a source of user knowledge and a barometer of trail demand.

Capital improvement programs and master plans should ensure that adequate funding is available to complete the projects recommended. Developers should be required to build the trails planned for their developments. Adequate funds should also be made available for proper maintenance of facilities once they are completed.

Although much progress has been made in recent years, there is still more potential for bicycles to serve as a significant alternative mode for short distance trips, one which could induce thousands of residents out of their automobiles. To achieve greater levels of bicycle use, there needs to be coordination of facility design and development, inter-jurisdictional

cooperation in route layout and construction, and participation from all segments of the public and private sector.

TRANSPORTATION ENHANCEMENT AND COMMUNITY PRESERVATION

TEA-21 enabled a portion of federal surface transportation funding to be devoted to transportation-related projects of a community enhancement, aesthetic improvements, scenic preservation, or historic preservation nature. Every year the Washington region implements a wide range of enhancement projects; examples include a train station restoration, scenic/historic acquisition of a Civil War battlefield, and wheelchair and bicycle trails, ramps, and facilities.

TEA-21 created the Transportation and Community and System Preservation (TCSP) Pilot Program and the TPB was awarded a TCSP grant in May 1999 to assist in the implementation of two key components of the adopted Vision for transportation in the Washington region:

- Circulation systems within the regional core and regional activity centers; and

- Integration of green space into a regional greenways system.

TCSP funding provided the resources needed to advance these program areas, including involvement of key agencies, officials and stakeholders and the identification of financial resources for project implementation. The TCSP funding was used to design comprehensive regional programs for each of these two components, to identify priority projects that need to be implemented within each of the programs, and to encourage the inclusion of these priority projects into the Constrained Long-Range Plan (CLRP) and Transportation Improvement Program (TIP).

The TPB appointed representatives from government, non-profit, and business groups to serve on the Circulation Systems and Green Space/Greenways Advisory Committees to guide the implementation of the TCSP grant in the Fall of 1999. Reports on the TCSP projects were adopted by the TPB in February 2000 and can be found at <http://www.mwcog.org/trans/priorities.html>.

RELEVANT LOCAL, STATE AND REGIONAL STRATEGIES

Several existing local, state, and regional strategies have had and will continue to have an important influence on the region's travel and are pertinent to the attainment of regional transportation goals. For example, the District of Columbia tax on commercial parking encourages transit use and carpooling, and the regional Metrochek program helps employers provide subsidies to workers who commute by transit. Some of the strategies that are currently adopted and in place are highlighted in a report *Zoning and Land Use Practices to Improve Transportation*[9], produced and reviewed by the COG Metropolitan Development Policy Committee (MDPC) in June 1999. The most promising of these types of strategies, possibly expanded and modified, can be considered in developing future plan updates.

[9] MWCOG. Zoning and Land Use Planning Practices to Improve Transportation. June 25, 1999.

5.

ADDRESSING THE VISION'S GOALS AND OBJECTIVES

The purpose of this chapter is to describe the expected performance of the future transportation system in relation to the Vision's policy goals and objectives. The first section presents the plan's anticipated overall performance based on travel demand forecasts. The second section assesses how the plan is expected to perform in relation to the Vision's policy goals and objectives. The last section summarizes the policy goal assessment and identifies challenges for updating the plan.

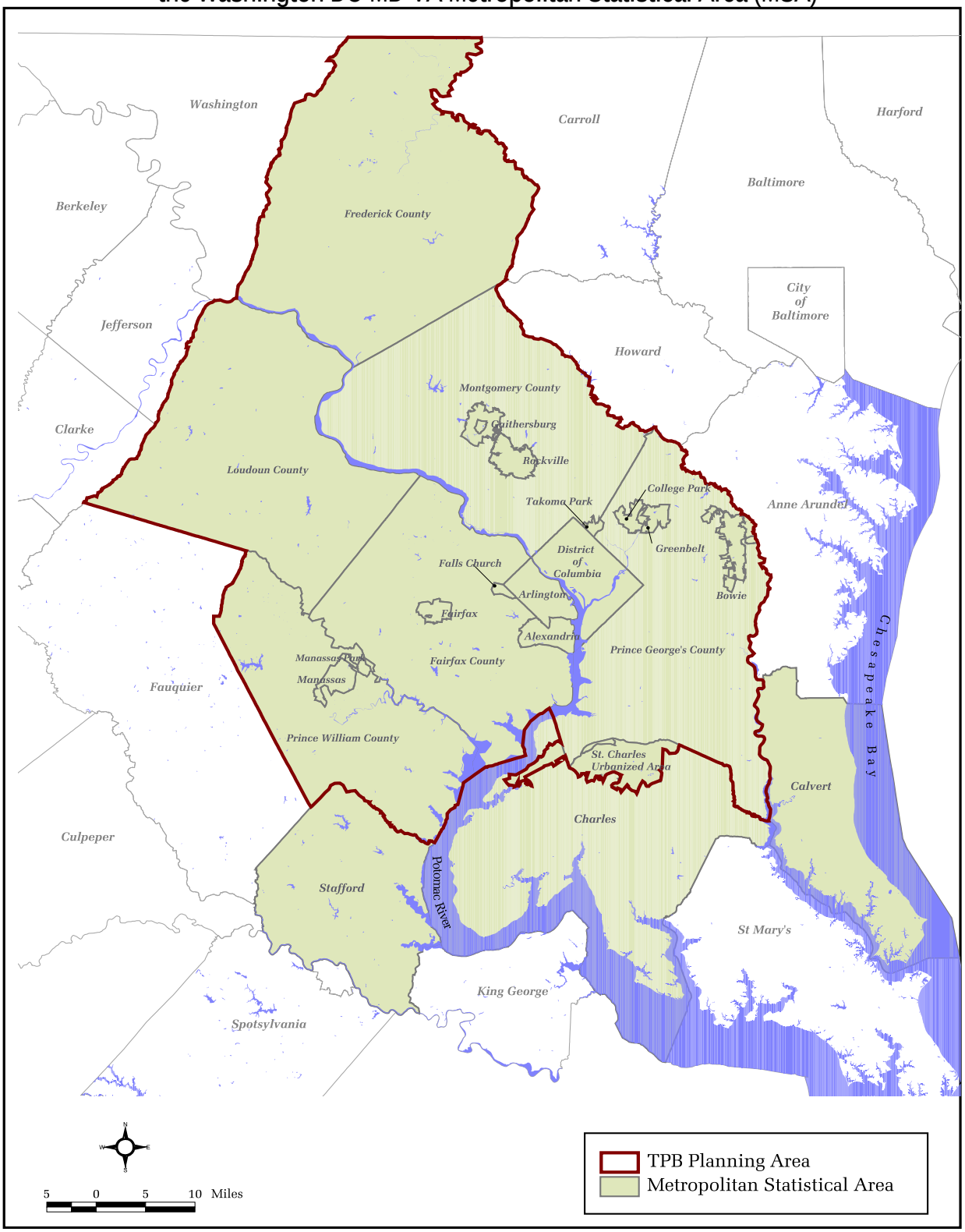
THE EXPECTED PERFORMANCE OF THE PLAN

Regional transportation demand projections for the plan, developed from the COG/TPB travel forecasting process, provide background information on the overall expected performance of the plan. The COG/TPB travel forecasting process utilizes forecasts of households and jobs together with a simulation of the expected transportation system in future years to predict the amounts and types of travel by persons and vehicles, and the resulting system performance. This section contains information on changes in demographics and travel characteristics, such as vehicle miles of travel (VMT), vehicle trips, transit trips, transit mode share, and accessibility measures.

The travel demand data provided in this chapter are based on the Washington, DC-MD-VA Metropolitan Statistical Area (MSA), which also serves as the area for air quality planning for the region[1] and is shown in Figure 5-1 along with the TPB planning area.

[1] Previous CLRP Updates and the Air Quality Conformity document provide travel demand data for the TPB modeled area or the TPB planning area.

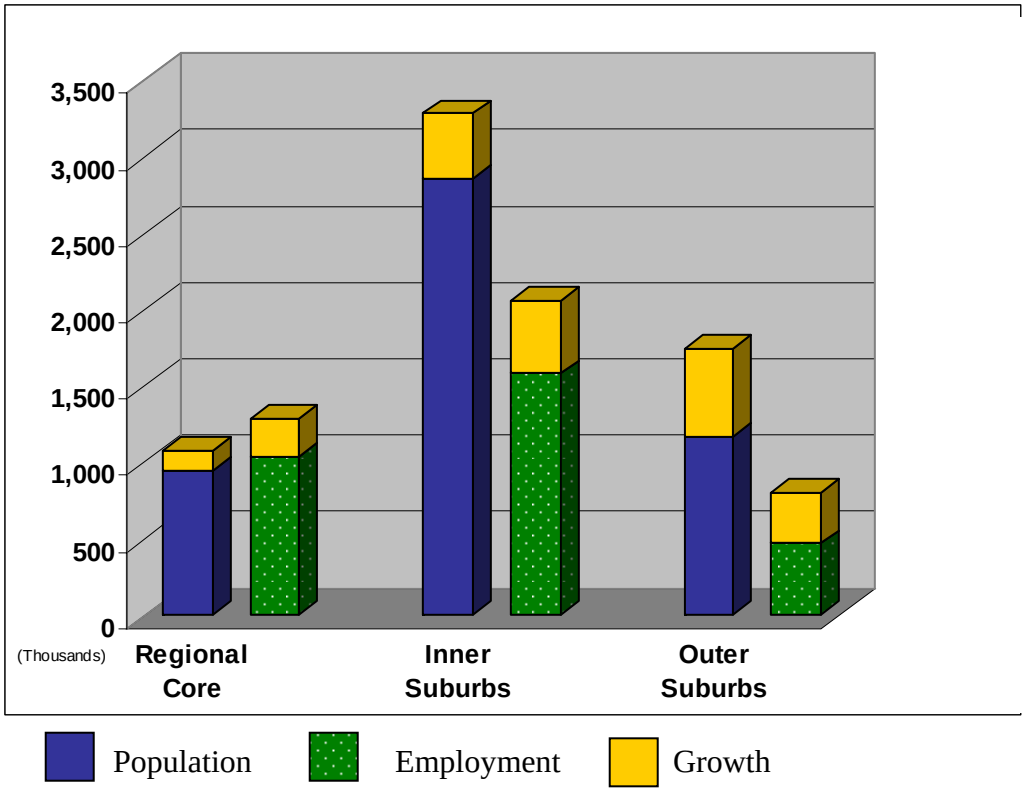
Figure 5-1: The TPB Planning Area and
the Washington DC-MD-VA Metropolitan Statistical Area (MSA)



Population and Employment Growth

Land use changes expected over the next 25 years were discussed in Chapter 3 (see Metropolitan Growth and Development). As an introduction to forecast conditions and the plan's performance, information on how the region is expected to develop is helpful because metropolitan growth greatly impacts the transportation challenges this region is facing. The region is forecast to grow by more than one million people and one million jobs over the next 25 years—a 23 percent increase in population and a 34 percent increase in employment.

Figure 5-2: Change in Population and Employment
in the Regional Core, Inner Suburbs, and Outer Suburbs 2005 - 2030



Regional Core:

District of Columbia; Arlington County and the City of Alexandria in Virginia.

Inner Suburbs:

Montgomery and Prince George's counties in Maryland; Fairfax County, the City of Fairfax and the City of Falls Church in Virginia.

Outer Suburbs:

Loudoun, Prince William, and Stafford counties in Virginia; Frederick, Calvert and Charles counties in Maryland.

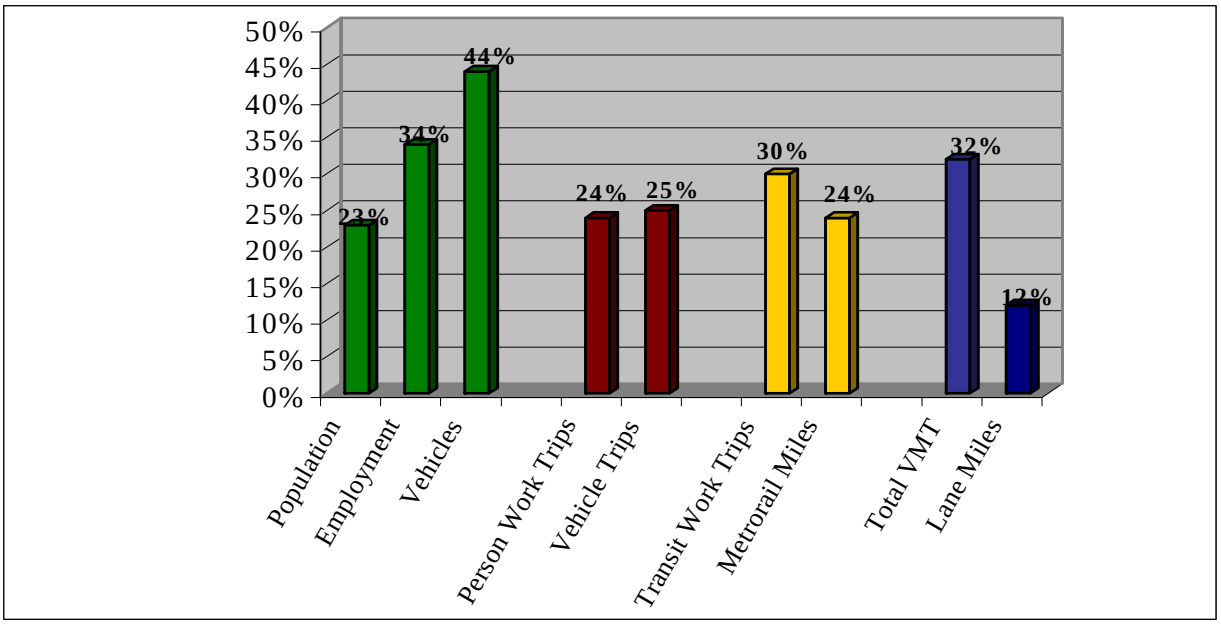
Figure 5-2 shows that the regional core will grow at a slower rate than the outer suburbs, which will see dramatic increases in population and employment. Despite the dramatic growth in the outer suburbs, the inner parts of the region (the regional core and inner suburbs) are still expected to have the highest concentrations of jobs and people in 2030. However, while most of the employment is in the regional core and inner suburbs, most of the population is located in inner and outer suburbs.

Travel Demand Forecasts and Resulting Conditions

The significant increase in population and jobs creates additional vehicles, trips, and congestion on the region's transportation system. Regional transportation demand projections for the plan predict the amounts and types of travel by persons and vehicles and the resulting system performance levels.

Figure 5-3 presents a summary of the change in regional demographic and transportation forecasts over the next 25 years. The figure illustrates that while population will increase 23 percent, employment and total daily vehicle miles of travel (VMT) will grow at even higher rates.

Figure 5-3: Percent Changes in Demographics and Travel Characteristics 2005 - 2030



Source: Air Quality Conformity Determination of the Year 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Plan for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. December 31, 2003.

Tables 5-1 and 5-2 provide the year 2005 and 2030 data for regional travel that support Figure 5-3. Significant increases in travel are expected over the next 25 years. Total VMT is increasing faster than population. The transit system is expected to be under greater strain due to the demand for transit ridership.

Table 5-1: Summary of Regional Travel Forecasts 2005 - 2030
(in Thousands)

	2005	*2015*	*2025*	*2030*	*Absolute Change 2005-2030*	*Percent Change 2005-2030*
Demographics						
Population	4,970	5,600	5,980	6,100	1,130	23%
Employment	3,080	3,590	4,000	4,140	1,060	34%
Vehicles	3,670	4,320	4,970	5,290	1,620	44%
Estimated Daily Travel						
Truck Trips	360	420	480	500	140	39%
Total Vehicle Trips	15,520	17,530	19,010	19,460	3,940	25%
Total Daily VMT	126,450	146,520	160,390	166,400	39,950	32%
Total Daily VMT Per Capita*	25	26	27	27	2	7%
Lane-Miles of Roadway	15,700	17,162	17,580	17,600	1,900	12%

*Figures are shown in total and are not in thousands.
Source: Air Quality Conformity Determination of the Year 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Plan for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. December 31, 2003. Figures are for the Washington, DC-MD-VA Metropolitan Statistical Area, as shown in Figure 5-1.

Table 5-2: Summary of Regional Work Travel Forecasts 2005-2030
(in Thousands)

	2005	2015	2025	2030	Absolute Change 2005-2030	Percent Change 2005-2030
All Person Work Trips	3,390	3,820	4,130	4,210	820	24%
Auto Person Trips	2,820	3,130	3,390	3,470	650	23%
Auto Driver Trips	2,510	2,770	3,000	3,080	570	23%
Auto Passenger Trips	310	360	390	390	80	26%
Vehicle Trips on HOV Facilities	29	34	35	33	4	14%
Average Auto Occupancy*	1.12	1.13	1.13	1.13	0.01	1%
Transit Work Trips	570	690	740	740	170	30%
Transit Share of Work Trips	17%	18%	18%	18%	1	--
Transit Share in District Core	46%	50%	51%	51%	5	--

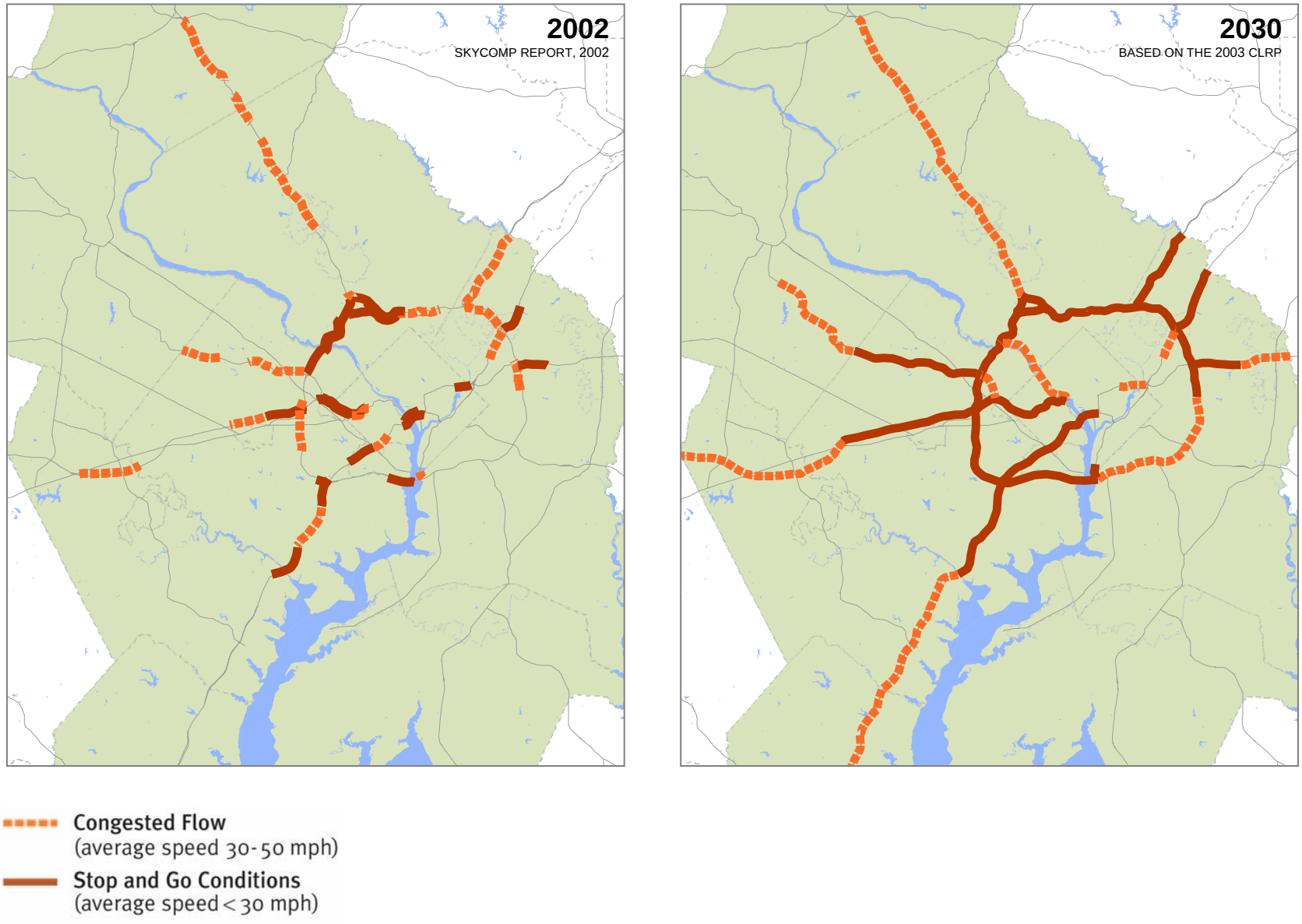
*Figures are shown in total and are not in thousands.
Source: Air Quality Conformity Determination of the Year 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Plan for the Washington Metropolitan Region. National Capital Region Transportation Planning Board. December 31, 2003. Figures are for the Washington, DC-MD-VA Metropolitan Statistical Area, as shown in Figure 5-1.

Levels of Highway Congestion

Figure 5-4 displays the expected changes in evening peak-hour highway congestion by 2030 based on the improvements in the CLRP. An analysis of forecast levels of congestion without the CLRP improvements is not available. The 2002 levels are based on aerial photo-surveys of highway traffic. The expected congestion levels for 2030 are based on travel demand forecasts. Severe stop and go congestion is expected to be prevalent throughout the entire region in 2030, not just in isolated areas.

While travel forecasts and simulations of the transportation system predict more congestion in the future, it is less clear how people during the next 25 years will adjust to those conditions. As the durations of the daily peak congestion periods spread, increasing numbers of commuters and others may change their times of departure, seeking less congested travel times. Employees may be more likely to try telecommuting. Automobile users may be more likely to carpool or ride transit. As congestion becomes more pervasive, people may be more likely to combine trips with different purposes and take shorter trips in order to avoid frustrating delays. People also might be more likely to seek jobs closer to where they live, or conversely, to seek housing closer to where they work.

Figure 5-4: Changes in Evening Highway Congestion 2002 - 2030



SUMMARY OF THE EXPECTED PERFORMANCE OF THE PLAN

The financially constrained plan's predicted performance between 2005 and 2030 can be summarized in the following points:

- Vehicle ownership will increase at a faster rate than population, employment and vehicle miles of travel (VMT);
- VMT will increase 32 percent, whereas capacity is planned to expand only 12 percent (as measured in roadway lane-miles);
- Over 80 percent of commuters are forecast to travel by single-occupancy vehicle in both 2005 and 2030, and this mode share increases for the more frequent non-work related trips;
- Stop-and-go conditions will be prevalent on most of the region's highways by 2030;
- Average auto occupancy will remain relatively steady—1.12 in 2005 and 1.13 in 2030;
- Both transit trips for work and non-work purposes will increase by approximately 30 percent, and Metrorail miles will expand by 24 percent; and
- In 2030, transit trips will account for about 17 percent of all work trips, and over half of the work trips in the District of Columbia.

THE PLAN'S PERFORMANCE IN RELATION TO THE VISION POLICY GOALS AND OBJECTIVES

The TPB Vision is a useful reference point and measuring stick. In contrast to the financially limited CLRP, the Vision considered creative approaches to the region's transportation future without being limited to projects and programs that can be paid for with existing funds. Looking at the Vision's policy goals and objectives can provide the region with important information on shortcomings of the CLRP in relation to regional goals. What are the shortcomings of the financially constrained plan? What areas need specific attention the next time the CLRP is updated?

The TPB Vision is also a symbol of regional consensus. The TPB consists of multiple levels of agencies and officials within varying political, institutional, and geographic entities. The TPB Vision reflects the views, ideas, and goals of the region as a whole and reflects the collective sense of how the region wants the transportation system to develop and perform. Along with providing a framework for the development of the transportation system, the Vision also sets goals for the environment, metropolitan development patterns, and the economy. Because the Vision extends beyond transportation, not all of the TPB Vision's policy goals can be assessed with travel demand forecasts.

The following assessments of each Vision goal provides information on where we are today, what the plan does by 2030, and challenges to be addressed in future plan updates. Travel demand and land use activity forecasts are the main sources of information used to describe the plan's performance. The Regional Mobility and Accessibility Study is still underway and will provide supplemental information on the 2003 CLRP's performance in relation to the Vision[2].

[2] For information on the study and preliminary results, please contact TPB staff at (202) 962-3311.

Policy Goal #1

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

Objectives:

(1) A comprehensive range of choices for users of the region's transportation system.

(2) Accurate, up-to-date and understandable transportation system information that is available to everyone in real time, and is user-friendly for first-time visitor and residents, regardless of mode of travel or language of the traveler.

(3) Fair and reasonable opportunities for access and mobility for persons with special accessibility needs.

(4) Convenient bicycle and pedestrian access.

Where We Are Today

The region currently has a comprehensive transportation system primarily focused on access to the regional core. Many highways and roads are radially orientated; the Capital Beltway is the major highway providing circumferential access. Currently, there are approximately 15,700 miles of roadway and 190 miles of high-occupancy vehicle (HOV) lanes. The transit system, comprised of local bus, Metro bus, Metrorail, and commuter rail, is also designed to serve the regional core and exists primarily in radial corridors. The 103-mile Metro system was recently completed with the opening of the Green line extension to Branch Avenue. Today, 17 percent of work trips are made by transit and 80 percent by low-occupancy vehicle auto. There are approximately 700 miles of trails and on-street bikeways in the region. From the 1994 Household Travel Survey, we know that over one million pedestrian trips are made everyday, accounting for 8 percent of all trips. The region's 77,000 average daily bicycle trips account for 0.7 percent of all trips.

Freeway Congestion

The TPB conducts a study of freeway congestion every three years. The 2002 study offered hope that major bottlenecks can be relieved with relatively modest road improvements. Using aerial photography the study showed that since 1999, traffic flow increased at several congestion points after improvements occurred. However, in a number of other locations, the study supported the pervasive view that the region's highways are getting more congested.[3]

[2]Traffic Quality in the Metropolitan Washington D.C. Planning Region (Spring 1996, 1999, 2002). Prepared for the Metropolitan Washington Council of Governments by Skycomp.

"Access for All"

The TPB established the Access for All Advisory (AFA) Committee in 2001 to create an on-going dialogue with communities not typically included in the transportation planning process, including low-income populations, minority communities, and people with disabilities. The committee's name comes from the first policy goal in the Vision and advises the TPB on projects, programs, and issues that impact these population groups. The committee's first report to the TPB recommended improvements in transit information for people with limited English proficiency and urged transportation decision makers to provide adequate funding for bus services. The committee also requested improvements and expansions in existing transportation programs, including MetroAccess service for persons with disabilities, WMATA's Access to Jobs program, and pedestrian safety programs throughout the region. As a result of the committee's efforts, improved transit information is now available in languages other than English. The committee continues to call attention to the need for improved transit and pedestrian access for people with disabilities. The AFA provided comments on the 2003 CLRP which can be found in Appendix B.

Real-Time Traveler Information

Several current activities relate to Objective 2: *Accurate, up-to-date and understandable transportation system information that is available to everyone in real time, and is user-friendly for first-time visitors and residents, regardless of mode of travel or language of the traveler*. The Internet has made transportation information more available to people in real-time. A variety of websites provide real-time travel conditions and incident information including the websites for the Washington Post and transportation agencies such as VDOT, MDOT, DDOT and WMATA. Each Metrobus schedule can be viewed online. Transit information from WMATA by telephone is available in several different languages. Metrorail has electronic messaging signs in most stations that provide real-time information on train arrivals. "E-Alerts", e-mails on the status of the Metrorail sytem, are provided to riders who sign up for the service. Some bus shelters in Montgomery County and the City of Fairfax offer the same type of real-time information with electronic signs. Interactive kiosks are available at malls and other public places throughout the region that provide online traffic, transit, and weather information.

There are other recent good examples of improved and effective communication of travel information. The Downtown D.C. Business Improvement District (BID), with assistance from the District Department of Transportation (DDOT) and WMATA, developed large bus route maps that have been posted in approximately 300 bus shelters in downtown D.C. The maps are customized for each stop with "You are here" markers, and highlight routes that serve the specific bus stop. Another example of improved transit information is the free distribution of Metrobus route maps from WMATA, which previously charged for the maps.

Pedestrian and Bicycle Safety

Regional leaders launched a public education and outreach campaign in October 2002 to reduce pedestrian deaths and injuries throughout the Washington region. With pedestrian fatalities outnumbering homicides in many jurisdictions, leaders vowed to work together on a multi-year effort to heighten awareness about pedestrian safety and change the behavior of drivers. The campaign, titled "Street Smart," was aimed at young drivers who are involved in the majority of pedestrian collisions. The campaign featured Metrorail and Metrobus ads, radio ads, television public service announcements, and posters. Campaign materials urged

drivers to “Imagine the Impact” of traffic accidents on the lives and families of both pedestrians and drivers. A special task force of the TPB’s Bicycle and Pedestrian Subcommittee developed the regional concept for the campaign and launched it at a news conference. An evaluation of the campaign’s effectiveness reported an increased awareness of messages featured in the campaign. One message reported to be particularly memorable was “Every seven minutes a pedestrian is injured or killed.” [4]

What the CLRP Does by 2030

Transportation system users already have a *comprehensive range of choices* (Objective 1) including highways, arterial roads, Metrorail, Metrobus, local bus, commuter rail, and an extensive HOV system. The 2003 CLRP further expands these options. The Metrorail system will expand by 24 percent, from 106 to 131 miles by 2030. The District of Columbia plans to add a light rail demonstration line in Anacostia running 2.7 miles between Pennsylvania Avenue SE and Bolling Air Force Base by 2005 as part of a first step in a wider light rail system. New Metrorail stations are under development for New York Avenue in the District of Columbia and Potomac Yards in Alexandria. The most significant transit improvement is a 23.1 mile Metrorail extension from East Falls Church to Dulles airport, with four stations in Tysons Corner. Other transit improvements include the Corridor Cities Transitway from the Shady Grove Metro station to COMSAT, new Metrorail stations at Potomac Yards and New York Avenue, the Bi-County Transitway between Bethesda and Silver Spring, and the Anacostia Light Rail line. One hundred and ninety more miles of high-occupancy vehicle (HOV) lanes will be added to the region. Road miles are planned to increase 12 percent from 15,700 miles to 17,600 miles by 2030.[5] Bike and pedestrian accommodations are included in 41 percent of the projects in the plan and 7 percent are primarily bike and pedestrian projects.

*Accurate, up-to-date and understandable transportation system information (*Objective 2) can be expected to improve over the life of the plan. Technological improvements will make readily available real-time information on transportation even more accessible.

Objective 3 states *fair and reasonable opportunities for access and mobility for persons with special accessibility needs.* In support of this objective, the Access for All Advisory Committee has advocated for improvements to the fixed transit and paratransit systems.[6] As the current population ages, demand will increase for improved transit and pedestrian access and improvements that meet and exceed the American with Disabilities Act (ADA) requirements. It should be noted that congestion of the region's roadways would limit access and mobility for everyone, including bus users and those with special accessibility needs.

Convenient bicycle and pedestrian access (Objective 4) will be improved in the plan. Seven percent of the transportation improvements in the plan are primarily bicycle and/or pedestrian projects—or 58 of the 782 projects in the plan. Although the travel demand model does not provide forecasts on travel by bicycle and walking if it is not connected to transit access, bicycling and walking will likely increase in certain areas due to the implementation of specific projects and through the inclusion of bicycle and pedestrian

[4] The Street Smart 2002 Pedestrian Safety Awareness Campaign report can be found online at <http://www.mwcog.org/transportation>.
[5] Lane miles include arterials and freeways.
[6] To view the AFA recommendations, go to <http://www.mwcog.org/transportation>, and search for “2003 AFA Report.”

facilities in other transportation improvements. However, as roads and intersections are expanded for motor vehicles, bicycle and pedestrian access often decreases. The challenge is to design transportation improvements that improve, or at least maintain, bicycle and pedestrian access. Another major factor affecting pedestrian and bicycle access is land use and urban design. More compact areas with a mix of land uses have higher levels of bicycling and walking than areas with destinations far apart and separated by busy highways.

Most of the greenway and circulation projects identified in the TPB's *Priorities 2000*[7] reports (see page 4-27) under the federal Transportation and Community and System Preservation (TCSP) Pilot Program are bicycle and pedestrian oriented. Through the distribution of these reports, the TPB hopes to encourage implementation of these projects and others like them.

Challenges to Be Addressed in Future Plan Updates

The review of the 2003 CLRP against Policy Goal 1 indicates that while the region is making progress towards this goal, there are remaining challenges that need to be addressed.

The high levels of congestion on both the transit and highway system are being examined in more detail under the Regional Mobility and Accessibility Study. The need for additional funding to accommodate the demand for transit ridership is expected to be a priority in 2005, along with funding for other critical transportation needs.

Providing "access to all" at a "reasonable cost" is a remaining challenge for future plan updates. A particular challenge is maintaining and expanding transit services for people with disabilities given WMATA's short-term budget problems. Transit information should be widely available to transit-dependant populations and limited English speakers who do not have convenient Internet access. Effective written materials should use simple language and many visuals, and rely more on universal symbols and images rather than words. The effects of transit fare policies on transit-dependant populations, who tend to be low-income, also needs to be considered in future plan updates.

In reviewing draft 2003 CLRP, the AFA Committee observed that the transit improvements appear to be serving more suburban areas, rather than low-income communities that may be more transit dependant and concentrated in the inner part of the region.[8] In addition, the AFA raised concerns about the lack of planned transit improvements or studies in Southern Prince George's County. Finally, although the expansion of the Metrorail system is very important, the AFA stressed that bus service levels should be maintained for current transit-dependant customers.

Finally, investing in bicycle and pedestrian facilities and improvements to encourage more non-motorized travel, increase safety conditions, and provide better access to transit by people with disabilities is a continuing challenge for the region.

[7] To view the reports, go to <http://www.mwcog.org/transportation/>, and then "Featured Publications".
[8] The AFA comments on the 2003 CLRP are included in Appendix B.

Policy 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 throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, and services in a walkable environment.

Objectives:

(1) Economically strong regional core.

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

(3) A web of multi-modal transportation connections that provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections where appropriate.

(4) Improved internal mobility with reduced reliance on the automobile within the regional core and within regional activity centers.

(5) Efficient and safe movement of people, goods, and information, with minimal adverse impacts on residents and the environment.

Where We Are Today

The Washington metropolitan region has a well-developed transportation system that is radially oriented towards moving people and goods to and from the core. Both the transit and highway systems tend to connect activity centers along radial corridors with the exception of the circumferential connections that the Beltway provides.

The region is economically prosperous and has experienced significant increases in population and employment in the last two decades. The regional core, which includes the District of Columbia, the City of Alexandria, and Arlington County, continues to have large concentrations of employment and residents. The District of Columbia continues to gain employment and is thriving in many respects, but has decreased in population in the last decade.

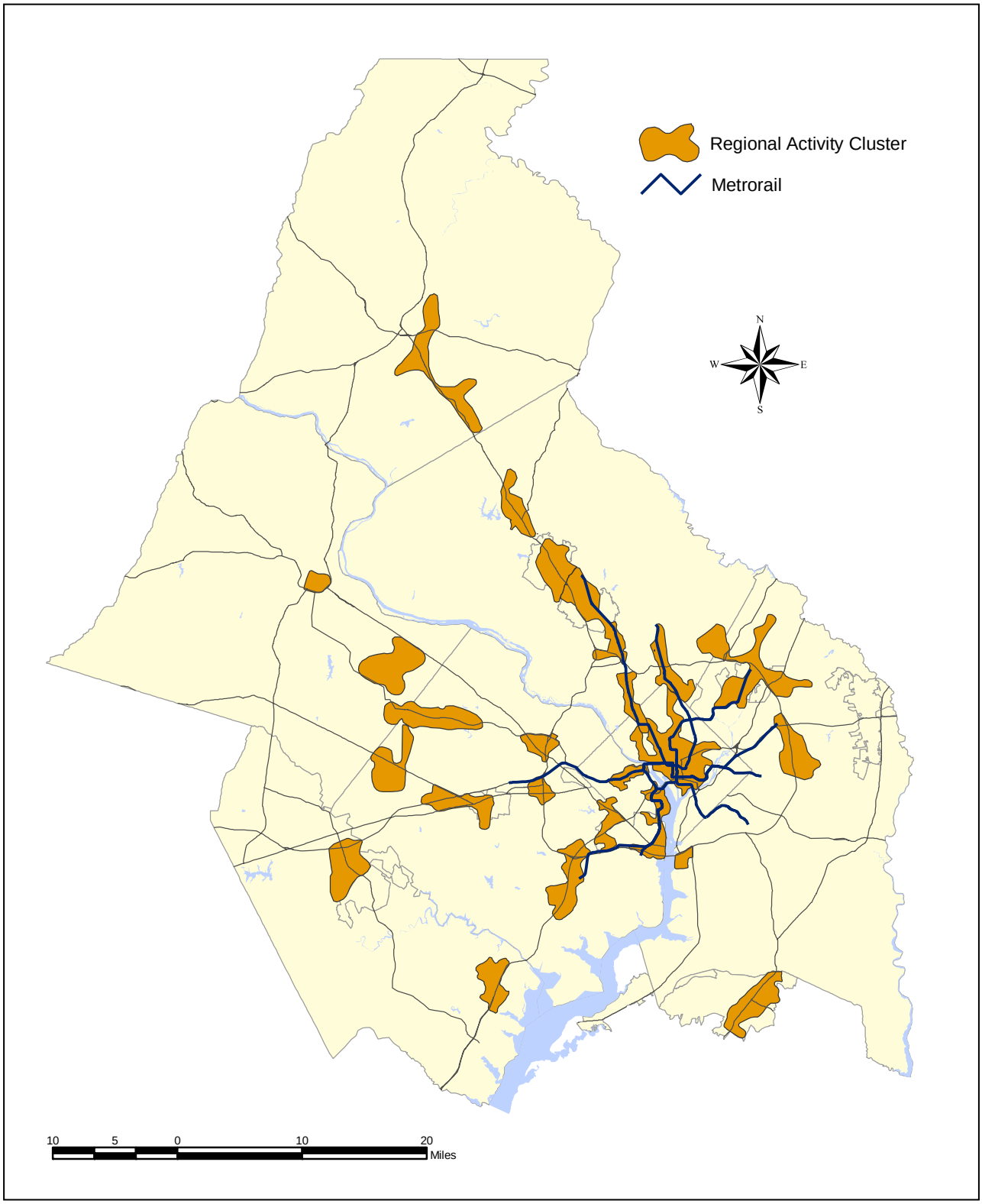
Multi-modal connections are greatest in the regional core and within regional activity centers. Transit use is highest in these areas, although regional activity centers in suburban locations tend to have a higher reliance on the automobile.

Fifty-eight regional activity centers were defined in a joint effort by the COG Board of Directors and the TPB based on current local government growth forecasts and categorized according to similar employment, residential, and growth pattern characteristics. Recognizing that significant concentrations of residential and commercial development exist

immediately adjacent to the tightly defined activity centers along the region's transportation facilities, 24 "activity center corridors" of development were created. Each corridor, referred to as a "cluster," contains several activity centers. The locations of regional activity clusters are shown in Figure 5-5. A map of the regional activity centers and other maps and information can be found in the Regional Activity Centers publication on-line at <http://www.mwcog.org/planning/planning/activitycenters>.

Another activity that supported Policy Goal 2 was the development of a multimedia CD-ROM and Web site by COG to inform and educate elected officials, civic groups, the development community, and citizens about the land use and transportation challenges currently facing the region. The accepted principles of "Smart Growth" are candidly introduced and discussed in the context of the varied and distinct communities across the region. The CD-ROM highlights the responsibilities and successes of local government policies while acknowledging the common concerns which elected officials and citizens encounter (e.g., neighborhood opposition, traffic, loss of open space, increased density, etc.). The CD and accompanying Web site contain numerous examples of local best management or best development practices that exemplify the ideas of "choices, connections, and collaboration." In addition, the discussion focuses on developing partnerships that engage all stakeholders, aim to minimize conflicts, and result in the highest quality growth. For more information see <http://www.mwcog.org/planning/planning/smartgrowth>.

Figure 5-5: Regional Activity Clusters



What the CLRP Does by 2030

The plan addresses Policy Goal 2 in several ways. First, the plan will support local planning efforts that promote concentrated development along existing transportation corridors and within regional activity centers. Highway improvements in the plan are almost exclusively widenings of existing highways. Second, the projects and programs in the plan emphasize maintaining existing transit and highway corridors as opposed to new construction in new corridors, which is one way of using transportation investment to encourage an economically strong regional core and regional activity centers. Third, numerous improvements in the plan contribute to a web of multi-modal connections between the core and activity centers. These improvements include Dulles Rail, High-Occupancy Vehicle (HOV) lanes on the Virginia portion of the Capital Beltway, the Bi-County Transitway between Bethesda and Silver Spring, the Anacostia Light Rail, and improvements to circumferential corridors such as US 301 and the Tri-County Parkway.[9] All of these projects reinforce existing transportation connections between activity centers.

Assessment of the Objectives

Employment and population growth forecasts are indicators of a strong economy, which is part of Objective 1 (*Economically strong regional core)* and Objective 2 (*Economically strong regional activity centers).* Employment is expected to increase by 34 percent by 2030 and population is expected to increase 23 percent. The regional core is expected to remain economically strong, and is forecast to account for 31 percent of the region's employment and 18 percent of the region's population.

Objective 2 refers to a mix of uses in the regional activity centers (*activity centers with a mix of jobs, housing, services, and recreation in a walkable environment).*

The 24 regional activity clusters comprise about 455 square miles (13 percent) of the region's total land area and contain 71 percent of the region's jobs and 38 percent of the region's households. The clusters include 60 out of the 83 total current Metrorail stations in the region. Fourteen activity clusters currently have no Metrorail station.

Figures 5-6 and 5-7 show the percent of regional growth in employment and households that will occur within regional activity clusters between 2005 and 2030. For some jurisdictions, such as the District of Columbia, Arlington County in Virginia, and Montgomery County in Maryland, a large majority of the growth will occur within regional activity clusters. For other jurisdictions, such as Prince William County in Virginia and Prince George's County in Maryland, much of the growth will occur outside regional activity clusters. Across the whole region, activity clusters will capture 70 percent of the region's employment growth and 36 percent of the region's household growth by 2030. This means that the percent of jobs and households contained within regional activity clusters will remain constant over the next 25 years.

It should be noted that the regional activity *clusters* contain significant concentrations of residential and commercial development, but the 58 activity *centers* include less residential development, and therefore the percentage of household growth captured by the regional activity *centers* would be less than the *clusters*.

[9] See Chapter 4 for more information about these and other 2003 CLRP projects.

Figure 5-6: Percent of Employment Growth between 2005 and 2030 Occurring in Activity Clusters

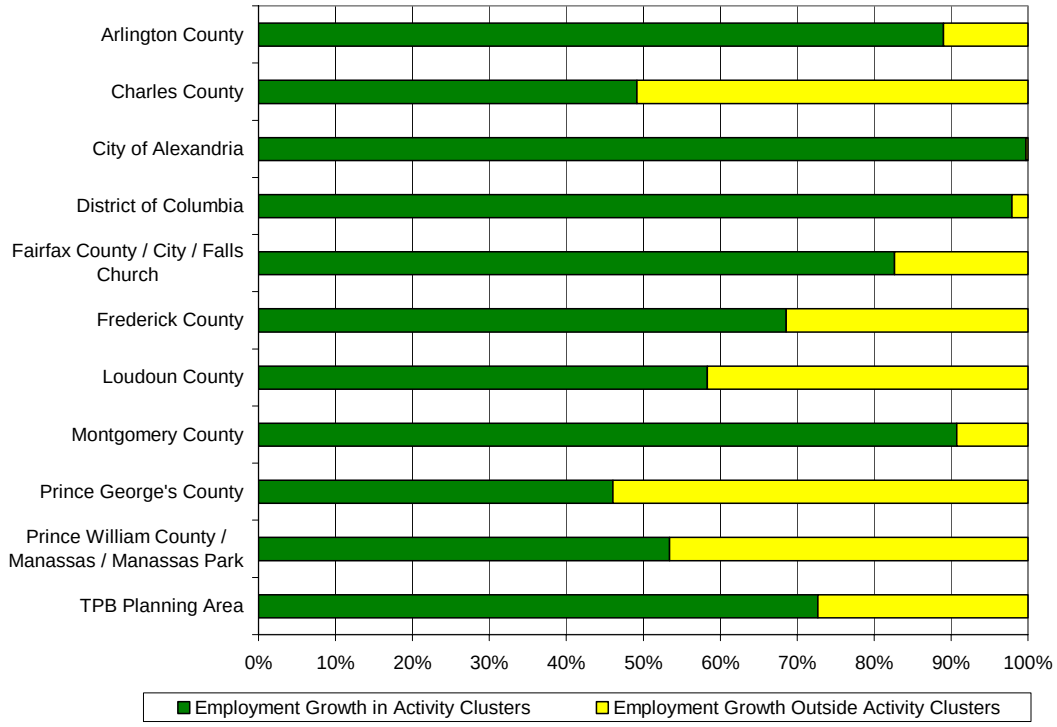
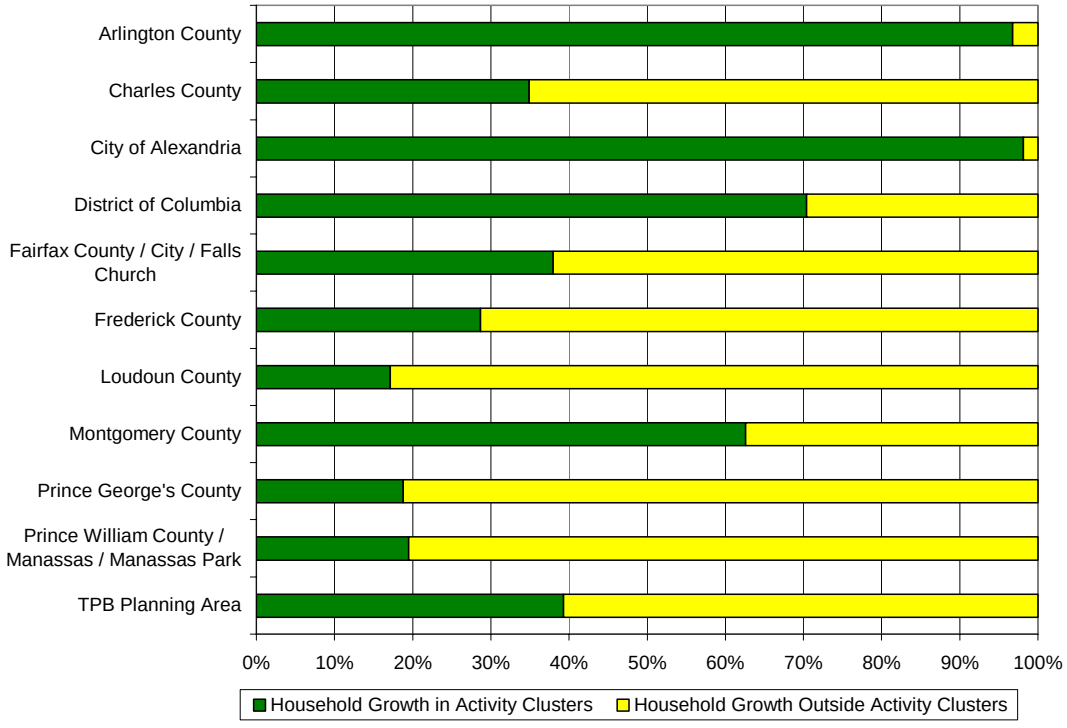


Figure 5-7: Percent of Household Growth between 2005 and 2030 Occurring in Activity Clusters



Round 6.3 of the Cooperative Forecasts[10] provide some information on the mix between jobs and households in the clusters over the next 25 years. As shown in Table 5-3, the 2030 jobs-to-households ratio in the activity clusters range from 1.2 to 7.8. All clusters have a higher concentration of employment than housing.

Table 5-3: Jobs to Households Ratio in Activity Clusters, 2030

Activity Cluster	Jobs 2030	Households 2030	2030 Jobs to Households Ratio
Bailey's Crossroads Area	66,876	57,666	1.2
Bethesda / Friendship Heights	112,867	32,536	3.5
Downtown Washington	733,482	186,488	4.0
Dulles Corridor	157,984	30,243	5.2
Dulles North Area	82,027	15,620	5.3
Dulles South Area	76,085	9,813	7.8
Fairfax Center / City of Fairfax / GMU	93,646	36,331	2.6
Frederick Area	112,247	38,228	3.0
Gaithersburg / Life Sciences Center	102,630	36,675	2.8
Germantown / Clarksburg	49,754	26,018	1.9
Greenbelt / College Park / White Oak Area	151,682	49,086	3.1
I-95/Springfield Area	74,457	20,021	3.7
Leesburg Area	29,088	19,360	1.5
Manassas Area	65,102	25,433	2.6
Merrifield / Dunn Loring	60,285	19,844	3.0
National Harbor	18,498	4,926	3.8
New Carrollton / Largo Area	62,243	23,164	2.7
Pentagon / Reagan Airport / Alexandria Area	232,714	56,978	4.1
Potomac Mills Area	40,879	21,058	1.9
Rockville / North Bethesda	209,884	38,201	5.5
Rosslyn / Ballston Corridor	127,143	41,407	3.1
Silver Spring / Takoma Park / Wheaton	87,825	47,651	1.8
Tysons Corner	140,405	24,401	5.8
Waldorf Commercial	33,939	28,403	1.2
All Clusters	**2,921,742**	**889,551**	**3.3**
Washington, DC-MD-VA MSA	**4,138,300**	**2,352,300**	**1.8**

[10] The Cooperative Forecasts are produced by each local jurisdiction and approved by the COG Board. The forecasts are updated annually.

A web of multi-modal transportation connections that provide convenient access (including improved mobility with reduced reliance on the automobile) between the regional core and regional activity centers, reinforcing existing transportation connections and creating new connections where appropriate is Objective 3. The majority of the projects in the plan reinforce existing transportation connections by upgrading, improving, extending, or widening routes. The region's transportation system was built to serve demand to and from the core with radial corridors. Travel patterns are changing with less radial-oriented travel and more travel between suburbs.

Objective 4 calls for *Improved internal mobility with reduced reliance on the automobile within the regional core and within regional activity centers.* In both 2005 and 2030, approximately 17 percent of commuters are expected to use transit. The transit mode share for the regional core and within some activity centers is much higher. For example, in D.C. transit is forecast to account for over 50 percent of all work trips in 2030. The Regional Mobility and Accessibility study will evaluate in more detail the jobs-housing mix, multi-modal connections, and travel mode shares within the regional activity centers.

A TPB Advisory Committee was established in 2000 under the Transportation and Community and System Preservation (TCSP) grant to assist in the implementation of circulation systems within the regional core and regional activity centers. This committee recommended nine circulation system projects, such as the Downtown DC circulator, a pedestrian plaza over Rockville Pike, and improving pedestrian access in Tysons Corner.

Efficient and safe movement of people, goods, and information, with minimal adverse impacts on residents and the environment is Objective 5. The growth of e-commerce has led to a boom in the home delivery of goods ordered online—everything from garden tools to groceries. The region must be ready to handle the emerging demands of the freight industry. The efficient movement of information has become a growing issue in the region. The demands of information technology have caused conflicts over adding cable lines in and around streets in the region and cell phone towers within existing rights-of-way. Projects in the plan that upgrade key transportation routes to move both people and goods help address this objective.

Challenges to Be Addressed in Future Plan Updates

While the region has made progress toward developing and maintaining *an interconnected transportation system…including a healthy regional core and dynamic regional activity centers*, (Policy Goal 2) there are significant challenges for future plan updates. A major challenge is securing adequate funding to maintain and develop an interconnected transportation system, which is discussed under Goal 7 in this chapter. Another challenge is developing a consensus regarding how to best develop *a web of multi-modal transportation connections* given the opposing views on new highways, such as the Intercounty Connector.

The Regional Mobility and Accessibility study will review how to provide better connections between the transportation corridors and the regional activity centers, including additional highway and transit circumferential facilities and capacity, such as Potomac River crossings, and ways to increase transit and high-occupancy vehicle (HOV) travel mode shares.

Policy Goal #3

The Washington metropolitan region's transportation system will give priority to management, performance, maintenance, and safety of all modes and facilities.

Objectives:

(1) Adequate maintenance, preservation, rehabilitation, and replacement of existing infrastructure.

(2) Enhanced system safety through effective enforcement of all traffic laws and motor carrier safety regulations, achievement of national targets for seatbelt use, and appropriate safety features in facility design.

Where We Are Today

Throughout the region, various transportation agencies have placed cameras at key intersections to help prevent red-light running, coordinate seatbelt campaigns, operate motorist assistance patrols, implement programs to enforce speed limits, and educate the public on safety issues like drinking and driving. While such programs are effective, safety issues also need to be addressed at the regional level. Addressing safety at the regional level is challenging because three jurisdictions are involved—the District of Columbia, Maryland, and Virginia—which have different safety and traffic regulations and laws.

A TPB effort to enhance pedestrian and bicycle safety was under Goal 1, but is also relevant for Goal 3. The "Street Smart" campaign conducted in Fall of 2002 was aimed at young drivers who are involved in the majority of pedestrian collisions. The campaign featured Metrorail and Metrobus ads, radio ads, television public service announcements, and posters. The campaign materials urged drivers to "Imagine the Impact" of traffic accidents on the lives and families of both pedestrians and drivers.[11]

What the CLRP Does by 2030

Objective 1 calls for *adequate maintenance, preservation, rehabilitation, and replacement of existing infrastructure.* The region will spend approximately $93.3 billion on the plan over the next 25 years. Seventy-seven percent will be spent on operating and preserving the transit and highway system. Why do operations and maintenance claim the lion's share of available resources? In part, this is the price of yesterday's successful construction programs. The major facilities built during the past 40 years are aging and need upkeep. Older transportation systems cost more to maintain, just as older homes and cars do. Highway and transit operating costs are also significant and growing, and transit operations are only partially offset by passenger fares. **Transit rehabilitation and maintenance is a growing unmet need in this region. The CLRP does not currently provide a reliable source of funding for adequate transit, highway and bridge maintenance and rehabilitation.**

[11] The Street Smart 2002 Pedestrian Safety Awareness Campaign report can be found on-line at <http://www.mwcog.org/transportation>.

Objective 2 focuses on safety issues by calling for *enhanced system safety through effective enforcement of all traffic laws and motor carrier safety regulations, achievement of national targets for seatbelt use, and appropriate safety features in facility design.* Transportation agencies in the region have various programs to address safety. Safety is the first priority in all transportation improvements. Technology-related safety enhancements offer opportunities for better highway lighting and visibility, crash avoidance, bicycle and pedestrian safety, railroad grade crossing camera enforcement systems, and safety-related law enforcement.

Challenges to Be Addressed in Future Plan Updates

While the operating agencies within the District of Columbia, Maryland, and Virginia have programs and policies in place that give *priority to management, performance, maintenance, and safety of all modes and facilities*, the region as a whole can do more to address system-wide and inter-jurisdictional safety issues.

Management and operations will be a focus area for the TPB in the immediate future, with an emphasis on safety. Safety performance measures such as traffic fatalities, crashes and injuries by mode will be useful to the region in better understanding trends and influencing safety programs and policies. The TPB can play a role in bringing together the safety data already collected by the operating agencies to look at regional trends. Understanding the trends is the first step towards better *management, performance, maintenance, and safety of all modes and facilities*. Continuing safety efforts, such as the Street Smart campaign to educate pedestrians and drivers, will help improve bicycle and pedestrian safety.

Future technology will likely offer ways to improve both management of the existing system and safety. Intelligent Transportation System (ITS) improvements will help the region better manage the system to enhance system performance, which is the subject of Policy Goal 4. Technological safety improvements to cars, roads, buses, rail, and pedestrian facilities will likely enhance system safety in the future.

A remaining challenge is finding reliable sources of funding to rehabilitate and maintain the region's transportation system adequately. The TPB will continue to discuss funding issues and raise awareness of the funding shortfalls at the federal, state and local levels.

Policy Goal #4

The Washington metropolitan region will use the best available technology to maximize system effectiveness.

Objectives:

(1) Reduction in regional congestion and congestion-related incidents.

(2) A user-friendly, seamless system with on-demand, timely travel information to users, and a simplified method of payment.

(3) Improved management of weather emergencies and major incidents.

(4) Improved reliability and predictability of operating conditions on the region's transportation facilities.

(5) Full utilization of future advancements in transportation technology.

Where We Are Today

Reducing crashes, managing congestion, making transit more user-friendly, and providing timely, accurate information on which to base travel decisions have great potential to improve the overall quality of life in the region. The application of emerging computer, telecommunications, and other electronic technologies to transportation systems is referred to as "Intelligent Transportation Systems," or ITS. These technologies have demonstrated impacts on maximizing transportation system effectiveness, and hold promise in the future for more improvements. The latest technology is being incorporated and utilized by traffic management centers in the Washington region.

More and better information is provided to the public through agency websites (such as MDOT, VDOT, and Montgomery County websites). Variable message signs on the region's freeways provide information to motorists at critical locations. Local bus providers, such as Montgomery County and the City of Fairfax, use Global Positioning System (GPS) technology to tell passengers exactly when their bus will arrive. In addition, WMATA has installed changeable message signs in the Metro system that will alert passengers of the arrival of the next train. WMATA's SmarTrip electronic payment system is now available on several bus lines.

Further examples of how the region's transportation agencies and private sector partners are utilizing the Internet and other technology more effectively than ever include the following:

- WMATA's Internet-based "Ride Guide" is one of the most comprehensive and user-friendly automated transit trip-planning systems in the country. The technology also supports WMATA's telephone information line.

- Traffic cameras on major roadways are now easily accessible to the public on major media outlets' websites.
- Increasing use of text messaging systems now allows transportation customers to receive pager or e-mail alerts regarding, for example, transit service disruptions.
- An increased commitment to optimize the timing of the region's traffic signals through the use of the latest hardware and software technologies aids both congestion reduction and air quality.

In order to maximize the benefits of transportation technology, the TPB has promoted regional coordination of planning and projects through the Management, Operations and Intelligent Transportation Systems (MOITS) Policy & Technical Task Forces. These two task forces—focusing on policy and technical coordination—meet regularly to discuss coordination and to share experiences about ways in which transportation technology can be deployed to improve congestion, safety, maintenance and system efficiency. For more information on the TPB task forces, go to <http://www.mwcog.org/transportation/committee/>.

Management and operations took on a new urgency in the aftermath of the September 11, 2001 attacks. The TPB quickly began working on a transportation emergency management plan for the region. The first step was to implement improvements in inter-jurisdictional communications and coordination. The solution was developing a telephone/radio conference call protocol, supported by e-mail and electronic text messaging systems, for coordinated decision-making. In the event of future emergencies, the lead agency in the area where the incident occurred would initiate a conference call with other key agencies throughout the region.

Local and state officials and agency representatives have worked to enhance transportation components of the Regional Emergency Coordination Plan (RECP).[12] Approved by the COG Board on September 11, 2002, the RECP included a transportation component and a transportation evacuation coordination annex, which were largely developed through the TPB's MOITS Task Forces and an Emergency Transportation Work Group. The Emergency Transportation Work Group conducted workshops to study different potential emergency situations, such as region-wide evacuation, shelter-in-place, or widespread power failure.

What the CLRP Does by 2030

Many expansion projects in the plan are expected to take advantage of the best available technology, and there is currently a significant level of funding for transportation technologies. Because most technologies are scalable (e.g., more cameras could cover more locations for traffic management), additional deployments could have a nearly immediate impact on traffic congestion and pollution in the region.

Objective 1 calls for *Reduction in regional congestion and congestion-related incidents*. However, figure 5-4 indicates that stop-and-go conditions are expected on the majority of the region's highways by 2030. Additional congestion-related incidents can be expected with higher levels of congestion.

[12] The "Partners in Preparedness: The Regional Emergency Coordination Plan at Work" report published in 2004 can be viewed at <www.mwocg.org>.

In an era of quickly advancing technology, the region must ensure that public capabilities are in place to enable travelers to take advantage of the latest technology, as Objectives 2 through 5 indicate. TPB's MOITS Task Forces are providing regional coordination to help take advantage of the best available technology.

Challenges to Be Addressed in Future Plan Updates

The Washington region has been highly successful in deploying transportation technology to maximize system effectiveness. However, congestion is anticipated to worsen over the next 25 years, and alleviating congestion through technology will continue to be a challenge. Other remaining challenges being addressed by the MOITS Task Forces include improving cooperation and coordination between multiple jurisdictions for full utilization of advanced technology.

Another challenge that is central to achieving many of the Vision's policy goals is the need for additional funding. Reliable sources of funding are needed to maintain the technological systems already in place. Additional funding is also needed to further maximize system effectiveness in areas such as safety and incident management systems, traffic detection, management and information systems, Automatic Vehicle Location (AVL) systems for buses, traffic signal systems, and electronic payment systems.

Finally, a critical remaining challenge is to continue to strengthen emergency response, communication, and coordination as the region grapples with increased security threats and other incidences. Public information improvements are essential. Technical and operational improvements are needed to ensure that transportation agencies that monitor roadway and transit systems are ready to initiate and shepherd regional communications and coordination during an incident. These improvements will require additional money. The pending Congressional reauthorization of the federal surface transportation programs is expected to provide new funding and authority for regional incident management improvements.

Policy 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.

Objectives:

(1) The Washington region becomes a model for protection and enhancement of natural, cultural, and historical resources.

(2) Reduction in reliance on the single-occupant vehicle (SOV) by offering attractive, efficient, and affordable alternatives.

(3) Increased transit, ridesharing, bicycling, and walking mode shares.

(4) Compliance with federal clean air, clean water, and energy conservation requirements, including reductions in 1999 levels of mobile source pollutants.

(5) Reduction of per capita vehicle miles traveled (VMT).

(6) Protection of sensitive environmental, cultural, historical, and neighborhood locations from negative traffic and developmental impacts through focusing of development in selected areas consistent with adopted jurisdictional plans.

Where We Are Today

Transportation dollars have been used effectively throughout the region to *enhance and protect the region's natural environmental quality, cultural and historical resources, and communities.* Examples of this include the Alexandria train station, the George Washington Memorial Parkway, and the Baltimore Washington Parkway.

Across the region, both residents and local governments are recognizing the value of integrating green space into communities. Momentum is building as jurisdictions, both small and large, are acquiring lands and opening them to the public. The Washington Metropolitan area has over 75 miles of existing greenways or trails. Significant existing regional greenways and trails include the C&O Canal National Historic Park, Mount Vernon Greenway, Washington and Old Dominion (W&OD) Trail, Rock Creek Greenway, Capital Crescent Trail, Anacostia Tributary Trail System, Appalachian Trail Greenway, Cactoctin-Gambrill Greenway, Bullrun Occoquan Greenway, and the Patuxent River Greenway.

Over the past decade, the region has made tremendous strides in cleaning up the air. The question now is whether the region is making progress fast enough to meet federal requirements. Under the Clean Air Act, the region is classified as a "non-attainment area" for federal standards for ground level ozone. Sometimes called smog, ozone is formed on hot summer days when nitrogen oxides (NOx) and volatile organic compounds (VOCs) are combined in sunlight. Motor vehicles emit VOCs and NOx, but power plants and other sources also emit these pollutants.

The Clean Air Act requires states to develop State Implementation Plans (SIPs) laying out steps to "attain" federal air quality standards. In our multi-state region, the Metropolitan Washington Air Quality Committee (MWAQC) is responsible for developing a regional air quality plan that contributes to the three SIPs produced by the District of Columbia, Virginia and Maryland. Like the TPB, MWAQC is an independent body at the Council of Governments including local and state representatives from across the region. The Washington region must attain these standards by 2005.[13]

One of ways in which the TPB and the plan promote the use of alternative modes to the single-occupancy vehicle is through the Commuter Connections program. Administered through the TPB, the program provides services designed to reduce congestion and improve air quality in the short-term. Services include ridematching, the "Guaranteed Ride Home" program, telework resource centers, and assistance for employers in setting up commuter programs. Commuter assistance programs and advertising are having an impact on how people travel, according to the TPB's 2001 State of the Commute Survey. In the survey, 55 percent of respondents said they had seen, heard, or read advertising for ridesharing, HOV lanes, or telecommuting in the last six months. More than a quarter of respondents said they would consider alternative commuting because of this advertising.

What the CLRP Does by 2030

Environmental enhancement and protection is challenging at the regional level because many of the decisions that affect the environment are made at the local level. Local comprehensive land-use plans and transportation agency plans guide these decisions. Impacts on the environment, natural and cultural resources, and communities are considered when transportation improvements are in the project planning process, as required by the National Environmental Policy Act (NEPA). However, there is no mechanism to examine all the local impacts of a regional plan for an area that covers over 3,000 square miles. System-wide impacts of all the transportation improvements included in the plan are best captured by the air quality conformity analysis for the region (reviewed below).

Federal enhancement and Congestion Mitigation and Air Quality (CMAQ) Improvement Program funding, which made projects such as the C&O Canal and the Alexandria train station possible, are assumed to continue throughout the time period of the plan.

Assessment of Objectives

Objective 1 envisions that *The Washington region becomes a model for protection and enhancement of natural, cultural, and historical resources.* One of the ways that the plan addresses this objective is through a grant awarded to TPB under the Transportation and Community and System Preservation (TCSP) Pilot Program to support a key component of the TPB Vision: Integrating green space into a regional greenways system. In order to provide the level of attention needed to advance regional greenways and to involve key agencies, officials, and stakeholders, the TPB created a Green Space Advisory Committee to help guide the planning and implementation process. Working with these experts and local planners, regional greenway priorities were established along with an implementation

[13] For more information on air quality planning at COG, see <http://www.mwcog.org/environment/air/>.

strategy to help make these proposed greenways a reality. Eight regional priority projects were identified and are described in detail in the report. One hundred and seventy-five miles of additional greenways and trails are proposed—doubling the miles of greenways and trails currently found in the region. These projects range in scale and character, but they all provide inter-jurisdictional connections that are the foundation of the greenway network.

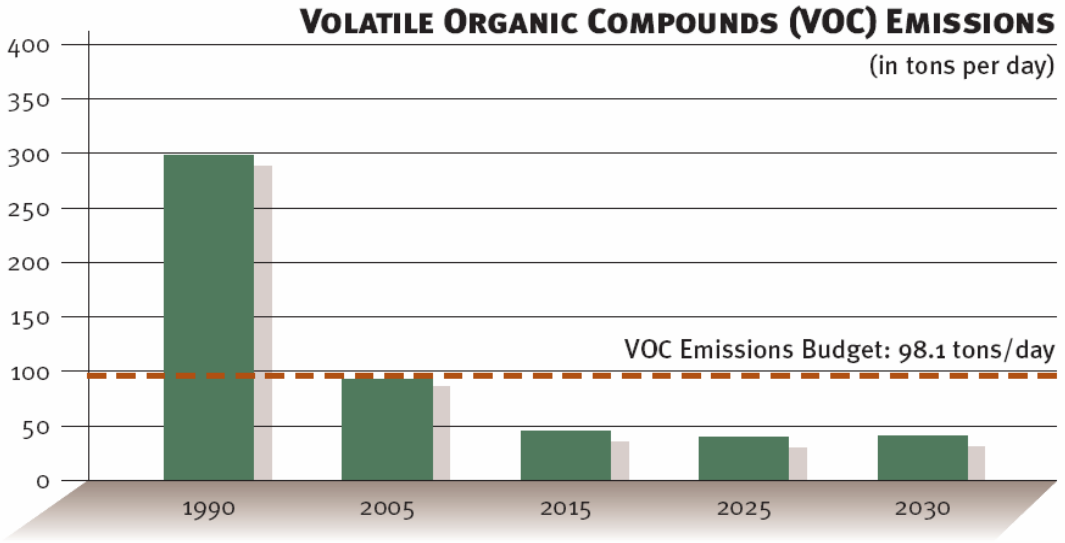
Objective 2, *Reduction in reliance on the single-occupant vehicle (SOV) by offering attractive, efficient, and affordable alternatives*, can be measured in several ways. Attractive, efficient, and affordable alternatives include rail, bus, and high-occupancy vehicle (HOV) lane systems. Over 60 percent of the funding for the plan is committed to transit projects, including rail transit to Dulles Airport by 2010, the Corridor Cities Transitway from the Shady the Bi-County Transitway, and the Anacostia Light Rail line. Although, the number or transit work trips are expected to increase 30 percent over the next 25 years, the percentage of work trips taken by transit remains relatively steady – 17 percent in 2005 and 18 percent in 2030. However, average auto occupancy is expected to remain steady—1.12 in 2005 and 1.13 in 2030. TPB's Commuter Connection program will continue to encourage the region to reduce reliance on the SOV and market the many other alternatives to commuters.

Objective 3 calls for *Increased transit, ridesharing, bicycling, and walking mode shares*. The travel demand forecasts show that transit mode share remains at about 17 percent for work trips, and about 5 percent for all trips, in both 2005 and 2030. Transit mode share is forecast to grow in the regional core—over half of all work trips in the District of Columbia are forecast to be made on transit.

Compliance with federal clean air, clean water, and energy conservation requirements, including reductions in 1999 levels of mobile source pollutants is Objective 4. Under the Clean Air Act, the CLRP is required to conform to regional air quality improvement goals. The Washington region currently does not meet national air quality standards for ground-level ozone. Before the CLRP update could be approved, the TPB was first required to approve a "conformity determination" showing that anticipated vehicle emissions will conform to emissions ceilings (called "mobile emissions budgets") contained in the region's air quality improvement plan. As mentioned earlier, the Metropolitan Washington Air Quality Committee (MWAQC) is the body responsible for developing the regional air quality plan. MWAQC developed a new air quality plan in 2003, which was closely coordinated with the CLRP development.

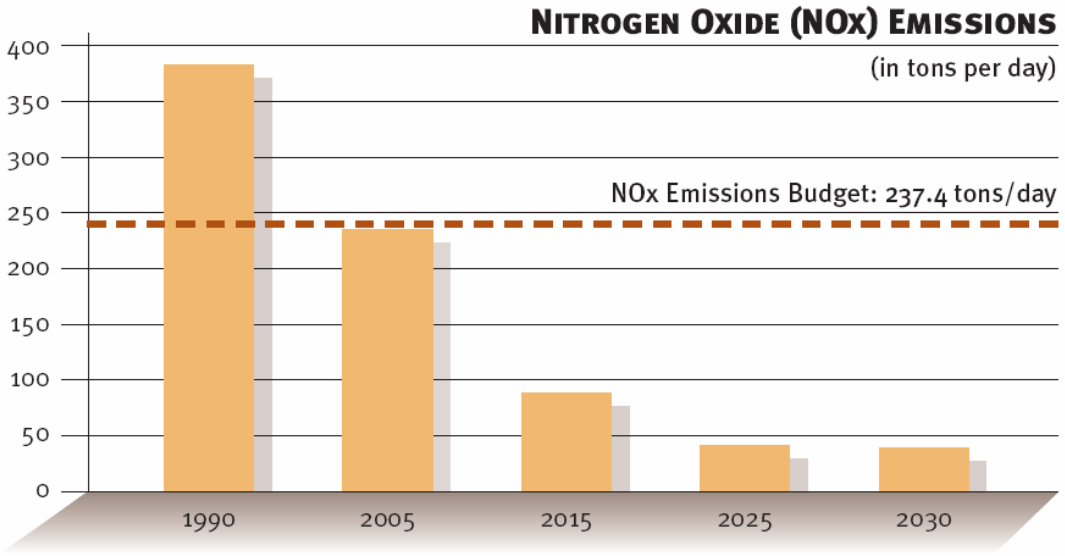
Figures 5-8 and 5-9 below show the emissions budgets in the 2003 air quality plan, which were 98.1 tons per day for VOC and 237.4 tons per day for NOx. The air quality analysis for the 2003 CLRP predicted the emissions levels shown in the charts. The emissions forecasts for 2005 were under the emissions budgets, although they were close. The long-term trend shows significant emissions reductions since 1990, which will help meet the requirements in 2015 and beyond.

Figure 5-8: Volatile Organic Compounds (VOC) Emissions 1990 -2030



Graphic Design by Carla Badaracco

Figure 5-9: Nitrogen Oxides (NOx) Emissions 1990 -2030



Graphic Design by Carla Badaracco

Objective 5 contains the most specific quantitative measure listed in the Vision, which is the *Reduction of per capita vehicle miles traveled (VMT)*. Daily VMT per capita increases 7 percent from 25 miles per person in 2005 to 27 miles per person in 2030, as shown in Table 5-4.

Table 5-4: Daily Vehicle Miles of Travel (VMT) Per Capita 2005 - 2030

	2005	2015	2030	Change 2005-2030
VMT Per Capita	**25**	**26**	**27**	**7%**
Population (Thousands)	4,970	5,600	6,100	23%
Total Daily VMT (Thousands)	126,450	146,520	166,400	32%

Total daily VMT is forecast to increase 32 percent between 2005 and 2030. This means that more people will be driving and traveling longer distances. The growth in VMT reflects the location of increases in population and employment, which is greatest in the inner and outer suburbs, as shown in Figure 5-2. VMT tends to be higher in suburban areas than in central cities because there is greater spatial separation between housing, jobs, and shopping centers. The development occurring in the outer jurisdictions increases the length of trips, which causes VMT to increase.

Other factors that influence VMT and VMT per capita include auto ownership, trip lengths, income, the number of workers in a family, access to transit, and the location of housing and jobs. Household income is a key factor affecting driving choices, not only because income closely correlates with auto ownership levels, but also because higher-income households have more housing choices, including large suburban homes that have limited transit service and few walkable destinations. Transit use tends to be highest and vehicle use lowest in communities with a high proportion of low-income households.[14]

The rate of growth in VMT per capita could be reduced by improved transit, more ridesharing, telecommuting incentives, and increased bicycle and pedestrian facility options. Compact, mixed-use development tends to be more pedestrian- and bike-friendly, which can encourage less driving. The Vision's objectives regarding regional activity centers (Policy Goal 2) call for a mix of uses in a walkable environment. Opportunities exist within the centers to improve the mix of uses and the walkability of these areas.

Objective 6 emphasizes *Protection of sensitive environmental, cultural, historical, and neighborhood locations from negative traffic and developmental impacts through focusing of development in selected areas consistent with adopted jurisdictional plans.* Parts of this objective are addressed at the project planning level, where negative traffic and development impacts are identified in an Environmental Impact Statement (EIS) for major investments. Impacts on the environment, cultural, and historic resources also have to be identified in the EIS. In creating the Regional Activity Centers, COG and TPB encouraged local jurisdictions and other agencies to promote mixed-use development and to further concentrate jobs and households in the regional activity centers and clusters.[15]

[14] *The Region*. National Capital Region Transportation Planning Board. Volume 37 1997, page 9.
[15] Figure 5-1 shows the locations of regional activity clusters. More information on the Regional Activity Centers can be found at http://www.mwcog.org/planning.

Challenges to Be Addressed in Future Plan Updates

The TPB continues to *plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities* and the Washington region is working towards many of the objectives in Policy Goal 5. However, significant challenges remain in achieving this goal.

As our prosperous metropolitan area continues to grow, people have to travel longer distances to reach jobs and services. In addition, the nature and location of new development presents a challenge to the objective *increased transit, ridesharing, bicycling, and walking mode shares*. Vehicle Miles of Travel per capita will continue to be difficult to reduce, or even maintain in the region. More VMT means increased VOC and NOx emissions, and meeting the new air quality tests—such as the "8-Hour standard."[16] will be a key challenge for future plans. The TPB will continue work to ensure that mobile source emissions conform to budget levels established in the air quality plan.

Protecting neighborhoods from negative traffic and development impacts as the region promotes transit-oriented development (TOD) is a continuing challenge. More development around transit stations, especially on the eastern side of the region, has been called for. However, states and localities need to ensure that provisions to mitigate potentially negative impacts from such development in the short- and long-term, such as the increased housing costs and displacement, are in place.

Many of these challenges will be examined under the Regional Mobility and Accessibility Study through transportation and land use scenarios, including air quality impacts, ways to reduce the reliance on the single-occupant vehicle, and changes in per capita VMT. A land-use scenario that focuses development in selected areas, such as the regional activity centers and transit stations, will also be examined in the study.

[16] For more information on the 8-Hour Standard, go to <http://www.mwcog.org/environment/air/>.

Policy Goal #6

The Washington metropolitan region will achieve better inter-jurisdictional coordination of transportation and land use planning.

Objectives:

(1) A composite general land use and transportation map of the region that identifies the key elements needed for regional transportation planning—regional activity centers, principal transportation corridors and facilities, and designated "green space."

(2) Region-wide coordination of land-use and transportation planning in accordance with the recommendations of the Partnership for Regional Excellence report approved by the COG Board of Directors in 1993.

Where We Are Today

The coordination of land-use and transportation planning within one jurisdiction is challenging. The coordination of land-use and transportation planning within 20 jurisdictions with different land-use controls and laws is considerably more challenging. County and state offices of planning, elected officials, and planning commissions are responsible for implementing and creating laws, regulations, and policies that guide land use and development. Land-use planning is done locally and there is no regional body responsible for long-range land-use plans. Land-use laws and philosophies vary in each of the three major jurisdictions (Maryland, Virginia, and the District of Columbia). Even though transportation planning is also done by transportation agencies in the states and counties, the TPB is a forum to weave the plans together and to discuss emerging issues and challenges for the region.

A composite map of adopted land-use plans was produced in 1996 that provides information on local comprehensive plans. The TPB and COG strengthened the linkage between land-use and transportation planning in 2002 with the development of maps depicting regional activity centers. According to a resolution passed by the TPB, “the maps and accompanying information have been developed for use by local jurisdictions, the TPB, and other regional bodies to encourage mixed-use development and to increase significantly the percentage of jobs and households found in regional activity centers.” The COG Planning Directors Technical Advisory Committee developed the maps, with review by a joint task force including members of the TPB and the COG Board of Directors. The data source for the activity centers maps was COG’s Cooperative Forecasts, which are based on the local jurisdictions’ projections of population, households, and employment. The maps identify 58 regional Activity Centers that are organized into six categories: downtown core, mixed-use centers, employment centers, suburban employment centers, emerging employment centers and regional airports.[17]

[17] Figure 5-5 shows the locations of regional activity clusters. Maps of the regional activity centers and clusters can be found at <http://www.mwcog.org/planning>.

The activity centers maps are integral to the development of the TPB's Regional Mobility and Accessibility Study, which is another important analytical effort to improve regional coordination between land use and transportation. The study is a multi-year initiative looking at the effects of alternative long-term scenarios for transportation and land use development. For example, the study will consider the effects of a greater concentration of jobs and/or housing in regional activity centers and clusters, and examine the impacts of a high-occupancy toll (HOT) lane network. The study will also examine a "congestion management system," featuring a package of improvements to manage demand for the region's highway and transit systems.

Another way that the TPB addresses Policy Goal 6 is through COG's Cooperative Forecasting program. Each year the local jurisdictions provide employment and household forecasts for the TPB to use in planning the transportation system and testing the long-range transportation plan for conformity with air quality standards. The Cooperative Forecasting program enables local and regional planning to be coordinated by using common assumptions about future growth and development. The program combines regional data, which are based upon national economic trends and regional demographics, with local projections of population, households, and employment. These local projections are based on data about real estate development, market conditions, adopted land-use plans, and planned transportation improvements.

What the CLRP Does by 2030

The regional activity clusters will capture 70 percent of the region's growth in employment and 36 percent of the region's household growth by 2030. This means that the percent of jobs and households contained within regional activity clusters will remain constant over the next 25 years. It should be noted that the regional activity *clusters* contain significant concentrations of residential and commercial development, but the 58 activity *centers* include less residential development, and therefore the percentage of household growth captured by the regional activity *centers* would be less than the *clusters*.

Objective 2 calls for *region-wide coordination of land-use and transportation planning in accordance with the recommendations of the Partnership for Regional Excellence report approved by the COG Board of Directors in 1993*. The report's recommendations included reconstituting COG's Metropolitan Development Policy Committee (MDPC) by adding representation from TPB, the Metropolitan Washington Air Quality Committee (MWAQC), business and environmental communities, and the federal government.[18] The MDPC initiated a series of local land-use planning and development dialogues to promote the exchange of information that will help educate local officials on planning challenges in the region. This activity led to the development of a multimedia CD-ROM and website by COG to inform and educate elected officials, civic groups, the development community, and citizens about the land use and transportation challenges currently facing the region. The accepted principles of "Smart Growth" are candidly introduced and discussed in the context of the varied and distinct communities across the region. The CD-ROM highlights the responsibilities and successes of local government policies while acknowledging the common concerns which elected officials and citizens encounter. For more information see <http://www.mwcog.org/planning/planning/smartgrowth/>.

[18] MWCOG. The Report of the Partnership for Regional Excellence. July 14, 1993.

Challenges to Be Addressed in Future Plan Updates

Positive steps have been taken to work towards *better inter-jurisdictional coordination of transportation and land-use planning*. A challenge for future updates of the CLRP will be increasing the percentage of regional jobs and people in the regional activity clusters.

"Green space" needs to be designated and integrated into the composite land-use and transportation map. Efforts have been made to define and map the region's "green space." However, because definitions and the levels of protection from future development vary from jurisdiction to jurisdiction, this task is not an easy undertaking.

The Regional Mobility and Accessibility Study will look at the impacts of concentrating residential and commercial development in regional activity centers along transportation corridors.

Policy Goal #7

The Washington metropolitan region will achieve an enhanced funding mechanism(s) for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.

Objectives:

(1) Consensus on a set of critical transportation projects and a funding mechanism(s) to address the region's growing mobility and accessibility needs.

(2) A fiscally sustainable transportation system.

(3) Users of all modes pay an equitable share of costs.

Where We Are Today

An analysis of revenues and expenditures through 2030 was conducted and used to financially constrain the 2003 CLRP. The plan was adopted with the full awareness that the funding is inadequate to maintain and operate the existing transportation system, let alone expand the system. There is a continuing public dialogue on transportation funding challenges and ways to address the shortfalls.

Transportation funding is an issue for several reasons. First, much of the transportation infrastructure in the region is aging and, just like a house, more rehabilitation and maintenance is required keep the system operating. Second, fuel taxes have not maintained the revenue levels they did in the past because of more fuel-efficient cars and tax rates not keeping pace with inflation. For these reasons, future revenues are projected to be inadequate to keep pace with growth and development.

In a February 2001 report titled "A System in Crisis," the TPB reviewed the regional unfunded transit and highway needs and found a $1.74 billion per year revenue gap. In the introduction to this report, Kathy Porter, chair of the TPB in 2000, stated:

> *"The Washington region is facing a crisis in transportation funding. This is a crisis that even now is affecting our economy and quality of life. And unless we take action, the situation will just get worse."*

Three years later, with growing maintenance, rehabilitation, and preservation needs, the situation has not improved. In fact, the state and local revenue outlook appears to have worsened since the 2001 TPB report, compounding the regional financial crisis. The region has made several serious attempts to increase revenues for transportation, but to date has not succeeded in securing the funding needed.

TPB Reauthorization Principles

Every six years, Congress reauthorizes the multi-billion dollar federal surface transportation programs that fund highway and transit systems across the country. The last reauthorization occurred in 1998, with the Transportation Equity Act for the 21st Century, known as "TEA-21." The TPB brought attention to regional transportation priorities with the brochure "Principles for Reauthorization of the Federal Surface Transportation Programs," released at a press conference in November 2002.[19] The TPB's policy positions support regional "must-do" transportation priorities, including emergency preparedness, system rehabilitation and maintenance, and air quality improvement measures. The TPB reauthorization principles stressed the region's unique relationship with the federal government. With state and local governments facing growing financial shortfalls, regional leaders emphasized that federal transportation funding has become more vital than ever.

Value Pricing for Transportation

The TPB and transportation agencies are beginning to discuss a concept which until recently was considered politically nonviable: the use of tolls and other pricing mechanisms to influence travel behavior, cut congestion, and raise revenue. In June 2003, the TPB convened more than 200 elected officials, community leaders, planners, and academics for a one-day conference that explored innovative transportation pricing strategies.[20] It was the first major public event to discuss "value pricing," which, in the terminology of transportation planning, means giving drivers and transit riders the option of paying an extra fee for the value of reduced congestion. The TPB organized the conference in conjunction with the Federal Highway Administration and the departments of transportation in the District of Columbia, Maryland, and Virginia. The most commonly discussed value pricing mechanism is high-occupancy toll (HOT) lanes, which permit travelers to either ride for free in a carpool or pay a toll if they are driving alone. Tolls are typically paid through electronic transponders attached to car windshields. More sophisticated HOT lanes automatically adjust tolls based on congestion levels—an approach called "dynamic pricing." In addition to expanding travel options, pricing strategies aim to reduce congestion by influencing travel behavior.

The state departments of transportation (DOTs) in the Washington region are seriously considering the implementation of variably-priced lanes on several existing and proposed new facilities. One project that has gained attention is a proposal from the Fluor Daniel Company to build HOT lanes on the Capitol Beltway between Springfield and Route 193. Maryland is considering Express Toll Lanes, special highway lanes that could be used by paying a fee, on I-270, the Capital Beltway, and portions of I-95 north of Baltimore. The District of Columbia is looking at variable pricing for parking and WMATA is currently implementing smart card technologies which might accommodate new pricing strategies in the future.

The TPB has identified value pricing as a concept worth pursuing and has appointed a task force to examine how value pricing could benefit the Washington region. The task force will guide the development of a regional HOV/HOT lane scenario for the TPB's Regional Mobility and Accessibility Study.

[19] The TPB's reauthorization principles can be found at <http://www.mwcog.org/transportation/>.
[20] For more information on the TPB's value pricing efforts see <http://www.mwcog.org/transportation/>.

What the CLRP Does by 2030

The financial analysis of the 2003 CLRP reviews and updates projected transportation revenues and costs for operating, maintaining, and expanding the transportation system through 2030. The analysis is financially constrained to revenues reasonably expected to be available, and does not include estimates for needed levels of expenditures. The region will spend approximately $93.3 billion on the plan over the next 25 years. The region's transportation funds come primarily from federal and state fuel taxes, vehicle fees, transit fares, tolls, and local property and sales taxes. It was estimated that 77 percent of available funding will be needed to maintain and operate the regional transportation system, leaving only 23 percent for expansion of the existing system.[21]

The financial analysis presents aggregate expenditures and revenues over a 27-year period, from 2004 to 2030, but does not address year-by-year expenditure requirements relative to year-by-year availability of revenues. The financial analysis notes that within the aggregate 27-year totals "are critical short-term funding needs such as the ramp-up requirements in WMATA's rehabilitative program, which call for substantially increased funding over the next six to ten years."

Assessment of Objectives

Objective 1 is *Consensus on a set of critical transportation projects and a funding mechanism(s) to address the region's growing mobility and accessibility needs.* A TPB study on short-term critical transportation needs represents this consensus. **The study found that the region must double its anticipated transportation revenues in the next six years in order to fund key transportation priorities**. This analysis of six-year funding streams estimated that transportation revenues between 2005 and 2010 will be 12.2 billion, while total needs are forecast at $25.4 billion, meaning a shortfall of $13.2 billion over the next six years. This analysis was compiled in a brochure called "Time to Act," which was released by the TPB in February 2004. This brochure was used to inform Federal, state and local funding partners on critical regional transportation needs.

Objective 2 calls for *A fiscally sustainable transportation system.* This objective stresses the importance of funding the maintenance, rehabilitation, and operating costs that recur on an annual basis before funding system expansion. The former requires a reliable, predictable stream of current revenues; the latter requires large injections of capital funds over relatively short periods. In effect, the region must enact strategies that both increase available funds from current sources, as well as expand the authority to leverage those funds through new financing techniques.

Users of all modes pay an equitable share of costs is Objective 3. This objective involves raising awareness about the subsidies for automobile use—such as free or reduced parking, construction and maintenance of roads and highways, the interest on debt assumed for earlier construction, some police costs, street lighting costs, and sewer and sidewalk costs. One way in which this objective is addressed is by the Metrochek program, which provides transit benefits to employees and attempts to "level the playing field" between automobiles and transit.

[21] See Chapter 2 for more information on the financial analysis for the 2003 CLRP.

The region has begun to consider land value capture methods as a way to fund or finance transportation improvements. For example, public facilities that are or will be financed by special assessment districts or similar devices include the New York Avenue Metrorail station and the Dulles Rail project.

Challenges to Be Addressed in Future Plan Updates

The region has been struggling with inadequate financial resources for transportation for many years. Estimates in 2000[22] predicted that the region needed an increase of more than 50 percent in funding to maintain the current transportation system and accommodate the forecast growth in travel over a 25 year period. The situation has worsened because of continued growth in the needs and stagnating funding levels. It is clear that a regional approach to addressing these problems is an appropriate and necessary response. The 2001 "System in Crisis" report[23] made a concluding statement regarding unfunded transportation needs that is perhaps even more pertinent today:

> *"Solving the problem will require an unprecedented level of cooperation among the numerous jurisdictions across the region. Only with a concerted effort can the region begin to tackle the critical rehabilitation and capacity needs of the region's transit and highway networks."*

[22] A summary of the TPB "System in Crisis" brochure and analysis is included in he 2001 *Region* magazine and can be found at http://www.mwcog.org/store/item.asp?PUBLICATION_ID=192.
[23] Ibid.

Policy Goal #8

The Washington metropolitan region will support options for international and inter-regional travel and commerce.

Objectives:

(1) The Washington region will be among the most accessible in the nation for international and inter-regional passenger and goods movements.

(2) Continued growth in passenger and goods movements between the Washington region and other nearby regions in the mid-Atlantic area.

(3) Connectivity to and between Washington Dulles International, National, and Baltimore/Washington International airports.

Where We Are Today

In the past few years, the region has seen rapid growth in air cargo and passenger travel as well as increased freight and goods movement. The Washington-Baltimore Region Airport System Plan includes components on Commercial Airports, Ground Access, and Air Cargo that support the planning, development, and operation of airport facilities and other transportation facilities that serve the airports in a systematic framework for the Washington-Baltimore region.[24]

According to a TPB survey, Baltimore/Washington International (BWI) Airport is now the most popular airport for local passengers. Most passengers reported that "closest airport" was their primary reason for choosing an airport. However, 32 percent of BWI users and 16 percent of Dulles users said their primary reason was "lowest fare." In 1992 only 3 percent of passengers at each of those airports reported that "lowest fare" was their primary reason.[25] The TPB survey was the fifth in a series of air passenger surveys conducted at the region's three major airports—BWI, Dulles, and Reagan National. The surveys provide data for air systems and master planning processes at the airports. The data are also incorporated into the regional travel demand model, which is used to forecast vehicle emissions, among other things.

Since 1992, air travel in the region has increased 55 percent. In 2000, BWI had 38 percent of trips originating in the Washington-Baltimore region, up from 25 percent in 1992. Reagan National had 34 percent of the region's trips, down from 43 percent in 1992, and Dulles had 28 percent, down from 32 percent in 1992. The most common way of getting to the airport

[24] Washington-Baltimore Regional Airport System Plan. Metropolitan Washington Council of Governments. National Capital Region Transportation Planning Board. Volume I—Commercial Airports. 1988. Volume II—Ground Access 1993. Volume III—Air Cargo 1997.

[25] 2000 Washington-Baltimore Regional Air Passenger Survey. Summary of Findings. National Capital Region Transportation Planning Board. July 19, 2002.

continued to be the private car—accounting for 63 percent (up from 60 percent in 1992) of all arriving passengers. In 2000, 12 percent of passengers leaving from National Airport used Metrorail, which continued to be one of the highest proportions of public transit usage at any airport in the country. Approximately 1 percent of trips at BWI were made using Amtrak/MARC or light rail.

What the CLRP Does by 2030

Forecast information on goods movement over the next 25 years was unavailable for the 2003 CLRP update, but will be examined in more detail in the Regional Mobility and Accessibility Study. Available travel demand forecasts indicate that daily truck trips in the region will increase 39 percent between 2005 and 2030. A total of 500,000 truck trips per day are forecast for 2030. A challenge for freight movement and planning is increasing congestion levels and travel times, which will seriously affect goods movement.

Assessment of Objectives

Objectives 1 through 3 are addressed in part by transportation improvements in the plan such as rail to Dulles Airport by 2010 and other highway improvements near the airports and in major corridors. The plan also contains a variety of projects relevant to the maintenance of airport access facilities. These objectives are also addressed through the Commercial Airports, Ground Access, and Air Cargo components of the Regional Airport System Plan. The information provided on highway congestion levels in this chapter indicate that the high levels of congestion expected by 2030 will impact access to the airports. Travel time reliability will become much worse in the future, and costly delays can be expected for passenger and goods movement.

Challenges to Be Addressed in Future Plan Updates

The 2003 CLRP moves the region towards achieving the objectives under Policy Goal 8 but challenges for future plan updates remain. A regional plan for freight movement could be useful to the region in understanding trends and planning a regional system that accommodates freight movement with minimal disruption to traffic flow. The Regional Mobility and Accessibility Study will provide more information on regional freight movement, accessibility to the region's airports, and high-quality inter-regional travel for people and goods. Air travel, air cargo, and ground access will be addressed by the TPB's continuous airport system planning process.

SUMMARY OF GOAL ASSESSMENT AND CHALLENGES FOR UPDATING THE PLAN

This section summarizes the main findings of the previous assessment. These conclusions concerning the plan's accomplishments and the challenges that remain are intended to provide guidance for future updates to this plan.

Achievements of the Plan

The long-range plan will move the region toward the goals expressed in the Vision. The plan

- Is financially realistic and includes all projects of regional significance;

- Provides enhanced people-moving capacity along existing transportation corridors using a combination of transit, HOV, and highway approaches;

- Expands the region's transit system by extending Metrorail to Largo, by providing rail transit to Dulles Airport by 2010, by building the Corridor Cities Transitway from the Shady Grove Metro station to COMSAT, by adding a station at Potomac Yards and New York Avenue, and by creating the Bi-County Transitway between Bethesda and Silver Spring, the Anacostia Light Rail line, and the K Street busway;

- Improves the region’s highway system and adds an additional 1,900 highway and arterial lane miles;

- Meets current Clean Air Act requirements, including the reduction of ozone-causing mobile emissions, although air quality issues will continue to be a challenge for this region;

- Encourages ridesharing through informational and incentive programs, new park-and-ride facilities, and the expansion of HOV lanes;

- Encourages telecommuting through the establishment of a regional resource center, telework centers, and promotional activities;

- Was developed with public participation and comment, including input from low-income communities, minority populations, and people with disabilities; and

- Increases the awareness of remaining transportation funding shortfalls.

Challenges for Updating the Plan

Challenges specific to each policy goal were reviewed in the previous section with information on ways the TPB will be addressing the challenges. This summary presents the general categories or themes these challenges fall into:

- Addressing the projected growth in highway and transit congestion with effective, equitable, and feasible strategies,

- Identifying additional transportation revenues to address these challenges, including funds that are needed to adequately maintain and rehabilitate existing facilities;

- Working towards the implementation of value-pricing projects that will ultimately work together as a system;

- Ensuring that the region takes full advantage of new technologies to maximize system performance and enhance the safety of all transportation modes;

- Continuing to strengthen emergency response, communication, and coordination as the region grapples with increased security threats;

- Accounting for the special issues of moving goods and the needs of freight transportation within the regional planning process;

- Improving pedestrian and bicycle facilities and safety for everyone, including people with disabilities;

- Ensuring that transit services continue to serve the needs of low-income and minority communities, as well as disabled persons, through improved transit information and efficient paratransit services;

- Increasing the regional employment and household share in the regional activity centers and clusters;

- Identifying ways in which regional planning can enhance walking, bicycling, and transit use; and

- Designating “green space” in a composite land-use and transportation map.

6.
PUBLIC COMMENTS AND RESPONSES

Federal regulations require the long-range plan to include a summary analysis and report on significant public comments made as part of the public involvement process. This chapter presents summaries of the comments received on the plan and associated TIP and air quality documents along with the TPB's response to each comment. The 2003 CLRP received significant public comment, both in writing and during the TPB public comment period, throughout the update process. Below are the summaries and responses to the main categories of public comment received which were presented to the TPB at the May 21, 2003, and November 13, 2003, TPB meetings.

Response to Comments Received on Submissions for Inclusion in the Air Quality Conformity Assessment for the 2003 CLRP and FY 2004-2009 TIP

At its April 16, 2003, meeting, the TPB was briefed on the project submissions received from state, regional, and local agencies for the 2003 CLRP and the FY 2004-2009 TIP. These submissions were released for public comment and inter-agency review at the TPB Citizens Advisory Committee (CAC) meeting on April 10, 2003. The public comment period on the submissions ended on May 16, 2003. Key comments and TPB responses are summarized below.

Suburban Maryland

1. Comment: Funding the transitway from Bethesda to Silver Spring (a portion of the inner Purple Line) is welcome, but only including the Silver Spring to New Carrollton portion of the line as a study is disappointing.

   Response: The transitway from Bethesda to Silver Spring has been shown for construction in the CLRP for several years. The Silver Spring to New Carrollton portion of the transitway has consensus and is being included for study in order to examine various alignments and station locations. The entire transitway is now called the “Bi-County Transitway” in the CLRP.

2. Comment: The study of the Silver Spring to New Carrollton portion of the Bi- County Transitway should be accelerated to 2005, and construction should take place at least at the same time or before the Corridor Cities Transitway (CCT) expected completion date of 2012. The proposed schedule for these projects reflects a bias towards the "favored quarter of growth" at the expense of communities in need of revitalization and traffic relief.

   Response: The Maryland Transit Administration will revise the management of the study for the Bi-County Transitway with the goal of achieving consensus on a cost-effective project. The Corridor Cities Transitway is being included in the plan for construction as a "place holder," with completion dates of 2012 (to Metropolitan Grove) and 2020 (to Comsat). The EIS process for the CCT is still underway and the alignment, completion date, and other details could change.

3. Comment: While the potential need for the Greenbelt Metro Interchange at I- 95/495 is recognized, the project should not be funded until development proposals are shown to be truly transit-oriented and pedestrian-friendly.

   Response: A project location/design hearing will be held in Fall 2003. The land use and development approvals are under the local jurisdiction and the project is consistent with the local master plan.

4. Comment: The conversion of MD 210 to an eight-lane highway should not occur because it would favor long-distance commuting from Charles County, increase sprawl, and further divide Prince George's County communities on either side of the highway.

   Response: In the mailout of May 15, the status for this project was corrected to show that the proposed two HOV lanes are removed. The six-lane highway will be shown in the CLRP for reconstruction with intersection improvements and enhanced bus service.

5. Comment: The intersection improvements on MD 210 should not be included because they would favor long-distance commuting from Charles County and increase sprawl development.

   Response: The intersection improvements will relieve traffic congestion along this corridor. The project is consistent with the Prince George's County Master Plan.

6. Comment: The Intercounty Connector (ICC) Study should not be revived.

   Response: A comprehensive NEPA process study will be conducted to address the concerns and issues identified in previous studies, the last of which was not completed.

7. Comment: Frederick County requests that the intersection of MD 15 and MD 26 be improved with a ramp from west bound MD 26 to MD 15.

   Response: This intersection improvement is included for construction by 2010.

8. Comment: Rail connection between Alexandria, Virginia, and Branch Avenue on the Woodrow Wilson Bridge must be added to the CLRP.

Response: The design and configuration of the new Woodrow Wilson Bridge allow for the construction and operation of future rail service. HOV lanes on the bridges are shown in the CLRP as a place holder until a decision is made on a future rail service connection and on HOV lanes on the Beltway.

Northern Virginia

9. Comment: The Tri-County Parkway should not be constructed for several reasons, including its adverse impact on Bull Run Regional Park and the region's environment.

   Response: The route alignment and other details are under study. The parkway is shown in the CLRP for construction by 2020 as a place holder. This project was included in the 2020 Plan adopted by the local jurisdictions in Northern Virginia.

10. Comment: Including the Tri-County Parkway in the CLRP before the Environment Impact Statement (EIS) is complete, public hearing held, and a final decision made raises procedural questions. Including the project for construction indicates that authorities have prejudged the outcome of the EIS.

    Response: Projects can be included in the CLRP for construction as "place holders." The degree of specificity required in the transportation plan and the specific travel network assumed for air quality conformity analysis do not preclude the consideration of alternatives in the EIS process or other project development studies. If the outcome of the EIS is different than assumed in the CLRP, the CLRP will be amended to reflect the change.

11. Comment: The completion date of 2010 for the study of the Potomac Yards Metro Station should be accelerated to 2005.

    Response: In the mailout of May 15, the study status for this project was incorrect. The Potomac Yards Metro Station is shown in the CLRP for construction and the completion date was changed from 2010 to 2015.

12. Comment: VA 28 and the Dulles Greenway should not be expanded because more lanes will increase sprawl pressures.

    Response: These projects are designed to respond to traffic and development pressures that already exist in these highway corridors. The road expansions are intended to improve safety, mobility, and accessibility. These projects have been examined and developed through the Northern Virginia 2020 Plan.

13. Comment: Loudoun County requests that the proposed improvement of US 50 from west of Middleburg east to Route 616 (to be completed by 2015) be removed from the CLRP.

    Response: As detailed in the letter of May 16, 2003, from VDOT to the Loudoun County Administrator, the completion date for this project will be changed to 2025.

14. Comment: The TPB should request the appropriate authorities to fix the northbound and southbound merges into the George Washington Parkway from the 14th Street Bridge.

Response: In 2001, the Federal Highway Administration (FHWA) Eastern Federal Lands Division, in cooperation with VDOT, DDOT, and the US Department of the Interior identified a number of projects, including ramp merger improvements, associated with the 14th Street Bridge to help reduce congestion and improve safety. These projects were included in the FY 2001-2006 TIP and several improvements have been completed.

Response to Comments Received on the Air Quality Conformity Assessment, the 2003 Update to the Constrained Long Range Plan (CLRP), the FY2004-2009 Transportation Improvement Program (TIP), and Project Information to Develop an Interim 2003 CLRP and FY 2004-2009 TIP

At the October 15, 2003, TPB meeting, the air quality conformity analysis, the draft 2003 CLRP update, and the draft FY 2004-09 TIP were released for a 30-day public comment period which ended on November 14. A summary of key comments and TPB responses are summarized below:

1. Comment: Since one of the greatest threats to better air quality and protecting public health is slower traffic speeds due to gridlocked roads and bridges, the TPB must do more to increase road and bridge capacity.

   Response: Increases in road and bridge capacity do not always improve air quality. The effects of such increases on regional air quality are assessed in the air quality conformity analysis.

2. Comment: Since one of the greatest threats to better air quality and protecting public health is bad air transported to this region from areas outside the region, the TPB must petition Congress to amend the Clean Air Act to no longer penalize this region for air pollution beyond it borders and ability to control.

   Response: Transported air from outside the region comes from all source categories, not just transportation. This issue is being address by the Metropolitan Washington Air Quality Committee (MWAQC).

3. Comment: The CLRP needs more balance in funding based upon actual demand, with 60 percent of all transportation revenues being spent on transit systems that carry only 6 percent of all daily trips.

   Response: The region has consciously made a significant investment in its rail and bus transit systems, and has made funding commitments to operating and maintaining them, with some expansions such as rail to Dulles and to Largo and a new station at New York Avenue in the District of Columbia. In addition to the revenues shown in the CLRP through 2030, a new study is underway to identify short-term highway and transit system needs and funding availability through 2010. This information will be used to inform the public and elected and appointed officials about the critical short-term funding shortfall in the region for highway, transit, and other travel modes.

4. Comment: In the wake of 9/11, the CLRP lacks a comprehensive strategy to address transportation capacity-related regional security deficiencies.

Response: Under COG's National Capital Region Emergency Preparedness Council, a great deal of the effort has been focused on the transportation and evacuation components of the regional emergency coordination plan. This involves coordination of regional transportation management and operations activities, with priority to measures needed to ensure better preparedness in the near-term. Because of the current federal, state, and local fiscal pressures and long lead times to plan, design, and construct new transportation capacity, it is prudent at this time to focus on short-term deficiencies.

5. Comment: The CLRP is overly optimistic because sharper cost-estimating methodologies are likely to show that a number of projects will cost more than assumed within the long-range revenue forecasts.

   Response: Uncertainty always exists when estimating the future costs of major transportation facilities. The cost estimates for the projects in the CLRP are provided by the transportation implementing agencies responsible for constructing and operating the facilities. Staff at each agency apply professional judgment to select the appropriate cost estimating methodology, with ongoing review and updates of the estimates as needed. The costs for major projects are reviewed and revised as needed for the updates to the CLRP.

6. Comment: The plan is not adequately funded. Federal, regional, state, and local sustained leadership has been lacking to secure higher funding levels. The plan does not include adequate new highway facilities and the most needed improvements languish as studies. A regional funding mechanism is necessary to address the funding issues.

   Response: The TPB highlighted the region's shortage of transportation funds with public meetings at Union Station in late 2000 and 2001, and with the February 2001 publication: "A System in Crisis." The TPB drew attention to the regional priorities for federal reauthorization of the surface transportation programs with a reauthorization principles brochure published in October 2002, the first principle of which calls for "encouraging a strong federal/state/local partnership with enhanced participation by all parties, to generate the necessary resources to meet the region's roadway and transit needs." In addition to documenting the region's long-term funding needs, short-term critical funding issues will be explicitly examined in a new TPB study to be finalized in early 2004. Highway and transit funding needs will be quantified and specific sources of revenue will be recommended over the period from 2005 to 2010 in the study. The results from this study will be used to inform state and local funding partners on critical regional transportation needs. The TPB also hosted a conference on Value Pricing for Transportation in the Washington Region in June 2003. This successful conference led to the creation of a TPB task force that is examining ways to implement pricing strategies in the region to allow for less congested travel and new sources of revenue.

7. Comment: The plan should be more regional in scope and evaluated for how it improves connectivity, accessibility, and mobility. A new Potomac River Crossing is needed.

Response: After adopting the 2000 CLRP, the TPB was dissatisfied with the performance of the plan in meeting the goals set out in the TPB Vision. The TPB called for a Regional Mobility and Accessibility Study (RMAS) to "evaluate alternative options to improve mobility and accessibility between and among regional activity centers and the regional core." The TPB specified that "additional highway and transit circumferential facilities and capacity, including Potomac River Crossings, where necessary and appropriate…" will be included in the study. The integrated land use and four transportation scenarios for the RMAS are currently under development with the assistance and input of the state and local transportation staff and interested citizens.

8. Comment: The plan should do more to connect outer jurisdictions and to accommodate suburb-to-suburb travel.

   Response: In calling for a "web of multi-modal transportation connections," the TPB Vision recognized the need to improve circumferential linkages among regional activity centers in outer jurisdictions, and between outlying activity centers and the regional core. Despite a major regional funding shortfall, the 2003 CLRP includes some key facilities to meet these needs, such as the planned construction of rail transit to Dulles Airport and the Corridor Cities Transitway in Montgomery County. The plan also includes a study of a key circumferential facility, the Intercounty Connecter between I- 270 and US 1. In addition, the Regional Mobility and Accessibility Study noted in response to comment 7 above provides an opportunity to examine and evaluate additional circumferential linkages.

9. Comment: The plan's highway portion should emphasize construction of long-delayed facilities. Only 17 of the plan's 105 road improvements involve new facilities. Most are relatively insignificant.

   Response: Given the funding shortfalls facing the entire region, transportation funding agencies have selected a limited number of projects, many of which are relatively small, to provide the most cost-effective improvements currently available for the region's highway system.

References

The following reference documents are relevant to many of the issues and projects discussed in this long-range plan. Documents prepared by the Metropolitan Washington Council of Governments are available either at www.mwcog.org or through the Information Center at (202) 962-3200.

Adams, Bruce, et al. *The Report of the Partnership for Regional Excellence*. Presented to MWCOG, July 1993.

Cambridge Systematics, Inc. *Analysis of Resources for the Financially Constrained Long Range Transportation Plan for the Washington Area*. Prepared for MWCOG/TPB, October 2000.

ICF Kaiser. *Assessment of Public Involvement in Transportation Planning for the Washington Metropolitan Region*. Final Report. October,1998.

Maryland Department of Transportation, Mass Transit Administration. *Access 2000: Bicycle and Pedestrian Access to Rail Transit Stations in Maryland*. Prepared by Rummel, Klepper and Kahl, LLP Consulting Engineers. June 1997.

MWCOG. *Our Changing Region: Census 2000. Volume 1, Number 1*. August, 2001.

MWCOG. *Our Changing Region. Census 2000. Volume 1, Number 2*. October, 2001.

MWCOG. *Growth Trends to 2030: Cooperative Forecasting in the Washington Region*. Autumn 2003.

MWCOG. *Partners in Preparedness: The Regional Emergency Coordination Plan at Work*. July, 2004.

MWCOG. *The Report of the Partnership for Regional Excellence*. July, 1993.

MWCOG. *Zoning and Land Use Planning Practices to Improve Transportation*. June 25, 1999.

MWCOG. *An Analysis of Land Use and Transportation Relationships Using Hypothetical Scenarios and Planning Analysis Tools.* Draft, August, 1994.

MWCOG/MWAQC. *State Implementation Plan (SIP) Revision, Phase II Attainment Plan for the Washington D.C.-MD-VA Non-Attainment Area.* February, 2000.

MWCOG/Task Force on Growth and Transportation. *A Legacy of Excellence for the Washington Region*. June, 1991.

MWCOG/TPB. *Air Quality Conformity Determination of the 2003 Constrained Long-Range Plan and the FY2004-2009 Transportation Improvement Program for the Washington Metropolitan Region.* December 31, 2003

MWCOG/TPB. *The Bicycle Element of the Long-Range Transportation Plan for the National Capital Region*. July 1995.

MWCOG/TPB. *National Capital Region Transportation Planning Board (TPB) Principles for Reauthorization of Federal Surface Transportation Programs.* October, 2002.

MWCOG/TPB. *Public Involvement Process*. As Amended October, 1999.

MWCOG/TPB. *The Region, Vol. 37,* "Shaping Transportation Solutions." 1997.

MWCOG/TPB. *The Region, Vol. 38,* "The Vision: Goals, Objectives, and Strategies For Our Transportation Future." 1999.

MWCOG/TPB. *The Region, Vol. 39,* "Reaching Out to Maker the Vision a Reality." 2000.

MWCOG/TPB. *The Region, Vol. 40,* "Facing the Transportation Funding Crisis." 2001.

MWCOG/TPB. *The Region, Vol. 41,* "Focusing on the Here and Now: Transportation Priorities for the Immediate Future." 2002.

MWCOG/TPB. *The Region, Vol. 42,* "Working Together on Transportation Challenges." 2003.

MWCOG/TPB. *StreetSmart: Look Out for Each Other! The 2002 Pedestrian Safety Awareness Campaign.* April, 2003.

MWCOG/TPB. *A System in Crisis: The Funding Shortfall for the Washington Area Transportation System.* February, 2001

MWCOG/TPB. *Traffic Quality on the Metropolitan Washington Area Freeway System.* Prepared for MWCOG/TPB by Skycomp, Inc., Rockville, MD, Spring 1996, Spring 1999, and Spring 2002.

MWCOG/TPB. *Transportation Improvement Program for the Washington Metropolitan Area FY 2004 – 2009*. December, 2003.

MWCOG/TPB. *Transportation Planning Board Consultation Procedures with Respect to Transportation Conformity Regulations Governing TPB Plans and Programs*. May, 1998

MWCOG/TPB. *Unified Planning Work Program for Transportation Planning for the Metropolitan Washington Region, FY 2003*. March, 2000

MWCOG/TPB. *2000 Washington-Baltimore Regional Air Passenger Survey: Summary of Findings.* July, 2002.

MWCOG/TPB. *Washington-Baltimore Regional Airport System Plan: Volume I—Commercial Airports.* 1988.

MWCOG/TPB. *Washington-Baltimore Regional Airport System Plan: Volume II—Ground Access.* 1993.

MWCOG/TPB. *Washington-Baltimore Regional Airport System Plan: Volume III—Air Cargo.* 1997.

MWCOG/TPB/Access for All Advisory Committee. *2003 Report to the National Capital Region Transportation Planning Board.* April, 2004.

MWCOG/TPB/Access for All Advisory Committee. *Report on Major Findings and Recommendations to Improve Transit Information for Limited English Proficiency (LEP) Customers.* June, 2003.

Strat@comm. *Final Report to the Metropolitan Washington Council of Governments on Public Outreach for the Year 2000 Update of the Constrained Long-Range Plan for the Washington Region*. August, 2000.

US Department of Transportation/Federal Highway Administration. Order 6640.23 *FHWA Actions to Address Environmental Justice In Minority and Low-Income Populations*. December, 1998

U.S. Census Bureau. *Census 2000 PHC-T-3. Ranking Tables for Metropolitan Areas: 1990 and 2000*. April, 2001

Appendix A
Resolution on the 2003 Constrained Long-Range Plan

TPB R6-2004
December 17, 2003

METROPOLITAN WASHINGTON COUNCIL OF GOVERNMENTS
NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002

RESOLUTION APPROVING
THE 2003 UPDATE TO THE CONSTRAINED LONG RANGE
TRANSPORTATION PLAN FOR THE NATIONAL CAPITAL REGION

WHEREAS, the National Capital Region Transportation Planning Board (TPB), which is the metropolitan planning organization (MPO) for the Washington Region, has the responsibility under the provisions of the Transportation Equity Act for the 21st Century (TEA-21) of 1998 for developing and carrying out a continuing, cooperative and comprehensive transportation planning process for the Metropolitan Area; and

WHEREAS, the Joint Planning Regulations issued October 28, 1993 by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require that the long range transportation plan be reviewed and updated at least triennially ; and

WHEREAS, on September 21, 1994, the TPB adopted the first Constrained Long-Range Transportation Plan (CLRP); and

WHEREAS, on July 17, 1997, the TPB approved the first triennial update to the CLRP, which was approved for publication on July 15, 1998 as the document: *1997 Update to the Financially Constrained Long-Range Transportation Plan for the National Capital Region*; and

WHEREAS, on October 18, 2000, the TPB approved the second triennial update to the CLRP, which was approved for publication on May 15, 2002 as the document: *2000 Update to the Financially Constrained Long-Range Transportation Plan for the National Capital Region*; and

WHEREAS, the transportation implementing agencies in the region provided submissions for the 2003 CLRP and inputs to the FY2004-2009 TIP, which were in response to the January 2003 solicitation document issued by the TPB, and the TPB Technical Committee

and the TPB reviewed the submissions and the financial analysis at meetings in April, May, June, July, and September; and

WHEREAS, during the development of the 2003 update to the CLRP, the TPB public involvement process was followed, and numerous opportunities were provided for public comment: (1) At the April 10, 2003 TPB Citizens Advisory Committee (CAC) meeting, the initial project submissions for inclusion in the air quality conformity analysis of the 2003 update and the FY 2004-09 TIP and the air quality conformity work scope were released, and an opportunity for public comment on these submissions was provided at the beginning of the April 16 and May 21 TPB meetings; (2) At the May 21, 2003 meeting, the TPB approved a set of responses to the public comments on the project submissions; (3)At the July 16 and September 17 TPB meetings, the TPB made available the financial analysis results for the 2003 CLRP; (4) At the October 15, 2003 TPB meeting, the draft air quality conformity analysis, the draft 2003 CLRP update, and the draft FY 2004-09 TIP were released for a 30- day public comment period which closed on November 14; (5)The comments and staff responses to them were reviewed and accepted for inclusion in the TIP by the TPB on November 19, 2003; and the final version of the TIP includes summaries of the comments and the responses; and

WHEREAS, the major highway, HOV and transit improvements, and studies in the 2002 CLRP together with changes associated with the 2003 CLRP submissions (shown in bold) are described in Attachment A and detailed information on all of the projects is provided in Appendix B of the Air Quality Conformity report as adopted December 17, 2003; and

WHEREAS, the 2003 update to the CLRP has been developed to meet the financial plan requirements in the Metropolitan Planning Rules and show the consistency of the proposed projects with already available and projected sources of transportation revenues as shown in the tables of projected revenues and expenditures provided in Attachment B; and

WHEREAS, the TPB has determined that the 2003 Update to the CLRP conforms with the requirements of the Clean Air Act Amendments of 1990; and

WHEREAS, the TPB Technical Committee has recommended favorable action on the 2003 update to the CLRP by the Board,

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD approves the 2003 Update to the Constrained Long-Range Transportation Plan for the National Capital Region, as described in Attachment A and in Appendix B of the Air Quality Conformity report as adopted November 19, 2003.

Adopted by the Transportation Planning Board at its regular meeting on December 17, 2003.

Appendix B

The 2003 Constrained Long-Range Plan and Low-Income and Minority Populations

Federal law requires transportation planning agencies to consider the needs of minority, low-income, and disabled populations, and to review the impacts of transportation plans on these communities. US Department of Transportation/Federal Highway Administration (FHWA) regulations indicate that in implementing these requirements, the following information "should be obtained where relevant, appropriate, and practical:

(1) population served and/or affected by race, or national origin, and income level;
(2) proposed steps to guard against disproportionately high and adverse effects on persons on the basis of race, or national origin; and,
(3) present and proposed membership by race, or national origin, in any planning or advisory body that is part of the program."[1]

To ensure on-going participation from low-income and minority communities and persons with disabilities the TPB created the Access for All (AFA) Advisory Committee to advise the Board on transportation issues, programs, policies, and services that are important to these communities and individuals. The mission of this committee is to identify concerns of low-income and minority populations and persons with disabilities, and to determine whether and how these issues might be addressed within the TPB planning process. The committee membership is composed of TPB-appointed community leaders from around the region. The committee also includes ex-officio representation from five key transportation agencies that are active in the TPB process—the District Department of Transportation, the Maryland Department of Transportation, the Virginia Department of Transportation, the Washington Metropolitan Area Transit Authority, the Federal Transit Administration, and the Federal Highway Administration.

In the fall of 2003, the AFA committee conducted a review of the 2003 CLRP projects. The review did not attempt to quantify disproportionate or adverse impacts; this type of analysis occurs at the project planning level and during the environmental assessment process. Rather, the review was intended to identify potential issues regarding the spatial distribution of major transportation improvements, relative to minority and low-income populations, and to serve as a starting point for future analyses.

[1] See Chapter 2 for more information on Federal requirements.

REGIONAL DEMOGRAPHIC PROFILE

Table B-1 shows statistics for minority, low-income, and disabled individuals living in the Washington region. Over 40 percent of the region's population is non-white, a figure which includes many recent immigrants to the region.[2] Individuals with limited English proficiency make up 5 percent of the population; 58 percent of these individuals are members of the Hispanic/Latino community. African Americans are the region's largest minority group, representing 27 percent of the population. Despite the region's overall affluence, over 328,000 residents were below the poverty level in 2000, and an additional 447,000 residents are classified as low-income. In the same year, 320,000 persons had physical or sensory disabilities that may have made them eligible for specialized transportation services (paratransit).

Table B-1
Low Income and Minority Populations in the Washington Region
(in Thousands)

Population Group	*Central Jurisdictions*	*Inner Suburbs*	*Outer Suburbs*	*Washington Region*	*Percent of Region* (8)
African American	389.9	719.3	134.9	1,244.1	27%
Asian (1)	39.4	260.6	29.8	329.7	7%
Two or More Races (2)	27.1	87.4	24.4	139.0	3%
Hispanic/Latino (3)	99.1	268.4	56.2	423.7	9%
Below the Poverty Level (4)	135.1	152.3	40.9	328.3	7%
Low Income (5)	258.1	393.6	123.7	775.3	17%
Limited English Proficiency (6)	46.0	129.3	18.3	193.6	5%
Disabled Persons (7)	81.4	177.3	61.4	320.0	8%
Total Population	889.8	2,676.5	978.7	4,544.9	100%

Source: 2000 U.S. Census; numbers are for the Washington DC-MD-VA MSA

Notes:
(1) Includes Native Hawaiian and Pacific Islander.
(2) For the first time in the 2000 Census, respondents could identify themselves as belonging to more than one race.
(3) Hispanic/Latino is considered an ethnicity, not a race, and therefore a Hispanic/Latino person can be of any race and included in the counts for other categories.
(4) Official poverty level depends on family size. For a family of four, the poverty level is an annual income of $17,000.
(5) "Low income" is defined as twice the poverty level. For example, for a family of four an annual income of $34,000 is considered low income.
(6) Limited English Proficiency includes individuals who speak English "not well" or "not at all."
(7) Disabled persons include individuals with physical and/or sensory disabilities.
(8) Population groups do not total to 100% because groups are not discrete.

[2] Our Changing Region. Census 2000. Metropolitan Washington Council of Governments. Volume 1, Number 1. Figures provided are for the TPB Planning Area.

THE SPATIAL DISTRIBUTION OF LOW-INCOME AND MINORITY POPULATIONS AND THE 2003 CLRP MAJOR IMPROVEMENTS

Figures B-1 through B-10 show the locations of major CLRP projects and the distribution of African-American, Asian, Hispanic/Latino, low-income, and disabled populations within the Washington region. As the maps illustrate, the Asian population is predominantly located in Fairfax County in Virginia and Montgomery County in Maryland, whereas the African-American population is predominantly located in the eastern half of the District of Columbia and Prince George's County in Maryland. The low-income population overlaps significantly with the African-American population, but is more widely dispersed throughout the region. Hispanic/Latino communities are clustered along high density transportation corridors, such as 16th Street in the District of Columbia, Route 1 and I-95 in Virginia, and I-270 and Rockville Pike in Maryland. In contrast, disabled individuals are dispersed throughout the region.

Figure B-1
2003 CLRP Major Highway Improvements
with African-American Population

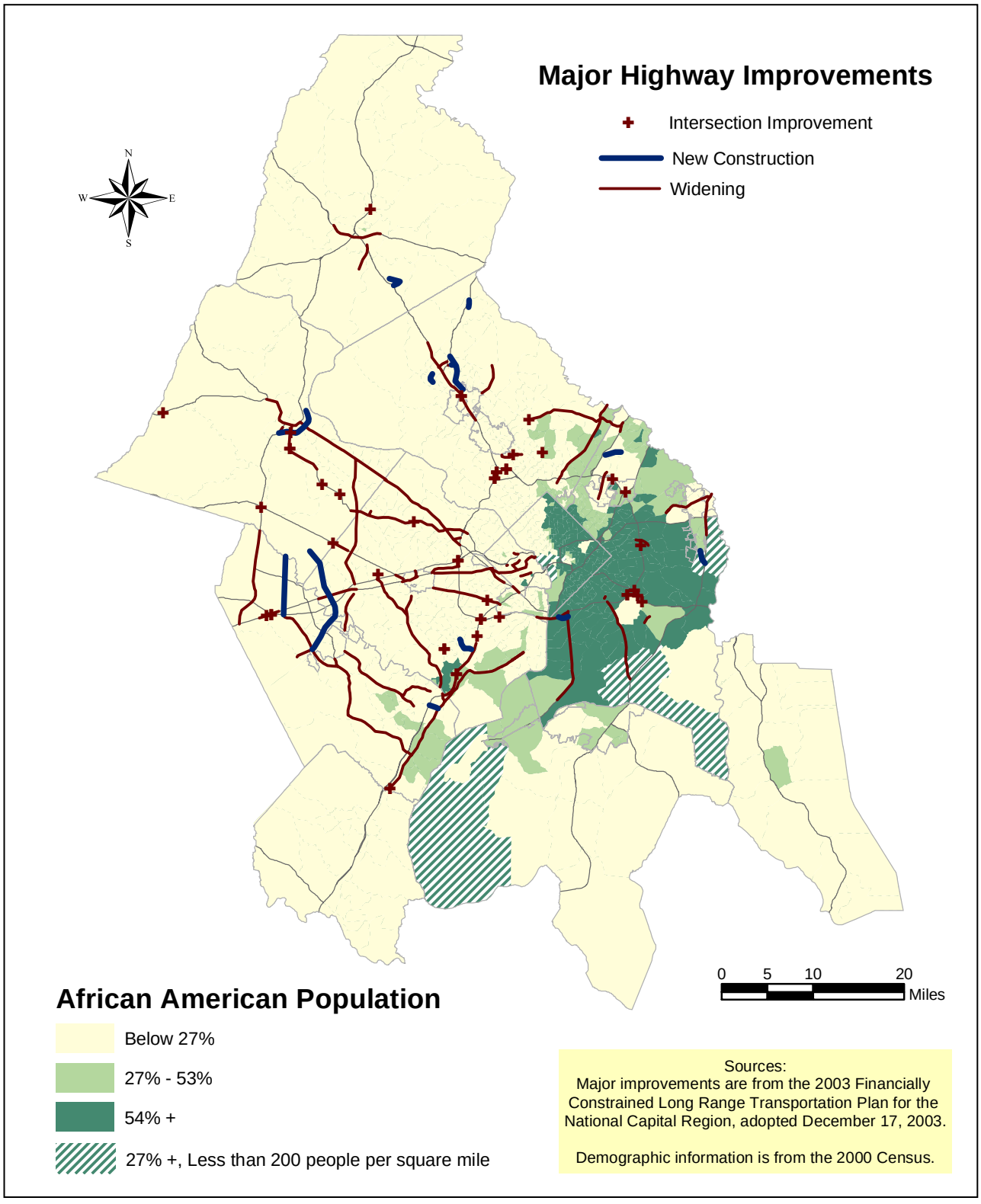


Figure B-2
2003 CLRP Major Transit and High-Occupancy Vehicle (HOV) Improvements
with African-American Population

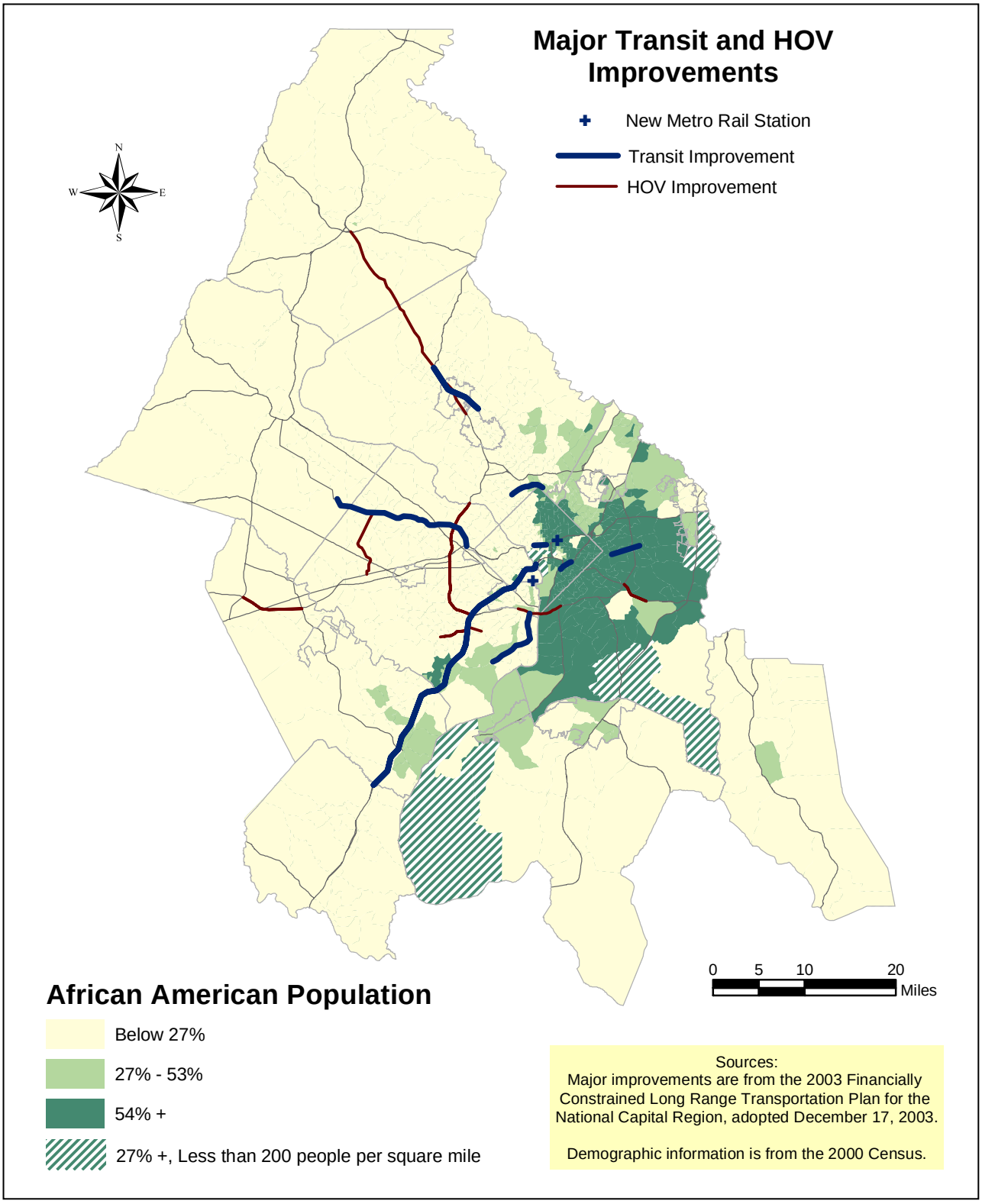


Figure B-3
2003 CLRP Major Highway Improvements
with Asian Population

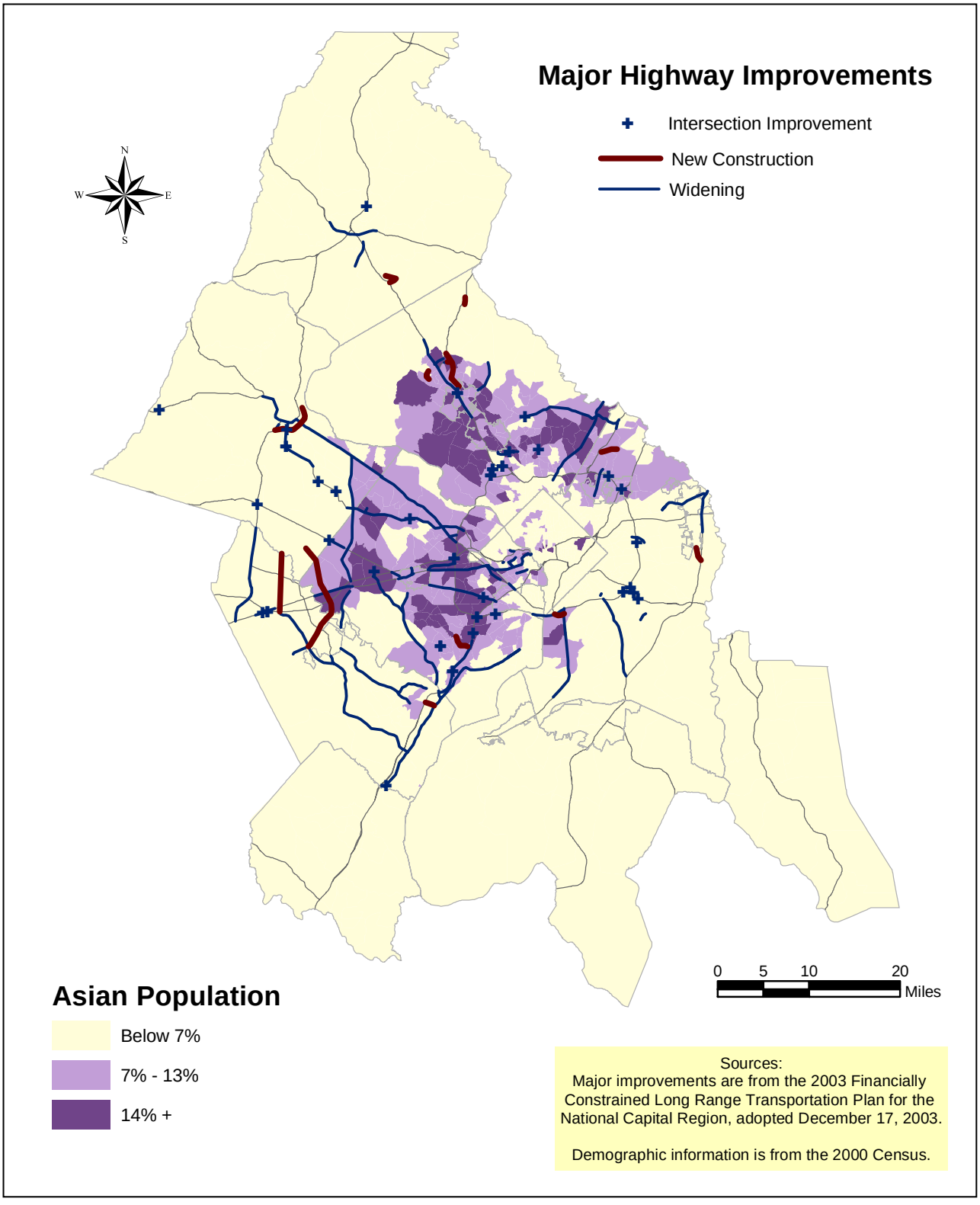


Figure B-4
2003 CLRP Major Transit and High-Occupancy Vehicle (HOV) Improvements
with Asian Population

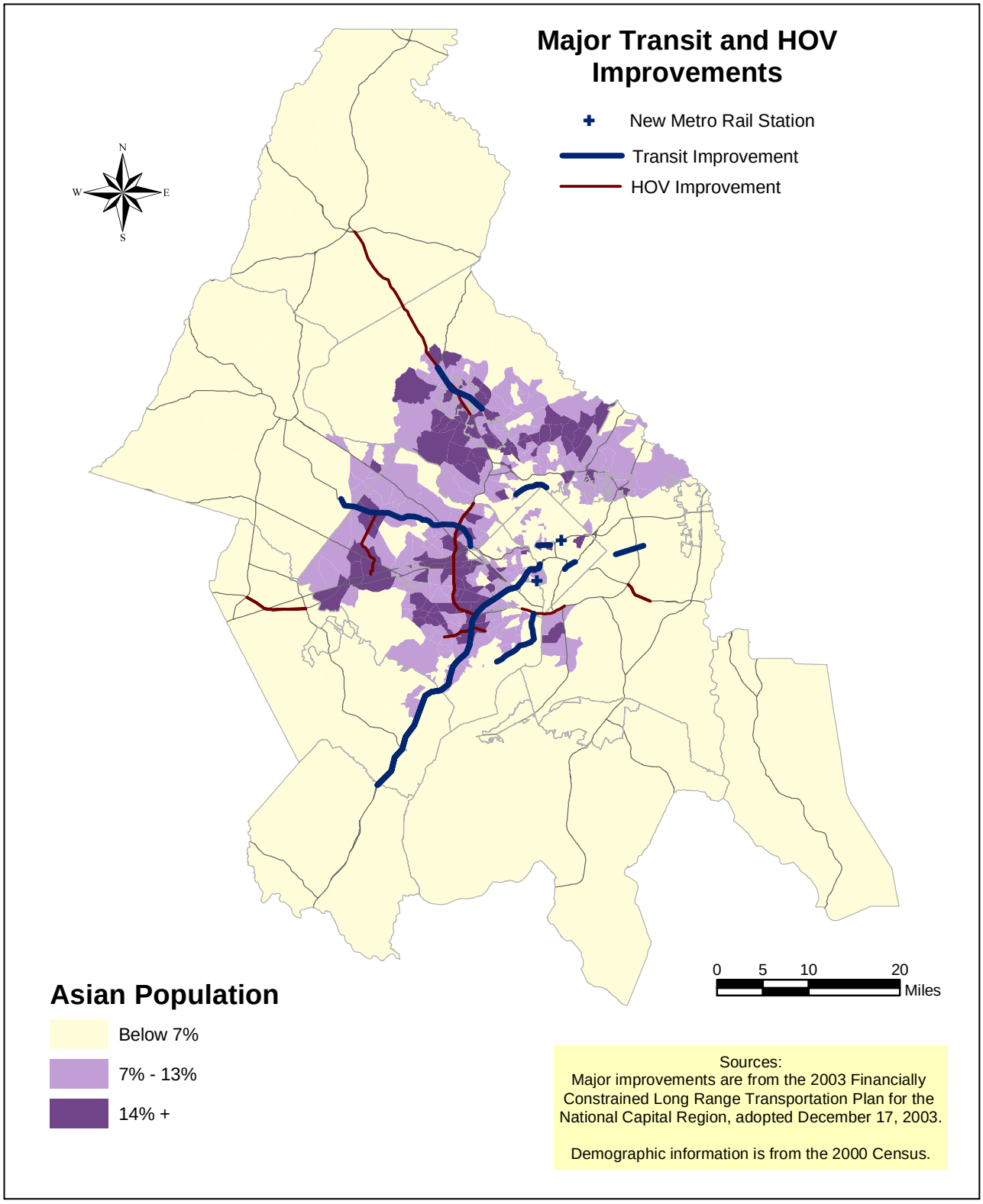


Figure B-5
2003 CLRP Major Highway Improvements
with Hispanic/Latino Population

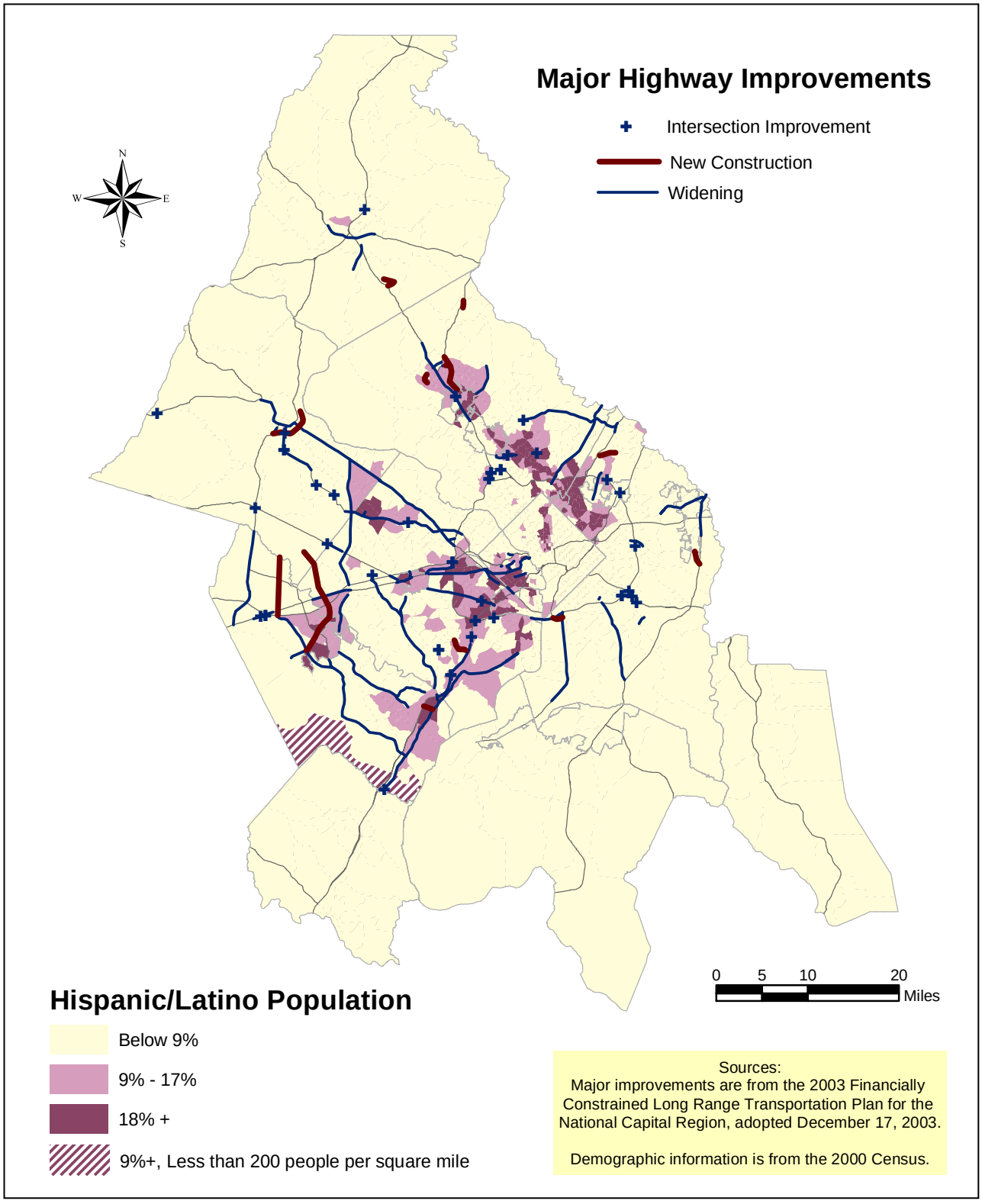


Figure B-6
2003 CLRP Major Transit and High-Occupancy Vehicle (HOV) Improvements
With Hispanic/Latino Population

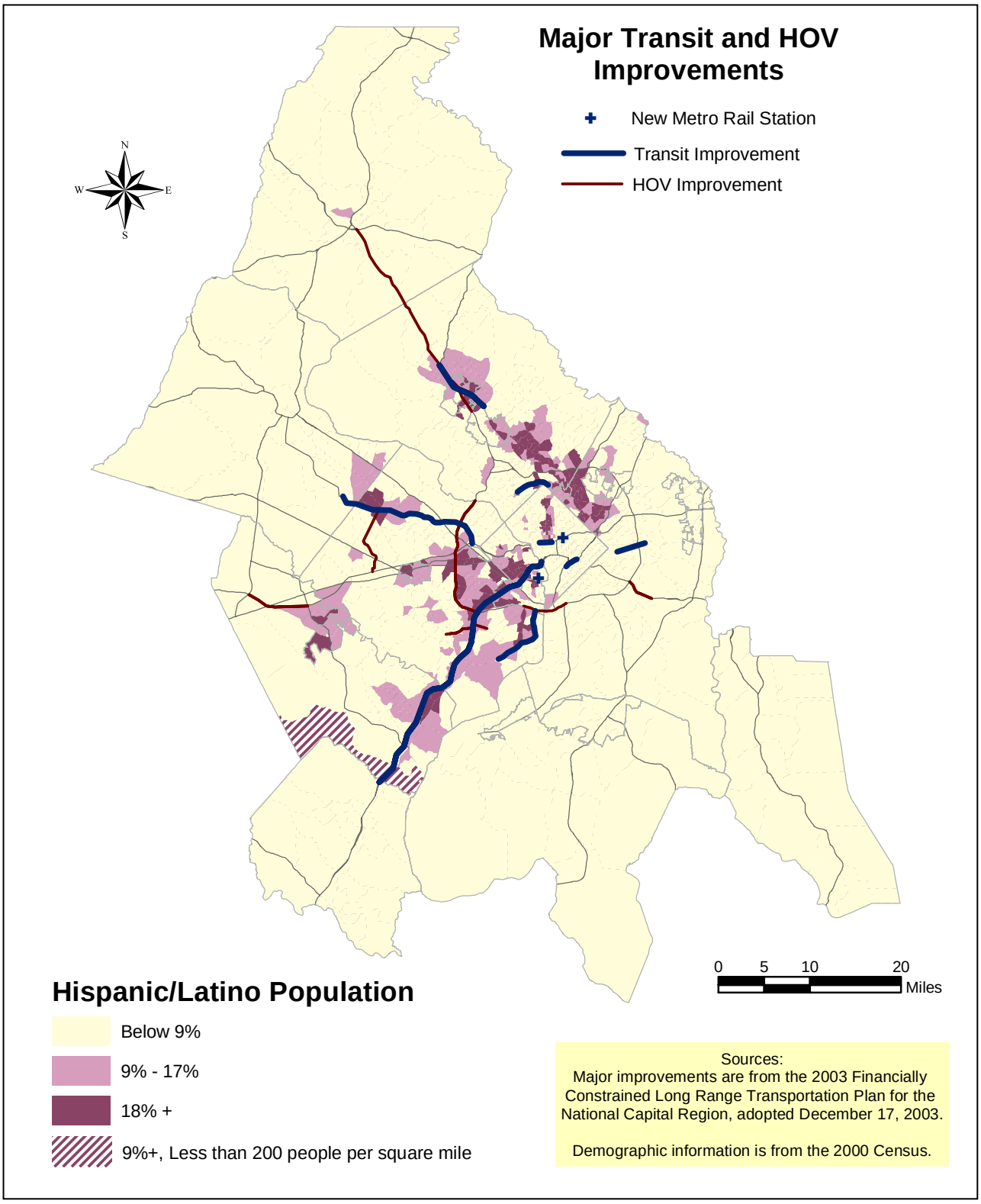


Figure B-7
2003 CLRP Major Highway Improvements
with Low Income Population

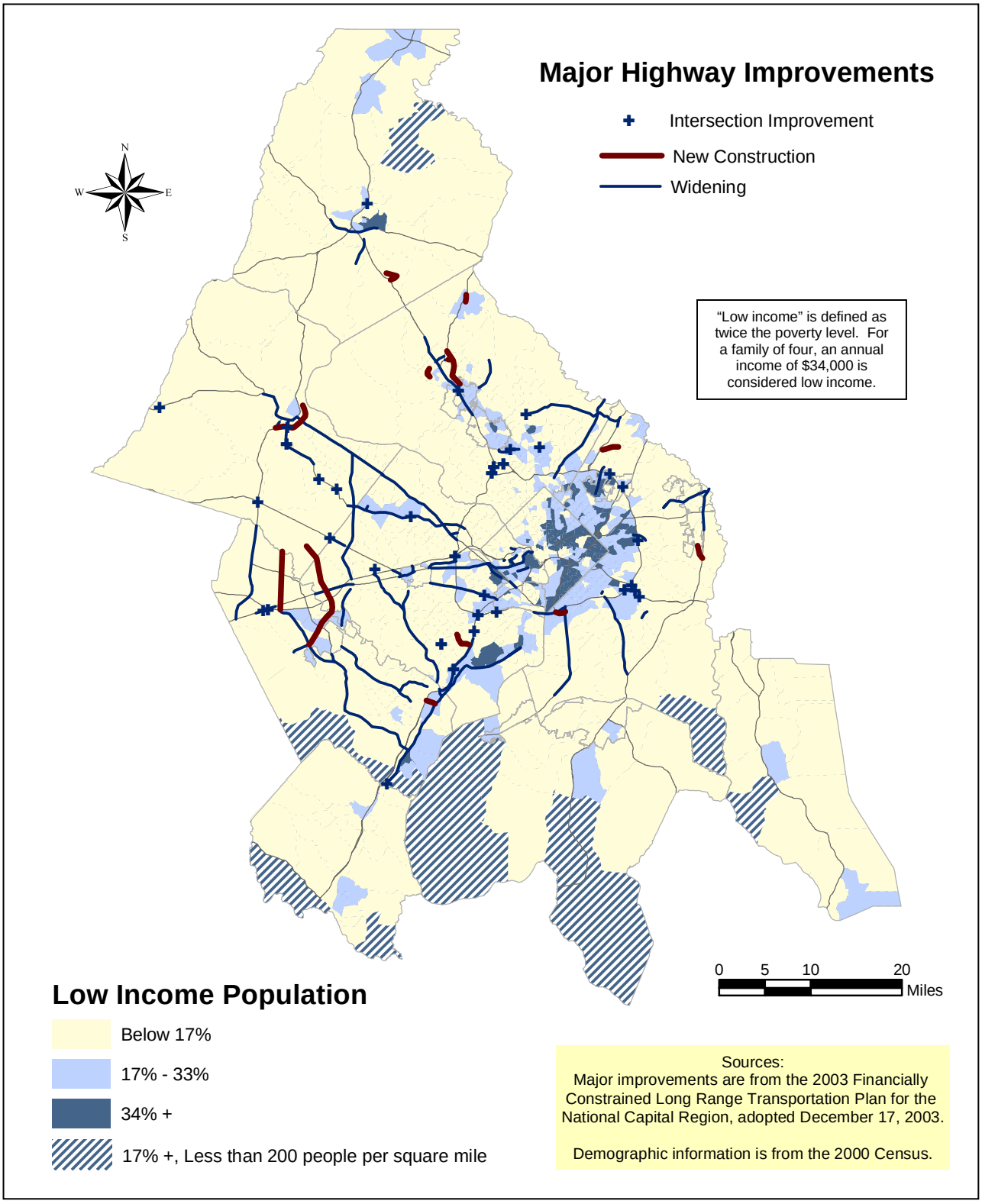


Figure B-8
2003 CLRP Major Transit and High-Occupancy Vehicle (HOV) Improvements
with Low Income Population

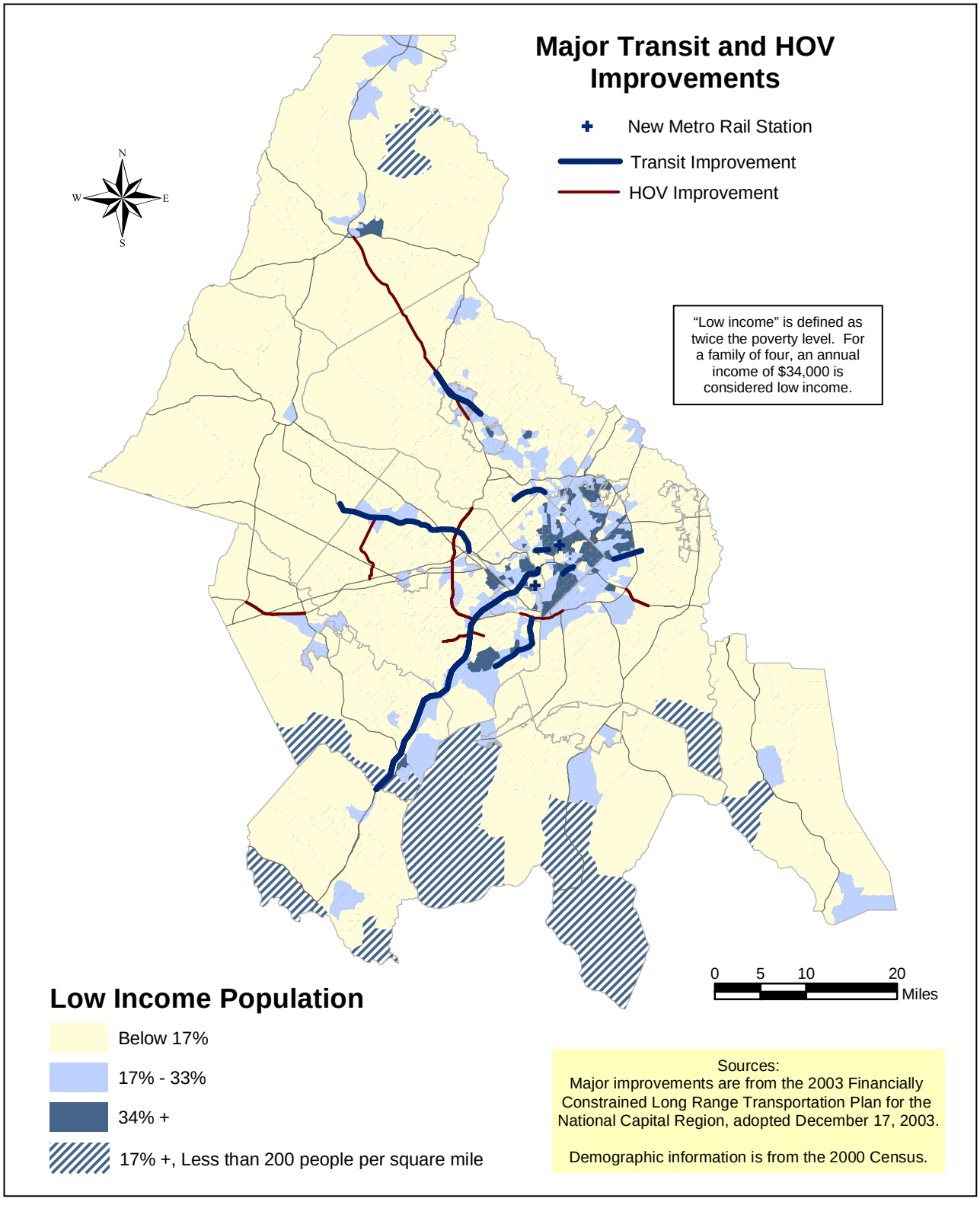


Figure B-9
2003 CLRP Major Highway Improvements
with Disabled Population

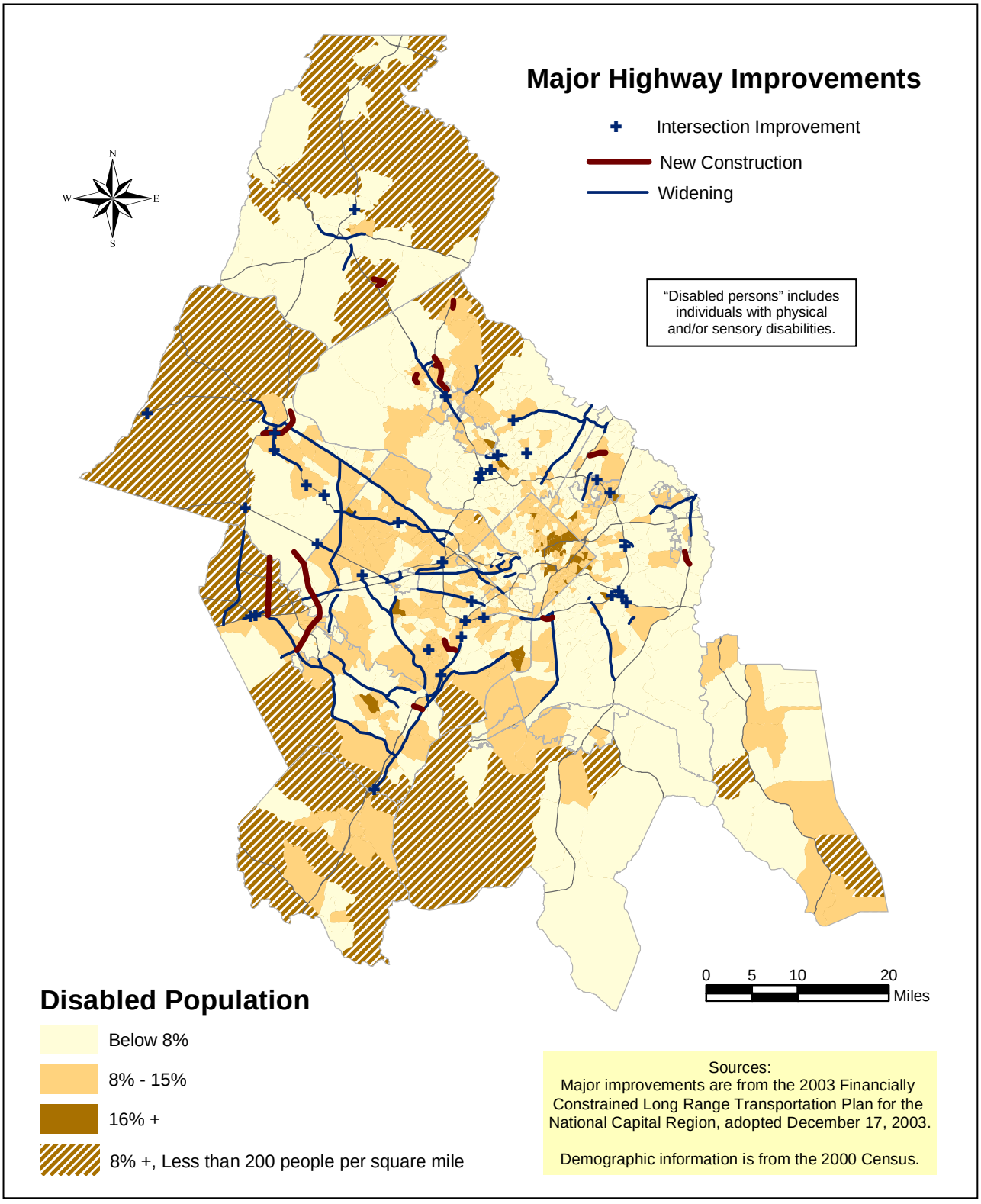
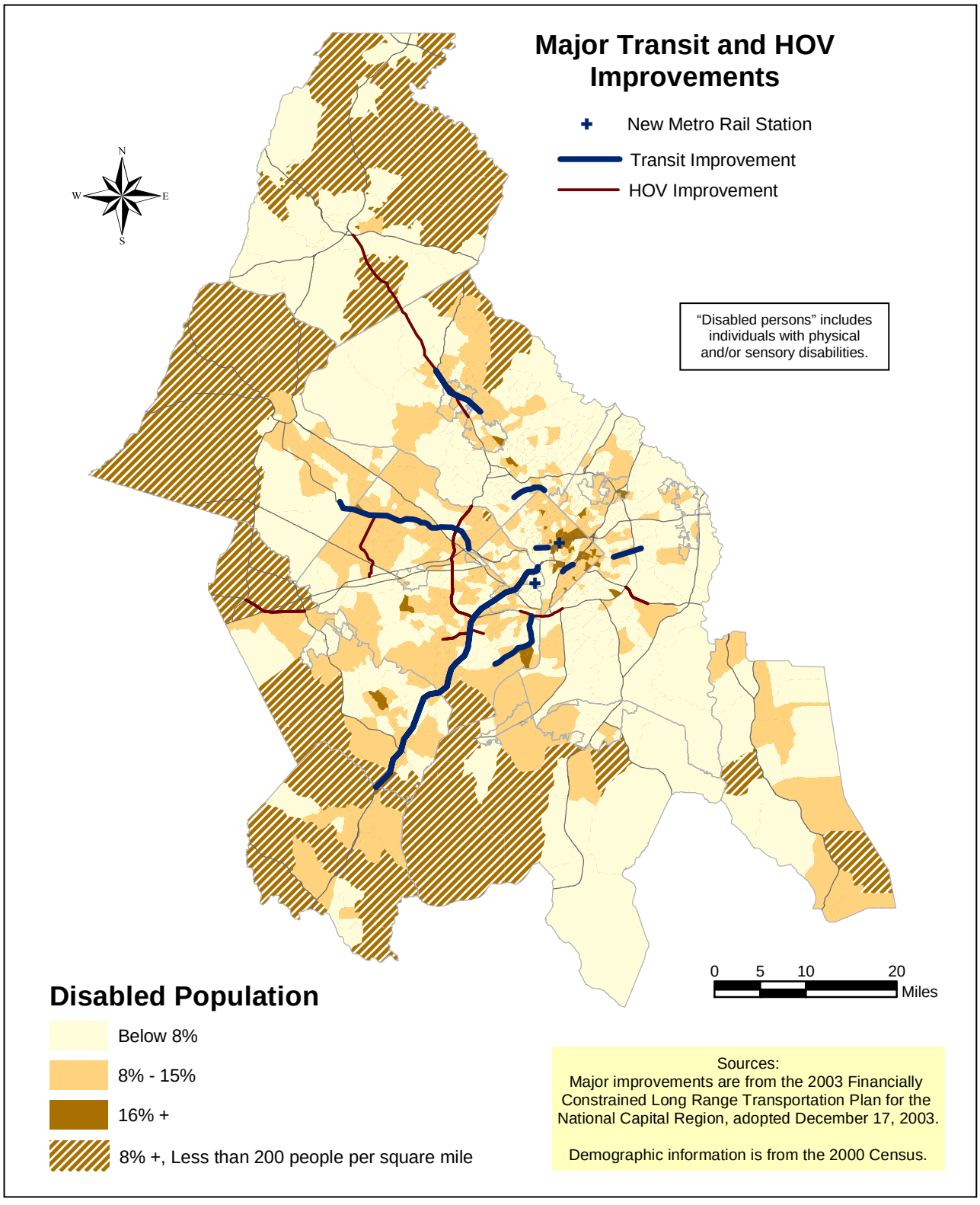


Figure B-10
2003 CLRP Major Transit and High-Occupancy Vehicle (HOV) Improvements
with Disabled Population



THE TPB ACCESS FOR ALL ADVISORY COMMITTEE COMMENTS ON THE DRAFT 2003 CLRP

After reviewing maps of the CLRP projects and demographic data, the AFA committee presented their comments to the TPB on October 15, 2003. Below is the full text of the AFA comments.

More Transit is Needed in the Inner Parts of the Region

Committee members observed that transit improvements in the 2003 CLRP appear to be serving more suburban areas, rather than low-income communities that may be more transit dependant near the inner part of the region.

Concerns were raised about the lack of planned transit improvements or studies in Southern Prince George's County. The light rail transit study between Silver Spring and New Carrolton should extend further south into Prince George's County and include new rail service across the Woodrow Wilson Bridge.

Current Transit Services Need to be Maintained and Improved *in the Short-Term*

Although the expansion of the Metrorail system is very important, low-income communities and persons with disabilities rely upon the services provided by MetroAccess, Metrobus, and local, community-based bus services.

The AFA committee is concerned about proposed discontinuation in six Metrobus lines due to funding shortfalls. The AFA stressed that the impacts on low-income communities from reductions in Metrobus service need to be considered. The possible reduction in service between the Branch Avenue Metro station and King Street in Alexandria, lines N11 and N13, was of particular concern.

Many low-income workers hold more than one job, and have jobs that do not follow traditional work hours such as 9 a.m. to 6 p.m. The region needs more transit service in the reverse commute direction and expanded levels of transit service to allow these workers access to employment opportunities.

Transit information for people who have limited English proficiency (LEP) needs to be improved and widely available for a significant part of the population dependent on transit. The AFA subcommittee looks forward to hearing from the transit agencies regarding progress on implementing the recommendations from the LEP report presented to the Board in July.

Transit Services for People with Disabilities

Concerns were raised over recent news articles regarding WMATA's short-term budget problems that were credited to increasing costs in paratransit services. Paratransit services for low-income and persons with disabilities should be funded at higher levels and expanded.

The AFA committee will be formally recommending that WMATA study the current door-to-door paratransit system. A six-month study should review how improvements could help more people

use paratransit services, and in light of current budget issues, investigate if there are more cost-effective ways to provide and operate paratransit services.

Promote More Development Around Transit Stations, But Take Care of the Community That's Already There

The AFA committee would like to see more development around transit stations, especially on the eastern side of the region. However, states and localities should make provisions to mitigate potentially negative impacts from such development, in the short- and long-term, such as the increased housing costs and displacement.

AFA RECOMMENDATIONS FOR FUTURE PLAN UPDATES

In April of 2004, the AFA committee produced a second report expanding and detailing the issues and concerns identified during the review of the 2003 CLRP, and developing a thorough set of recommendations for addressing these issues in future plan updates. The recommendations are to be considered by TPB member agencies during the annual project solicitation process for the Transportation Improvement Program (TIP) and the Financially Constrained Long Range Transportation Plan (CLRP). Below is a summary of the committee's recommendations.[3]

Develop More Effective Communication of Regional Transit Information

- Expand the availability of clear and concise transit information from a variety of sources, especially bus services, for the general public, people with limited English skills, and illiterate persons.

- Improve transit information for people with limited English proficiency (LEP) by implementing the AFA recommendations endorsed by the TPB on June 18, 2003.[4]

Prioritize Regional and Local Transportation Services for Low-Income Populations

- Maintain bus service levels for current transit-dependent riders. Low-income communities that are transit dependant are scattered throughout the metropolitan area with a higher concentration near the inner part of the region. This point is of particular concern given current budget concerns and planned rail projects.

- Expand reverse commute services to allow improved access to jobs.

- Pay close attention to low-income populations when developing pedestrian and bicycle safety programs.

[3] The full "Access for All Advisory Committee 2003 Report to the National Capital Region Transportation Planning Board" of April 21, 2004, may be viewed at <http://www.mwcog.org/transportation>.
[4] The "Report on Major Findings and Recommendations to Improve Transit Information for Limited English Proficiency (LEP) Customers" endorsed by the TPB on June 18, 2003, may be viewed at <http://www.mwcog.org/transportation>.

Improve Transit Services for People with Disabilities

The following recommendations were transmitted from the TPB to the Washington Metropolitan Area Transit Authority (WMATA) Board of Directors on January 21, 2004.[5]

- Coordinate efforts with county and city transit systems throughout the region to encourage more people with disabilities to use bus and rail. Many people access the WMATA system from the local systems, such as Ride-On and Fairfax Connector, which need to be fully accessible and reliable for the "Metro is Accessible"[6] project to be effective.

- Improve reliability of the WMATA system to attract and retain the targeted riders. The AFA fully supports ensuring that elevators work routinely, improving accessibility to bus stops, and making other improvements that increase the reliability of train and bus systems.

- Conduct a study of Metro's paratransit service to identify ways to serve the greatest number of people with the available budget. The study should examine if there are more cost-effective ways to better serve more people with disabilities who cannot use the fixed route system.

Promote More Development around Transit Stations, But Take Care of the Community That Is Already There

- The AFA committee would like to see more development around transit stations, especially on the eastern side of the region. The committee recognizes that such development is a long-term recommendation. State and local policies should not only focus on the long-term transformation of transit station areas, but also need to focus on provisions to mitigate potentially negative impacts from such development, in the short- and long-term, such as the increased housing costs and displacement.

[5] The "Letter to the Washington Metropolitan Area Transit Authority (WMATA) Transmitting the TPB Access for All Advisory (AFA) Committee's Recommendations for Transit Services for People With Disabilities" dated January 21, 2004 is available at <http://www.mwcog.org/transportation>.

[6] "Metro is Accessible" is a WMATA outreach and marketing initiative to encourage more people with disabilities to use the rail and bus systems.

Appendix C
Glossary of Acronyms

AFA	Access for All Advisory Committee
CAC	Citizens 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 Division of Transportation
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HOV	High Occupancy Vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
MDOT	Maryland Department of Transportation
MOITS	Management, Operations, and Intelligent Transportation Systems
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MTA	Maryland Transit Administration
MWAA	Metropolitan Washington Airports Authority
MWAQC	Metropolitan Washington Air Quality Committee
NEPA	National Environmental Policy Act
NCPC	National Capital Planning Commission
NOx	Nitrogen Oxides (smog component)
NVTC	Northern Virginia Transportation Commission
PRTC	Potomac and Rappahannock Transportation Commission
SHA	Maryland State Highway Administration
SIP	State Implementation Plan (air quality)
SOV	Single-Occupant Vehicle
TCC	Transportation Coordinating Council of Northern Virginia
TEA-21	Transportation Equity Act for the 21st Century
TERMs	Transportation Emissions Reductions Measures
TIP	Transportation Improvement Program
TPB	National Capital Region Transportation Planning Board
US DOT	U.S. Department of Transportation
VDOT	Virginia Department of Transportation
VDRPT	Virginia Department of Rail and Public Transportation
VMT	Vehicle-Miles Traveled
VOC	Volatile Organic Compounds (smog component)
WMATA	Washington Metropolitan Area Transit Authority