

TPB R17-2007  
March 21, 2007

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD  
777 NORTH CAPITOL STREET, N.E.  
WASHINGTON, D.C. 20002-4201**

**RESOLUTION APPROVING THE FY 2008 UNIFIED PLANNING WORK PROGRAM  
FOR TRANSPORTATION PLANNING**

**WHEREAS**, the Joint Planning Regulations issued February 14, 2007 by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) require a Unified Planning Work Program (UPWP) for Transportation Planning; and

**WHEREAS**, the Unified Planning Work Program is required as a basis and condition for all funding assistance for transportation planning to state, local and regional agencies by the FTA and FHWA; and

**WHEREAS**, the FY 2007 Unified Planning Work Program (UPWP) for Transportation Planning was approved by the Transportation Planning Board (TPB) on March 15, 2006; and

**WHEREAS**, on February 15, 2007, the TPB released the draft FY 2008 UPWP for public comment; and

**WHEREAS**, the TPB Technical Committee reviewed the outline and budget on January 5, 2007, the draft document on February 2, and recommended approval by the TPB of the final draft FY 2008 UPWP at its meeting on March 2; and

**WHEREAS**, on March 21, 2007, the TPB adopted resolution R16-2007 which identifies certain projects for carryover funding from FY 2007 to FY 2008, and these projects and budgets will be incorporated into the final version of the FY 2008 UPWP;

**NOW, THEREFORE, BE IT RESOLVED THAT** the National Capital Region Transportation Planning Board approves the FY 2007 Unified Planning Work Program for Transportation Planning for the Metropolitan Washington Region.

# National Capital Region Transportation Planning Board

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## MEMORANDUM

March 15, 2007

**TO:** Transportation Planning Board

**FROM:** Ronald F. Kirby  
Director, Department  
of Transportation Planning

**SUBJECT:** Modification to the February Budget for the Draft FY 2008 Unified Planning Work Program (UPWP) and a Summary of Carryover Project Budgets from the FY 2007 UPWP

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### Reduction to the February Draft Budget

At the February 21 meeting, the Board was briefed on a draft document and budget for FY 2008 UPWP. I explained that the budget estimates were based upon TPB staff assumptions, and that VDOT had recently provided TPB staff with an allocation estimate which was \$504,000 lower for the PL funds than was shown in the draft budget. At the March 2 Technical Committee meeting, we reviewed a set of proposed budget changes to account for the \$504,000 reduction. We also reviewed the proposed carryover of activities and funding that would be carryover from FY 2007 to FY 2008.

Table A shows the proposed changes to the February budget levels. The Virginia Technical Assistance budget is reduced by \$68,100 or 13.5 percent of the total. The remaining \$436,500 will come from the basic TPB work program.

To identify potential project budget reductions, TPB staff reviewed the project budgets in the current FY 2007 program to identify funding that will not be spent by June 30 and will need to be carried over to FY 2008. The delay in submissions for the air quality conformity analysis of the 2007 CLRP and new TIP of about a month means that some expenditures for the **1.C Constrained Long-Range Plan** and **3.A Air Quality Conformity** work activities will not occur by June 30 and that this funding should be carried over for these work activities in FY 2008. The FY 2008 budgets shown for both projects can now be reduced by \$50,000. After the TPB approves the carryover funding on March 21, the final budget for each activity will restore the \$50,000.

For the **4.A Network Development activity and 4.C Models Development**, staff reviewed the FY 2008 consultant support budgets. It is proposed that the consultant study to review the network development process in activity 4.A be deferred which reduces the budget by \$150,000. There will be carry over funding of \$75,000 for this work activity from FY 2007 which will enable funding a reduced consultant study. For activity 4.C Models Development, it is proposed that consultant support be reduced by \$60,000.

For activity **5.C Household Travel Survey**, the start of the main survey interviewing was rescheduled to begin in January, 2007 rather than in July, 2006. Because of this change in the start date of the survey interviewing, \$1.2 million in funding for this project will need to be carried over into FY 2008. With this \$1.2 million in carry over and planned enhancements in the geocoding software to be used in processing the collected survey data, staff believes the FY 2008 budget for 5.C Household Travel Survey can be reduced by \$126,500.

Summary of Carryover Project Budgets from the FY 2007 UPWP

Table B lists the work activities and budgets proposed to be carried over from the FY 2007 UPWP to the FY 2008 UPWP.

## TPB FY 2008 WORK PROGRAM FUNDING CHANGES FROM FEBRUARY VERSION

Work Activity	FY 2008	FY 2008 Feb	FY08-FY08 Feb
<b>1. PLAN SUPPORT</b>			
A. Unified Planning Work Program (UPWP)	70,700	70,700	0
B. Transp Improvement Program (TIP)	151,700	151,700	0
C. Constrained Long-Range Plan	<b>508,100</b>	558,100	-50,000
D. Financial Plan	84,000	84,000	0
E. Public Participation	323,900	323,900	0
F. Private Enterprise Participation	18,300	18,300	0
G. Annual Report	80,100	80,100	0
H. Transportation/Land Use Connection Progr	255,000	255,000	0
I. DTP Management	452,100	452,100	0
Subtotal	1,943,900	1,993,900	-50,000
<b>2. COORDINATION and PROGRAMS</b>			
<b>A. Congestion Management Process (CMP)*</b>	150,000	150,000	0
B. Management, Operations, and ITS Planning	350,000	350,000	0
C. Emergency Preparedness Planning	75,400	75,400	0
<b>D. Transportation Safety Planning*</b>	75,000	75,000	0
E. Bicycle and Pedestrian Planning	108,700	108,700	0
<b>F. Regional Bus Planning*</b>	100,000	100,000	0
G. Human Service Transportation Coordination	105,000	105,000	0
H. Freight Planning	101,000	101,000	0
Subtotal	1,065,100	1,065,100	0
<b>3. FORECASTING APPLICATIONS</b>			
A. Air Quality Conformity	<b>513,200</b>	563,200	-50,000
B. Mobile Emissions Analysis	640,100	640,100	0
C. Regional Studies	415,800	415,800	0
D. Coord Coop Forecasting & Transp Planning	676,800	676,800	0
Subtotal	2,245,900	2,295,900	-50,000
<b>4. DEVELOPMENT OF NETWORKS/MODELS</b>			
A. Network Development	<b>694,500</b>	844,500	-150,000
B. GIS Technical Support	498,800	498,800	0
C. Models Development	<b>969,200</b>	1,029,200	-60,000
D. Software Support	178,900	178,900	0
Subtotal	2,341,400	2,551,400	-210,000
<b>5. TRAVEL MONITORING</b>			
A. Cordon Counts	230,000	230,000	0
B. Congestion Monitoring and Analysis	521,200	521,200	0
C. Travel Surveys and Analysis			0
Household Travel Survey	<b>1,128,400</b>	1,254,900	-126,500
Regional Travel Trends Report			0
D. Regional Trans Data Clearinghouse	267,900	267,900	0
Subtotal	2,147,500	2,274,000	-126,500
<b>Core Program Total (I to V)</b>	9,743,800	10,180,300	-436,500
<b>6. TECHNICAL ASSISTANCE</b>			
A. District of Columbia	300,600	300,600	0
B. Maryland	579,600	579,600	0
C. Virginia	<b>454,400</b>	522,500	-68,100
D. WMATA	166,300	166,300	0
Subtotal	1,500,900	1,569,000	-68,100
<b>Total, Basic Program</b>	11,244,700	11,749,300	-504,600
<b>7. CONTINUOUS AIRPORT SYSTEM PLANNING</b>			
A. Update Ground Access Forecasts	318,000		
<b>GRAND TOTAL</b>	11,562,700		

**DRAFT TABLE B**  
**PROJECT CARROVER FROM FY 2007 TO FY 2008**

Work Activity	FY 2007
1. PLAN SUPPORT	
C. Constrained Long-Range Plan	50,000
3. FORECASTING APPLICATIONS	
A. Air Quality Conformity	50,000
4. DEVELOPMENT OF NETWORKS/MODELS	
A. Network Development	75,000
5. TRAVEL MONITORING	
C. Household Travel Survey	1,200,000
Subtotal	1,375,000
6. TECHNICAL ASSISTANCE	
A. District of Columbia	72,000
B. Maryland	306,500
C. Virginia	98,700
D. WMATA	250,000
Subtotal	727,200
<b>TOTAL</b>	<b>2,102,200</b>

**NATIONAL CAPITAL REGION  
TRANSPORTATION PLANNING BOARD**

**FY 2008**

**UNIFIED PLANNING WORK PROGRAM  
FOR TRANSPORTATION PLANNING  
FOR THE  
WASHINGTON METROPOLITAN REGION**

**DRAFT**

**March 21, 2007**

The preparation of this program was financially aided through grants from the District of Columbia Department of Transportation; Maryland Department of Transportation; Virginia Department of Transportation; U.S. Department of Transportation, Federal Highway Administration; and the U.S. Department of Transportation, Federal Transit Administration, under the Federal Transit Act.

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## I. INTRODUCTION

### Purpose

The **FY 2008 Unified Planning Work Program (UPWP) for Transportation Planning for the Washington Metropolitan Region** incorporates in one document all federally assisted state, regional, and local transportation planning activities proposed to be undertaken in the region from July 1, 2007 through June 30, 2008. The UPWP provides a mechanism for the coordination of transportation planning activities in the region, and is required as a basis and condition for all federal funding assistance for transportation planning by the joint planning regulations of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

This work program describes all transportation planning activities utilizing federal funding, including Title I Section 112 metropolitan planning funds, Title III Section 5303 metropolitan planning funds, and Federal Aviation Administration Continuing Airport System Planning (CASP) funds. It identifies state and local matching dollars for these federal planning programs, as well as other closely related planning projects utilizing state and local funds.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA) created a number of planning requirements. On October 28, 1993, the FHWA and FTA issued final regulations regarding metropolitan planning.

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), which became law on August 11, 2005, reaffirms the structure of the metropolitan planning process, and increases federal financial support for it. Most of the modifications to the process are aimed at streamlining and strengthening the provisions included in ISTEA in 1991 and the Transportation Equity Act for 21st Century (TEA-21) of 1998. On June 9, 2006, the FHWA and FTA issued proposed regulations regarding metropolitan planning in response to SAFETEA-LU. The final regulations are anticipated to be issued in the spring of 2007. This work program has been developed to comply with the proposed regulations regarding metropolitan planning that address the new requirements in SAFETEA-LU as currently identified. If the final regulations change any specific requirements that affect the activities in this work program, the work program will be amended so that the work activities comply with the final regulations.

On September 21, 1994, the National Capital Region Transportation Planning Board (TPB) adopted the initial financially-constrained Long Range Transportation Plan for the National Capital Region (CLRP) as required by the final regulations. On September 30, 1996, FHWA and FTA issued a joint "Certification Review" of the TPB planning process and found that "the metropolitan planning process fully meets all the requirements of the October 28, 1993 Federal metropolitan planning regulations, 23 CFR Part 450, Subpart C." On July 15, 1998 the TPB approved the document: *1997 Update to the*

*Financially Constrained Long Range Transportation Plan for the National Capital Region*, which summarizes the first three-year update to the 1994 plan. On January 19, 2000, FHWA and FTA presented their final Certification Report on the TPB planning process and found that " the metropolitan planning process fully meets all the requirements of the October 28, 1993 Federal metropolitan planning regulations, 23 CFR Part 450, Subpart C." On October 18, 2000 the TPB approved the *2000 Financially Constrained Long Range Transportation Plan for the National Capital Region*, which is the second three-year update to the CLRP. On June 9, 2003, FHWA and FTA transmitted their final Certification Report on the TPB planning process which found that " the metropolitan planning process fully meets all the requirements of the October 28, 1993 Federal metropolitan planning regulations, 23 CFR Part 450, Subpart C." On December 17, 2003, the TPB approved the *2003 Financially Constrained Long Range Transportation Plan for the National Capital Region*, which is the third three-year update to the CLRP. On October 18, 2006, the TPB approved the *2006 Financially Constrained Long Range Transportation Plan for the National Capital Region*, which is the fourth three-year update to the CLRP.

The Clean Air Act Amendments (CAAA) of 1990 require that the transportation actions and projects in the CLRP and Transportation Improvement Program (TIP) support the attainment of federal health standards for ozone. The CLRP and TIP have to meet specific requirements as specified by the Environmental Protection Agency (EPA) regulations issued on November 24, 1993, with amendments on August 15, 1997 and supplemental guidance on May 14, 1999, regarding criteria and procedures for determining air quality conformity of transportation plans, programs and projects funded or approved by the FHWA and FTA. These conformity requirements are also addressed in this document.

This document details the planning activities that must be accomplished to address the annual planning requirements such as preparing the TIP and a Congestion Management System. It describes the tasks required to meet the approval dates for the region's CLRP and the TIPs, and outlines the activities for the subsequent years.

This UPWP builds upon the previous UPWP, and is the result of close cooperation among the transportation agencies in the region. This UPWP was prepared with the involvement of these agencies, acting through the TPB, the TPB Technical Committee and its subcommittees.

## **Responsibilities for Transportation Planning**

The National Capital Region Transportation Planning Board (TPB) is the organization responsible for conducting the continuing, cooperative, comprehensive (3-C) transportation planning process for the Washington metropolitan region in accordance with requirements of Section 134 (Title 23 U.S.C) of the Federal Highway Act of 1962, and Section 8 of the Federal Transit Act. The TPB is the official Metropolitan Planning Organization (MPO) for transportation planning for the Washington metropolitan region, designated by the Governors of Maryland and Virginia and the Mayor of the District of

Columbia, under Section 134 of the Federal Aid Highway Act, and the Joint Planning regulations of FTA and FHWA.

The TPB is composed of representatives from the 19 cities and counties, including the District of Columbia, that are members of the Metropolitan Washington Council of Governments(COG), the City of Manassas, the St. Charles Urbanized Area of Charles County, the two state and the District transportation agencies, the Washington Metropolitan Area Transit Authority (WMATA), the Metropolitan Washington Airports Authority (MWAA), four federal agencies, the General Assemblies of Maryland and Virginia, and private transportation service providers. When matters of particular importance are before the TPB, a special voting procedure may be invoked that weights the votes of local jurisdiction members according to population.

Figure 1 lists the organizations represented on the TPB and its Technical Committees, and Figure 2 shows the geographical location of each of the participating local jurisdictions. The TPB also serves as the transportation policy committee of COG. This relationship serves to insure that transportation planning is integrated with comprehensive metropolitan planning and development, and is responsive to the needs of the local governments in the area.

Policy coordination of regional highway, transit, bicycle, pedestrian and intermodal planning is the responsibility of the TPB. This coordinated planning is supported by the three departments of transportation (DOTs), FTA, FHWA, and the member governments of COG. The TPB coordinates, reviews and approves work programs for all proposed federally assisted technical studies as part of the UPWP. The relationship among land use, environmental and transportation planning for the area is established through the continuing, coordinated land-use, environmental and transportation planning work programs of COG and TPB. Policy coordination of land use and transportation planning is the responsibility of COG, through its Metropolitan Development Policy Committee (MDPC) and the Transportation Planning Board. COG's regional land use cooperative forecasts are consistent with the adopted regional Long Range Transportation Plan.

The chairman of the TPB and the state transportation directors are members of the Metropolitan Washington Air Quality Committee (MWAQC), which was formed under the authority of the governors of Maryland and Virginia, and the mayor of the District of Columbia to recommend the region's air quality plans. These recommendations will be forwarded to the governors and mayor for inclusion in the State Implementation Plans (SIPs) they submit to EPA.

The roles and responsibilities involving the TPB, state and local government transportation agencies, and other MPOs for cooperatively carrying out transportation planning and programming in the Washington region have been established over several years. The responsibilities for the primary planning and programming activities are indicated in Figure 3. Two agreements involving the TPB and the Fredericksburg Area MPO in Virginia and Charles and Calvert Counties in Maryland are included in the Appendix

**Figure 1**  
**ORGANIZATIONS REPRESENTED ON**  
**THE TPB AND/OR ITS TECHNICAL COMMITTEES**

**VIRGINIA**

Arlington County	Northern Virginia Regional
Fairfax County	Commission
Loudoun County	Northern Virginia Transportation
Prince William County	Commission
City of Alexandria	Virginia Department of Transportation
City of Fairfax	Virginia Department of Rail and Public
City of Falls Church	Transportation
City of Manassas	Virginia Department of Aviation
City of Manassas Park	Virginia General Assembly
	Potomac and Rappahannock
	Transportation Commission

**MARYLAND**

Frederick County	City of Greenbelt
Montgomery County	City of Rockville
Prince George's County	City of Takoma Park
St. Charles Urbanized Area of Charles Co	The Maryland-National Capital Park and
City of Bowie	Planning Commission
City of College Park	Maryland Department of Transportation
City of Frederick	Maryland General Assembly
City of Gaithersburg	

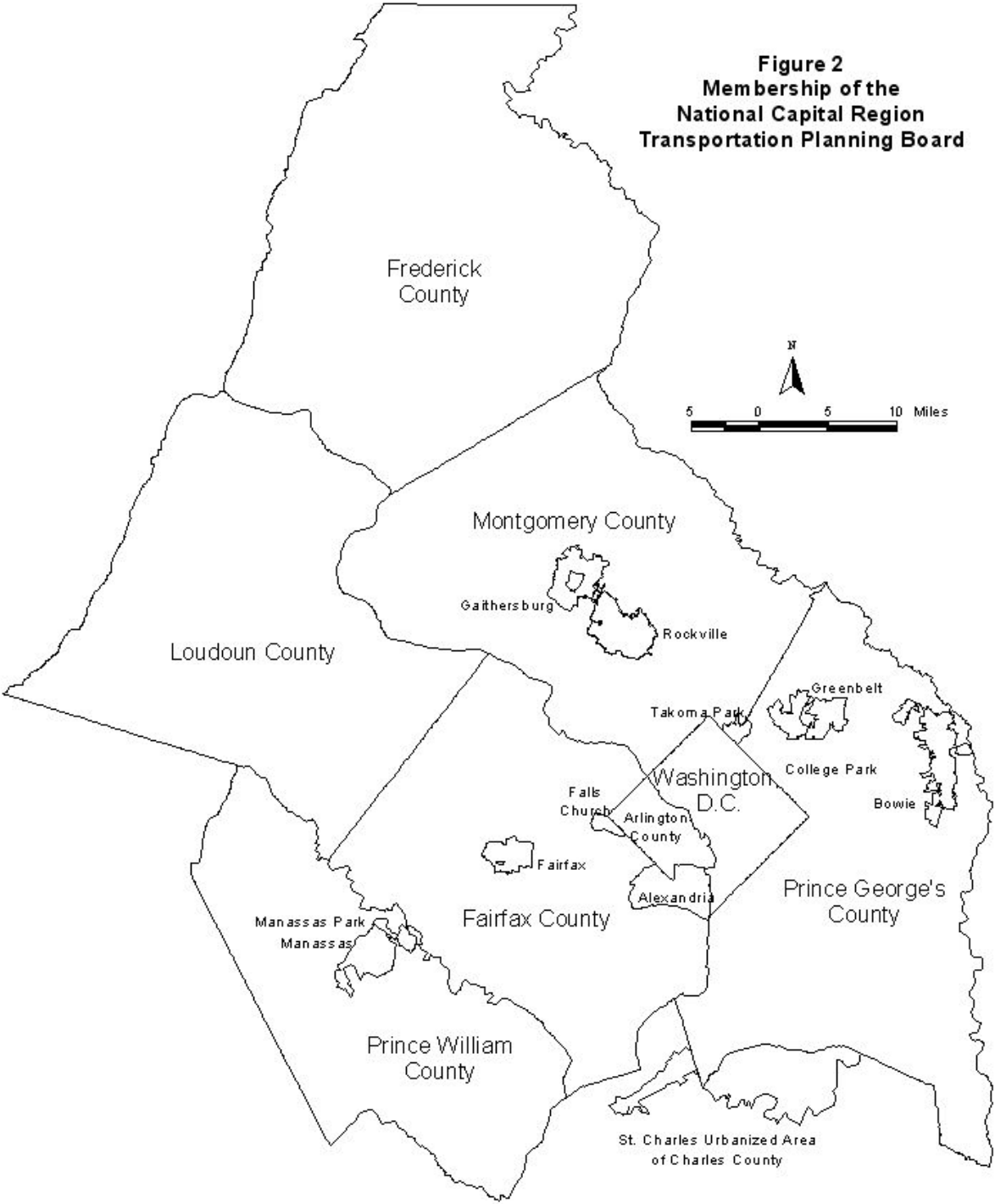
**DISTRICT OF COLUMBIA**

D.C. Council  
D.C. Department of Transportation  
D.C. Office of Planning

**REGIONAL, FEDERAL AND PRIVATE SECTOR**

Washington Metropolitan Area Transit Authority  
Metropolitan Washington Airports Authority  
Federal Highway Administration  
Federal Transit Administration  
National Capital Planning Commission  
National Park Service  
Private Transportation Service Providers

**Figure 2**  
**Membership of the**  
**National Capital Region**  
**Transportation Planning Board**



**Figure 3**

**TRANSPORTATION PLANNING AND PROGRAMMING RESPONSIBILITIES**

<b>Responsibility</b>	<b>Agencies</b>
UPWP Development	TPB, DOTs, WMATA, Local Govts
CLRP Development	
Plan Inputs/Update	DOTs, WMATA, Local Govts, NVTC/PRTC, MWAA
Project Selection	TPB, DOTs, WMATA, and Local Govts
Planning Certification	TPB, DOTs
Air Quality Conformity	TPB, Fredericksburg Area MPO
Financial Plan	TPB, DOTs, WMATA
Congestion Management Process	TPB, DOTs, Local Govts,
Safety Element	TPB, DOTs, Local Govts,
Transportation/Land-Use Planning	TPB, MDPC, Local Govts
Public Participation Plan	TPB
TIP Development	
TIP Inputs	DOTs, WMATA, Local Govts, NVTC/PRTC, MWAA
Project Selection	TPB, DOTs, WMATA
Planning Certification	TPB, DOTs
Air Quality Conformity	TPB, Fredericksburg Area MPO
Financial Plan	TPB, DOTs, WMATA, Local Govt., NVTC/PRTC
Human Service Transportation	
Coordination Planning	TPB, WMATA, human services agencies
Private Enterprise Participation	TPB, WMATA, Local Govts, NVTC/PRTC
Public Involvement Plan	TPB
Air Quality 2010 Attainment Plan	MWAQC, TPB, DOTs WMATA, state AQ agencies
Corridor Studies	DOTs, WMATA, TPB
Travel Demand Forecasting	TPB
Travel Monitoring	TPB, DOTs, WMATA, Local Govts

The operators of publicly owned transit services are directly involved in all aspects of this regional planning and programming process. The Washington Metropolitan Area Transit Authority (WMATA) is a voting member on the TPB. To coordinate the various transit activities with the regional planning and programming, WMATA, the local transit operators, the commuter rail operators, and other transit agencies within the region are represented on the Technical Committee and its subcommittees.

During FY 2008, the regional planning priority will be to comply with the new planning requirements in SAFETEA-LU and to complete the regional household travel survey. The TPB technical planning procedures will also continued to be strengthened. In addition to these activities directly involving the TPB, a number of corridor studies and other planning studies and programs are underway throughout the region (see Figure 4).

### **Total Proposed Funding by Federal Source for FY 2008**

Proposed federal funding for the transportation planning activities in this UPWP relies upon five sources: FTA Section 5303, FHWA Section 112, FAA Continuous Airport System Planning (CASP), FHWA State Planning and Research (SPR) and special federal funding. The proposed funding amounts (including state and local matching funds) for the TPB work program are shown in Table 1 on page 1-13.

Funding levels for this UPWP are slightly less than those for FY 2007. The new FY 2007 funding level in Table 1 under the "FTA Section 5303" column has increased about 2 percent from the FY 2007 level as amended on October 18, 2006, and new funding under the "FHWA Section 112" column has decreased about 11 percent from FY 2007 as amended. The total budget for the Basic Program without carryover funding from FY 2007 is about 9 percent less than the FY 2007 total as amended.

**Figure 4**  
**TRANSPORTATION PLANNING STUDIES**  
**WITHIN THE WASHINGTON METROPOLITAN AREA 2007**

<u>Name</u>	<u>Primary Agencies</u>	<u>Schedule</u>	<u>Products</u>
<b>Regional</b>			
Regional Mobility and Accessibility Scenario Study	TPB	2007	Outreach
Update of Long-Range	TPB, state DOTs, WMATA, local govts.	2007	CLRP
Regional Value Pricing Study	TPB	2007	Report
Regional ITS Architecture Update	TPB, state DOTs, WMATA, local govts.	2007	Report
Station Area Plans (multiple stations)	WMATA	on-going	Plans
Station Access Studies (multiple stations)	WMATA	on-going	Plans
Station Access Guidelines	WMATA	2007	Report
Metrobus Network Evaluation	WMATA	2007	Report
Priority Bus Corridors Plans	WMATA	on-going	Plans
Regional Bus Conference	WMATA	2007	Plans
Station Access & Capacity Study	WMATA	2007	Report
Transit Services Equity Study	WMATA	2007	Report
Metrorail Passenger Survey	WMATA	2007	Survey
Infill Station Assessment	WMATA	2007	Plans
MetroAccess Accessible Paths	WMATA	2007	Report



Figure 4 **PLANNING STUDIES 2007** (Continued)

<u>Name</u>	<u>Primary Agencies</u>	<u>Schedule</u>	<u>Products</u>
CSX Railroad Relocation Study	NPCPC	2007	Report
<b>Virginia</b>			
Idea 66: Spot Improvements (Inside the Beltway)	VDOT-NoVA	2007	PE
I-66 Corridor Study (Outside the Beltway)	VDOT	2009	NEPA
I-95/I-395 HOT Lane (PPTA)	VDOT	2007	NEPA
Capital Beltway Southside Mobility Study	VDOT	2008	Report
US 1 Location Study	VDOT, Local Jurisdictions	2007	EA
<b>Maryland</b>			
Capital Beltway Study	MDOT, VDOT, Montgomery Prince George's Counties	2007	DEIS
I-270 Multi-Modal Corridor Study	MDOT/SHA, Montgomery & Frederick Counties	2008	PE/FEIS
Corridor Cities Transitway Study	MDOT/MTA	2007	PE/FEIS
Purple Line (Bethesda to Silver Spring/ Silver Spring to New Carrollton)	MDOT/MTA	2007	AA/DEIS
MD 5 Transportation Study( I-495 to US 301)	MDOT/SHA	2008	DEIS
US 301 Waldorf Study (US 301from T.B. to	MDOT/SHA	2009	DEIS

Figure 4 **PLANNING STUDIES 2007** (Continued)

<u>Name</u>	<u>Primary Agencies</u>	<u>Schedule</u>	<u>Products</u>
south of Waldorf)			
US 301 Governor Harry W. Nice Bridge	MD Transportation Authority	2008	DEIS
University of Maryland Connector	MDOT/SHA	2009	DEIS
MD 223 Study (Temple Hill Road to MD 5)	MDOT/SHA	2010	DEIS
MD 197 Study (MD 450 Relocated to Kenhill Drive)	MDOT/SHA	2009	DEIS

### **District of Columbia**

Theodore Roosevelt Memorial Bridge Study	DDOT/FHWA	2007	Report
14th Street Bridge Feasibility Study	FHWA, DDOT, VDOT	on-going	EIS
Baltimore/Washington MAGLEV Deployment	DDOT, MDOT	on-going	EIS
White House Area Transportation Study	US DOT	2007`	Report
DC Multi-Corridor Alternatives Analysis	DDOT/WMATA	2007`	Plan
Transportation Vision Plan Update	DDOT	2007	Report
ITC/New York Avenue Study	DDOT	2007	Report

Figure 4 **PLANNING STUDIES 2007 (Continued)**

<u>Name</u>	<u>Primary Agencies</u>	<u>Schedule</u>	<u>Products</u>
DRAFT 3/21/2007			

Assessment of Efficiency in Parking Pricing and Procedures	DDOT	2007	Report
Whitehurst Freeway/Theodore Roosevelt Bridge/M Street/Lower K Street Renewal and Environmental Study	DDOT	2007	EIS
Neighborhood Transportation Planning Studies	DDOT	on-going	Studies
Traffic Calming Studies	DDOT	on-going	Reports
Parking Studies	DDOT	on-going	Reports
South Capitol Street (EIS)/AWI	DDOT	2007	DEIS
Kenilworth Avenue Corridor Study/AWI	DDOT	on-going	Study
Union Station Intermodal Center	DDOT	2008	Report
14th Street Streetscape Design & Transportation	DDOT	2007	Study
Washington Circle Pedestrian Safety	DDOT	2007	Study
Congress Heights Traffic Impact Study	DDOT	2007	Report
Woodland Terrace Traffic Impact Study	DDOT	2007	Report
Fairlawn Traffic Impact Study	DDOT	2007	Report
Southern Avenue Streetscape and Traffic Impact Design	DDOT	2007	Study/Plan

Figure 4 **PLANNING STUDIES 2007** (Continued)

<u>Name</u>	<u>Primary Agencies</u>	<u>Schedule</u>	<u>Products</u>
Blagden Avenue	DDOT	2007	EA



**DRAFT**  
**TABLE 1**  
**FY 2008 TPB PROPOSED FUNDING BY FEDERAL STATE AND LOCAL SOURCES**  
**(July 1, 2007 to June 30, 2008)**

	<b>FTA SECT 5303 80% FED &amp; 20% STA/ LOC</b>	<b>FHWA SECT 112 80% FED &amp; 20% STA/ LOC</b>	<b>FAA CASP 90% FED &amp; 10% LOC</b>	<b>TOTALS</b>
<b>ALLOTMENTS PROVIDED BY DDOT</b>				
NEW FY 2008	387,000	1,840,000		2,227,000
UNOBLIGATED FY 2006	57,800	211,600		269,400
<b>SUBTOTAL</b>	<b>444,800</b>	<b>2,051,600</b>		<b>2,496,400</b>
<b>ALLOTMENTS PROVIDED BY MDOT</b>				
NEW FY 2008	937,900	3,355,600		4,293,500
UNOBLIGATED FY 2006	56,200	662,700		718,900
<b>SUBTOTAL</b>	<b>994,100</b>	<b>4,018,300</b>		<b>5,012,400</b>
<b>ALLOTMENTS PROVIDED BY VDOT</b>				
NEW FY 2008	754,000	2,612,000		3,366,000
UNOBLIGATED FY 2006	71,300	298,500		369,800
<b>SUBTOTAL</b>	<b>825,300</b>	<b>2,910,500</b>		<b>3,735,800</b>
<b>TPB BASIC PROGRAM</b>				
TOTAL NEW FY 2008	2,078,900	7,807,600		9,886,500
TOTAL UNOBLIGATED FY 2006	185,300	1,172,800		1,358,100
<b>SUBTOTAL</b>	<b>2,264,200</b>	<b>8,980,400</b>		<b>11,244,600</b>
<b>TOTAL BASIC PROGRAM</b>	<b>2,264,200</b>	<b>8,980,400</b>		<b>11,244,600</b>
<b>GRAND TOTAL</b>	<b>2,264,200</b>	<b>8,980,400</b>	<b>318,000</b>	<b>11,562,600</b>

"New FY2008 funds" refer to newly authorized funds for the FY2008 UPWP

"Unobligated FY2006 funds" refer to unexpended funds from the completed FY2006 UPWP

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## II. PROPOSED FY 2008 TPB WORK PROGRAM AND BUDGET

### Program Structure and Work Item Budgets

The FY 2008 work Program comprises seven major work activities and revises the structure in the FY 2007 program to more clearly address the SAFETEA-LU planning requirements. The tasks to be completed under each of the work activities are described in the following sections. The staff of the COG Department of Transportation Planning will carry out these activities, with the assistance of staff in other COG departments and supplementary consultant support.

The work program has been structured to clearly identify the specific work products to be developed, the linkages between them, and the TPB entity responsible for oversight of the products. The relationship and interactions of the seven major work activities are shown in Figure 5 on page 2-3.

The first major activity, **Plan Support** includes the preparation and coordination of the policy and planning products necessary for conducting an effective transportation planning process for the region. The UPWP, the transportation improvement program (TIP) and the financially-constrained long-range plan (CLRP) are required by federal law and regulations. As shown in the figure, **Coordination Planning** includes related activities such as the regional congestion management process (CMP), safety planning, management, operations and emergency preparedness, freight planning, the financial plan, regional bus planning, and bicycle and pedestrian planning. Public participation applies to all of the policy products. Human services transportation coordination planning addresses the new SAFETEA-LU requirement for coordination of the FTA programs for elderly persons and persons with disabilities and job access and reverse commute, and the new freedom program. The Transportation /Land Use Connection (TLC) Program began as a pilot program in FY 2007 to improve the coordination between land use and transportation planning. **Continuous Airport System Planning (CASP)** utilizes the methods and data work activities for airport and airport-serving facilities in the region.

The second major activity, **Forecasting Applications** includes forecasting applications such as air quality conformity and regional studies to provide the substantive inputs for the policy products. As shown in the figure, **Development of Networks and Models** interact with **Travel Monitoring**, which provides empirical travel information from congestion monitoring and survey and analysis activities. Both products and methods activities provide input for the technical products.

The **Technical Assistance** activity responds to requests from state and local governments and transit operating agencies for applying TPB methods and data to support corridor, project, and sub-area transportation and land use studies related to regional transportation planning priorities.

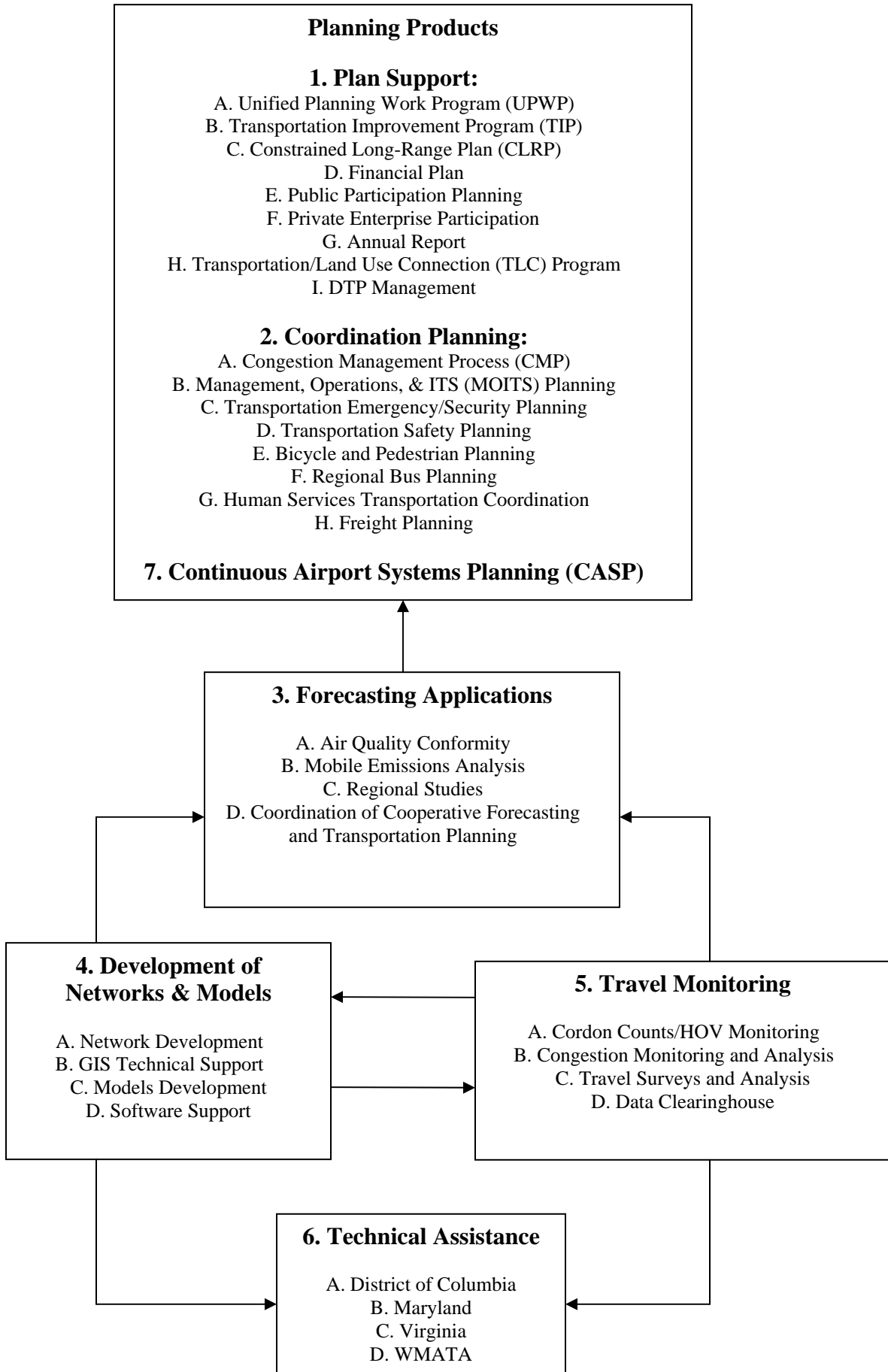
The proposed budget levels by funding source, which include FTA and FHWA funds together with state and local match, are shown in Table 2 on page 2-5. The TPB committee or subcommittee responsible for the specific work activities listed in Table 2 are shown in Figure 6 on page 2-7. A detailed breakdown of staffing and other budgetary requirements is provided in Table 3 on page 2-6.

Funding for the TPB Basic Work Program is about similar to the FY 2007 level, and the FY 2008 UPWP continues and expands the work activities in the FY 2007 UPWP. The structure and content of this work program are summarized as follows:

- **Under Section 1 - Plan Support**, most of the activities have been conducted on an annual basis in previous years. The new one is the Transportation /Land Use Connection (TLC) Program (item H) which began as a pilot program in FY 2007 to improve the coordination between land use and transportation planning.
- **Under Section 2 - Coordination Planning**, some of the activities have been conducted on an annual basis in previous years. The new ones that focus on SAFETEA-LU requirements include Congestion Management Process (CMP)(item A), Transportation Emergency Preparedness (item C), Transportation Safety Planning (item D), Regional Bus Planning (item F), Human Services Transportation Coordination Planning (item G), and Freight Planning (item H).
- **Under Section 3 - Forecasting Applications**, all of the activities have been conducted on an annual basis in previous years.
- **Under Section 4 - Development of Networks/Models**, all of the activities have been conducted on an annual basis in previous years.
- **Under Section 5 - Travel Monitoring**, all of the activities have been conducted on an annual basis in previous years.
- **Section 6 - Technical Assistance and Section 7 - Continuous Airport System Planning (CASP)** represent the continuation of activities that are conducted each year.



**Figure 5 - DRAFT**  
**How FY2008 UPWP Work Items are Related**



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## TPB FY 2008 WORK PROGRAM BY FUNDING SOURCES

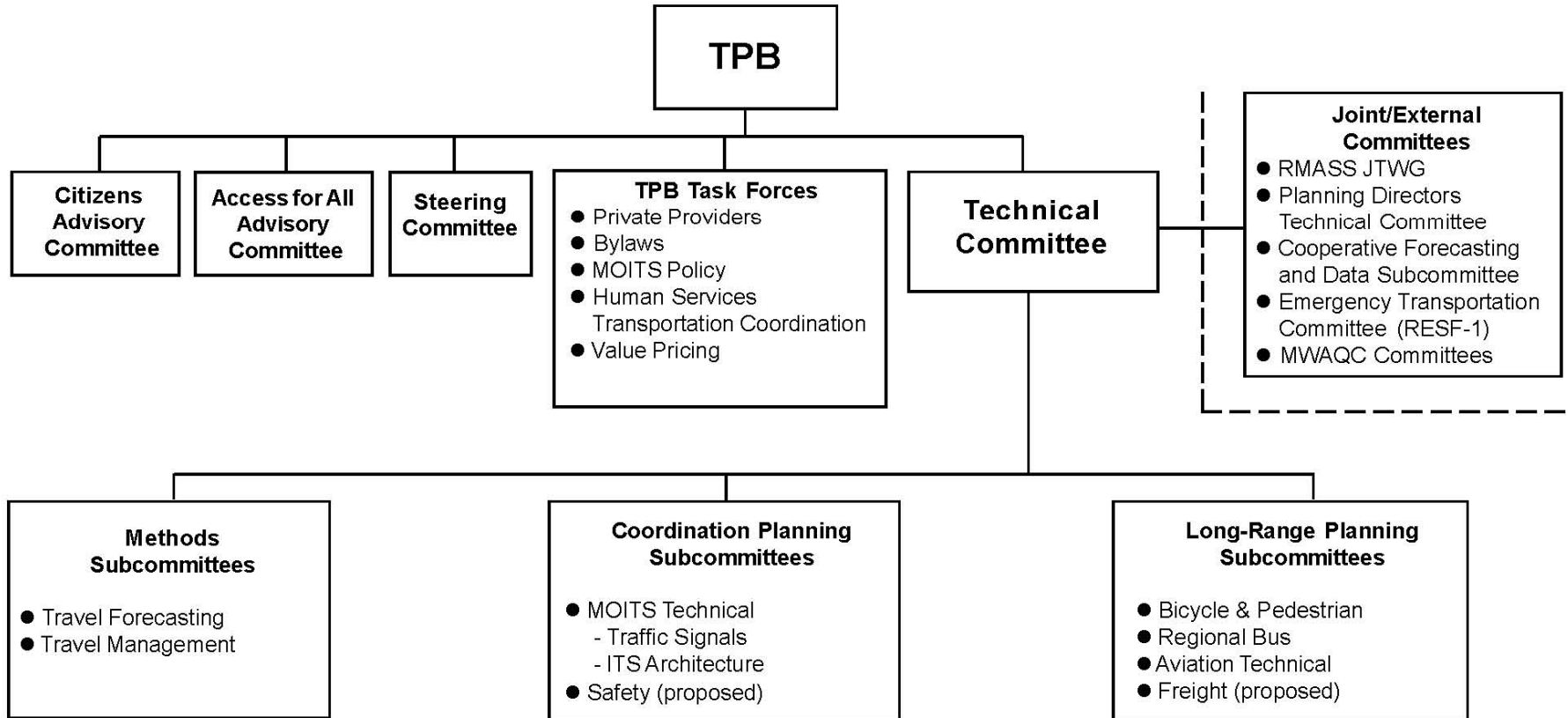
WORK ACTIVITY	TOTAL COST	FTA/STATE/LOCAL	FHWA/STATE/LOCAL	OTHER FUND
<b>1. PLAN SUPPORT</b>				
A. Unified Planning Work Program (UPWP)	70,700	13,624	57,076	
B. Transp Improvement Program (TIP)	151,700	29,233	122,467	
C. Constrained Long-Range Plan	508,100	97,911	410,189	
D. Financial Plan	84,000	16,187	67,813	
E. Public Participation	323,900	62,416	261,484	
F. Private Enterprise Participation	18,300	3,526	14,774	
G. Annual Report	80,100	15,435	64,665	
H. Transportation/Land Use Connection Progr	255,000	49,139	205,861	
I. DTP Management	452,100	87,120	364,980	
Subtotal	1,943,900	374,591	1,569,309	
<b>2. COORDINATION PLANNING</b>				
A. Congestion Management Process (CMP)	150,000	28,905	121,095	
B. Management, Operations, and ITS Planning	350,000	67,445	282,555	
C. Trans. Emergency/Security Planning	75,400	14,530	60,870	
D. Transportation Safety Planning	75,000	14,453	60,547	
E. Bicycle and Pedestrian Planning	108,700	20,947	87,753	
F. Regional Bus Planning	100,000	19,270	80,730	
G. Human Service Transportation Coordination	105,000	20,234	84,766	
H. Freight Planning	101,000	19,463	81,537	
Subtotal	1,065,100	205,246	859,854	
<b>3. FORECASTING APPLICATIONS</b>				
A. Air Quality Conformity	513,200	98,894	414,306	
B. Mobile Emissions Analysis	640,100	123,348	516,752	
C. Regional Studies	415,800	80,125	335,675	
D. Coord Coop Forecasting & Transp Planning	676,800	130,420	546,380	
Subtotal	2,245,900	432,787	1,813,113	
<b>4. DEVELOPMENT OF NETWORKS/MODELS</b>				
A. Network Development	694,500	133,831	560,669	
B. GIS Technical Support	498,800	96,119	402,681	
C. Models Development	969,200	186,766	782,434	
D. Software Support	178,900	34,474	144,426	
Subtotal	2,341,400	451,190	1,890,210	
<b>5. TRAVEL MONITORING</b>				
A. Cordon Counts	230,000	44,321	185,679	
B. Congestion Monitoring and Analysis	521,200	100,436	420,764	
C. Travel Surveys and Analysis				
Household Travel Survey	1,128,400	217,444	910,956	
D. Regional Trans Data Clearinghouse	267,900	51,625	216,275	
Subtotal	2,147,500	413,825	1,733,675	
<b>Core Program Total (1 to 5)</b>	9,743,800	1,877,638	7,866,162	
<b>6. TECHNICAL ASSISTANCE</b>				
A. District of Columbia	300,600	49,588	251,012	
B. Maryland	579,600	95,613	483,987	
C. Virginia	454,400	74,960	379,440	
D. WMATA	166,300	166,300	0	
Subtotal	1,500,900	386,462	1,114,438	
<b>Total, Basic Program</b>	11,244,700	2,264,100	8,980,600	
<b>7. CONTINUOUS AIRPORT SYSTEM PLANNING</b>				
A. Update Ground Access Forecasts	318,000			318,000
<b>GRAND TOTAL</b>	11,562,700	2,264,100	8,980,600	318,000

TABLE 3

## TPB FY 2008 BUDGET AND WORK PROGRAM BY EXPENDITURE CATEGORY

WORK ACTIVITY	DIRECT SALARIES DTP STAFF	DIRECT SALARIES OTHER COG STAFF	M & A 27%	LEAVE BENEFITS 18%	FRINGE BENEFITS 19%	INDIRECT COSTS 38%	DATA & PC COSTS	CONSULTANT	DIRECT COSTS	TOTAL
<b>1. PLANS SUPPORT</b>										
A. Unified Planning Work Program	27,059	206	7,362	6,233	7,763	18,477	100	0	3,500	70,700
B. Transportation Improvement Program	56,873	2,859	16,128	13,655	17,008	40,478	200	0	4,500	151,700
C. Constrained Long-Range Plan	177,566	17,741	52,733	44,647	55,610	132,353	1,250	25,000	1,200	508,100
D. Financial Plan	34,132	0	9,216	7,803	9,719	23,130	0	0	0	84,000
E. Public Participation	117,690	920	32,025	27,114	33,772	80,378	0	25,000	7,000	323,900
F. Private Enterprise Participation	7,230	206	2,008	1,700	2,117	5,039	0	0	0	18,300
G. Annual Report	22,288	0	6,018	5,095	6,346	15,104	0	5,000	20,250	80,100
H. Transportation/Landuse Connection Program	46,729	0	12,617	10,682	13,305	31,667	0	140,000	0	255,000
I. DTP Management	88,229	15,631	28,042	23,742	29,573	70,383	0	0	196,500	452,100
<b>Subtotal</b>	<b>577,796</b>	<b>37,563</b>	<b>166,147</b>	<b>140,671</b>	<b>175,214</b>	<b>417,009</b>	<b>1,550</b>	<b>195,000</b>	<b>232,950</b>	<b>1,943,900</b>
<b>2.COORDINATION PLANNING</b>										
A. Congestion Management Process	60,951	0	16,457	13,933	17,355	41,304	0	0	0	150,000
B. Management, Operations, & ITS Planning	121,902	0	32,913	27,867	34,710	82,609	0	50,000	0	350,000
C. Trans. Emmergency/Security Planning	0	30,638	8,272	7,004	8,724	20,762	0	0	0	75,400
D. Transportation Safety Planning	20,317	0	5,486	4,644	5,785	13,768	0	25,000	0	75,000
E. Bicycle and Pedestrian Planning	33,198	0	8,963	7,589	9,453	22,497	0	27,000	0	108,700
F. Regional Bus Planning	40,634	0	10,971	9,289	11,570	27,536	0	0	0	100,000
G. Human Service Transportation Coordination	42,666	0	11,520	9,753	12,148	28,913	0	0	0	105,000
H. Freight Planning	26,818	0	7,241	6,131	7,636	18,174	0	35,000	0	101,000
<b>Subtotal</b>	<b>346,485</b>	<b>30,638</b>	<b>101,823</b>	<b>86,210</b>	<b>107,380</b>	<b>255,564</b>	<b>0</b>	<b>137,000</b>	<b>0</b>	<b>1,065,100</b>
<b>3. FORECASTING APPLICATIONS</b>										
A. Air Quality Conformity	175,830	21,171	53,190	45,034	56,093	133,501	15,080	0	13,300	513,200
B. Mobile Emissions Analysis	208,851	43,120	68,032	57,600	71,745	170,752	0	20,000	0	640,100
C. Regional Studies	120,117	36,900	42,395	35,894	44,708	106,406	25,481	0	3,899	415,800
D. Coordination Cooperative Forecasting and Transportation Planning	88,253	163,189	67,889	57,480	71,594	170,394	55,500	0	2,500	676,800
<b>Subtotal</b>	<b>593,052</b>	<b>264,380</b>	<b>231,507</b>	<b>196,009</b>	<b>244,140</b>	<b>581,053</b>	<b>96,061</b>	<b>20,000</b>	<b>19,699</b>	<b>2,245,900</b>
<b>4. DEVELOPMENT OF NETWORKS/MODELS</b>										
A. Network Development	273,156	0	73,752	62,443	77,777	185,109	19,163	0	3,100	694,500
B. GIS Technical Suport	173,750	0	46,913	39,719	49,473	117,745	49,500	0	21,700	498,800
C. Models Development	314,225	0	84,841	71,832	89,471	212,940	21,886	139,000	35,005	969,200
D. Software Support	69,032	0	18,639	15,781	19,656	46,781	0	0	9,011	178,900
<b>Subtotal</b>	<b>830,164</b>	<b>0</b>	<b>224,144</b>	<b>189,776</b>	<b>236,376</b>	<b>562,575</b>	<b>90,549</b>	<b>139,000</b>	<b>68,816</b>	<b>2,341,400</b>
<b>5. TRAVEL MONITORING</b>										
A. Cordon Counts	37,900	0	10,233	8,664	10,792	25,684	10,000	0	126,727	230,000
B. Congestion Monitoring and Analysis	171,150	0	46,210	39,125	48,732	115,983	0	100,000	0	521,200
C. Travel Surveys and Analysis										
Household Travel Survey	330,882	0	89,338	75,640	94,213	224,228	16,500	273,500	24,100	1,128,400
D. Regional Transportation Clearinghouse	108,858	0	29,392	24,885	30,996	73,770	0	0	0	267,900
<b>Subtotal</b>	<b>648,790</b>	<b>0</b>	<b>175,173</b>	<b>148,313</b>	<b>184,733</b>	<b>439,664</b>	<b>26,500</b>	<b>373,500</b>	<b>150,827</b>	<b>2,147,500</b>
<b>Core Program Total (1 to 5)</b>	<b>2,996,287</b>	<b>332,581</b>	<b>898,794</b>	<b>760,979</b>	<b>947,842</b>	<b>2,255,864</b>	<b>214,660</b>	<b>864,500</b>	<b>472,292</b>	<b>9,743,800</b>
<b>6. TECHNICAL ASSISTANCE</b>										
A. District of Columbia	122,145	0	32,979	27,922	34,779	82,774	0	0	0	300,600
B. Maryland	235,514	0	63,589	53,838	67,059	159,600	0	0	0	579,600
C. Virginia	184,640	0	49,853	42,209	52,573	125,125	0	0	0	454,400
D. WMATA	67,574	0	18,245	15,447	19,241	45,793	0	0	0	166,300
<b>Subtotal</b>	<b>609,874</b>	<b>0</b>	<b>164,666</b>	<b>139,417</b>	<b>173,652</b>	<b>413,291</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,500,900</b>
<b>TOTAL BASIC PROGRAM</b>	<b>3,606,161</b>	<b>332,581</b>	<b>1,063,460</b>	<b>900,396</b>	<b>1,121,494</b>	<b>2,669,155</b>	<b>214,660</b>	<b>864,500</b>	<b>472,292</b>	<b>11,244,700</b>
<b>7. CONTINUOUS AIRPORT SYSTEM PLANNING</b>										
A. Update Ground Access Forecast - Phase 2	27,465	0	7,416	6,279	7,820	18,612	0	0	0	67,592
B. Ground Access Element Update	101,585	0	27,428	23,222	28,925	68,841	0	0	0	250,000
<b>Subtotal</b>	<b>129,050</b>	<b>0</b>	<b>34,843</b>	<b>29,501</b>	<b>36,745</b>	<b>87,453</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>317,592</b>
<b>GRAND TOTAL</b>	<b>3,735,211</b>	<b>332,581</b>	<b>1,098,304</b>	<b>929,897</b>	<b>1,158,239</b>	<b>2,756,608</b>	<b>214,660</b>	<b>864,500</b>	<b>472,292</b>	<b>11,562,292</b>

**Figure 6  
TPB Committee Structure  
and FY2008 Work Activity Oversight**



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## 1. PLAN SUPPORT

### A. THE UNIFIED PLANNING WORK PROGRAM (UPWP)

The Unified Planning Work Program (UPWP) for the Metropolitan Washington Region describes all transportation planning activities utilizing federal funding, including Title I Section 134 metropolitan planning funds, Title III Section 8 metropolitan planning funds, and Federal Aviation Administration Continuing Airport System Planning (CASP) funds. The UPWP identifies state and local matching dollars for these federal planning programs, as well as other closely related planning projects utilizing state and local funds.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Clean Air Act Amendments of 1990 (CAAA) created a number of planning requirements. On October 28, 1993, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued final regulations regarding metropolitan planning. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), which became law on August 11, 2005, reaffirms the structure of the metropolitan planning process, and increases federal financial support for it.

On June 9, 2006, the FHWA and FTA issued proposed regulations regarding metropolitan planning in response to SAFETEA-LU. The final regulations are anticipated to be issued in the spring of 2007. This work program has been developed to comply with the proposed regulations regarding metropolitan planning that address the new requirements in SAFETEA-LU as currently identified. If the final regulations change any specific requirements that affect the activities in this work program, the work program will be amended so that the work activities comply with the final regulations.

In 1994, the TPB developed and adopted the first financially-constrained Long Range Transportation Plan for the National Capital Region (CLRP) as required by the final regulations. In July 1997, the first three-year update of the CLRP was approved by the TPB, the second update was approved in October 2000, and the third update was approved in December 2003. The fourth update was approved by the TPB in October 2006.

The Environmental Protection Agency (EPA) issued regulations on November 24, 1993, followed with a succession of guidance documents, and on July 1, 2004 published the 8-hour ozone standard conformity guidance, which taken together provide criteria and procedures for determining air quality conformity of transportation plans, programs and projects funded or approved by the FHWA and FTA. These conformity requirements are addressed in this document. Under these regulations, the State Implementation Plans (SIP) for improving air quality for the region must be adopted by the states and submitted to EPA by specified dates.

The FY 2008 UPWP defined by this document details the planning activities to be accomplished between July 2007 and June 2008 to address the annual planning requirements such as preparing the Transportation Improvement Program, addressing federal environmental justice requirements, and assessing Air Quality Conformity. It describes the tasks required to meet approval dates for the region's SIPs, and outlines the activities for the subsequent years.

In addition, this document describes the integration of program activities and responsibilities of the TPB Technical Committee and its subcommittees for various aspects of the work program. It provides an overview of the regional planning priorities and describes the major transportation planning and air quality planning studies being conducted throughout the region over the next two years. It also describes the planning roles, responsibilities and procedures, as required by the final regulations, involving the TPB and the states, the publicly owned operators of mass transit services, the state air quality agencies, and another MPO to the south of the Washington metropolitan region.

During FY 2008 certain amendments may be necessary to reflect changes in planning priorities and inclusion of new planning projects. Under this task, Department of Transportation Planning (DTP) staff will identify and detail such amendments for consideration by the TPB as appropriate during the year.

In the second half of FY 2008, staff will prepare the FY 2009 UPWP. The document will incorporate suggestions from the federal funding agencies, state transportation agencies, transit operating agencies, local governments participating in TPB, and the public through the TPB's public involvement process. The new UPWP will be presented in outline to the TPB Technical Committee and the TPB in January 2008, as a draft to the Technical Committee in February 2008 and as a final document for adoption by the Technical Committee and the TPB in March 2008. The approved UPWP will be printed, distributed to the TPB, and made available to the public on the TPB web site.

This task will also include the preparation of monthly progress reports for each of the state agencies administering the planning funding, and the preparation of all necessary federal grant submission materials.

Oversight:	Technical Committee
Cost Estimate:	\$70,700
Products:	UPWP for FY 2009, amendments to FY 2008 UPWP, monthly progress reports and state invoice information, federal grant materials
Schedule:	Draft: February 2008    Final: March 2008



## B. THE TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

As required under the final planning regulations, the Transportation Improvement Program (TIP) for the Metropolitan Washington Area is a six year program of highway, transit, bicycle and pedestrian, congestion mitigation/air quality, safety and transportation enhancement projects. The TIP is updated each year and must be approved by the TPB and the governors of Maryland and Virginia and the mayor of the District of Columbia. The TIP is required as a condition for all federal funding assistance for transportation improvements within the Washington Metropolitan Statistical Area.

The new TIP will include all projects to be carried out within two 3-year periods, beginning with FY 2009-11 and then followed by FY 2012-14. Projects for funding and implementation in the first year of the program are placed in the annual element.

TIP documentation will describe major projects from the previous TIP that were implemented and identify significant delays in the implementation of major projects. The air quality conformity report will describe progress in implementing transportation emission reduction measures (TERMs) required for improving air quality.

Citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, freight shippers, users of public transit, and all other interested parties will be given an opportunity to review and comment on the proposed TIP as described under the TPB's public participation plan which anticipated to be adopted in Summer 2007. To facilitate public review, the TIP and CLRP inputs and project descriptions will be accessible electronically through the Internet. The database application for TIP project data, CLRP projects, and air quality conformity data will continue to be improved to facilitate reviewing the TIP and CLRP information. Interactive means of sharing the information in the TIP and CLRP such as querying capabilities and specialized maps or graphs will be available.

### The TIP Schedule and Project Selection

The FY 2008-13 TIP is scheduled to be adopted by the TPB in November 2007. In December 2007, TPB will issue a call for projects document requesting project or action input for the new TIP. Draft versions of the TIP will be prepared for review by the TPB Technical Committee, the TPB, and the public between June and September. This TIP will be prepared with the assistance of and in cooperation with the transportation implementing agencies in the region, including the state departments of transportation, the District of Columbia Department of Transportation, the National Park Service, the Washington Metropolitan Area Transit Authority (WMATA) and other public transit operators, and local government agencies.

The TPB will select in consultation with the states all transit, highway, congestion mitigation/air quality, and safety and enhancement projects (excluding those on the National Highway System (NHS) or the Bridge and Interstate Maintenance programs)

undertaken within the Washington Transportation Management Area (TMA). The states will select in cooperation with the TPB all projects on the NHS or funded under the Bridge and Interstate Maintenance programs undertaken within the Washington TMA.

Projects included in the TIP will be reviewed for consistency with the policies and facilities delineated in the adopted financially-constrained Long Range Transportation Plan (CLRP) for the region. Only projects, or phases of projects, that have full funding anticipated to be available within the time period contemplated for completion are included in the TIP. As described under Task I.F, a financial plan will be prepared to demonstrate how the TIP can be implemented, and indicate the sources of public, private and innovative funding.

During the year certain amendments may be needed in the FY 2008-13 TIP to reflect changes in priorities or the introduction of new project elements. Such amendments will be identified and detailed for consideration by the TPB as appropriate during the fiscal year.

#### Annual Listing of TIP Projects that Have Federal Funding Obligated

SAFETEA-LU requires that the TPB must publish or otherwise make available an annual listing of projects, consistent with the categories in the TIP, for which federal funds have been obligated in the preceding year. With the assistance of and in cooperation with the transportation implementing agencies in the region, TPB will prepare a listing of projects for which federal funds have been obligated in FY 2007.

Oversight:	Technical Committee
Cost Estimate:	\$151,700
Products:	Draft FY 2009-2014 TIP, amendments to FY 2008-2013 TIP; TIP projects with obligated federal funding in preceding year
Schedule:	Final TIP Draft for Public Comment: September 2008 TIP projects with obligated federal funding in preceding year: June 2008

#### C. CONSTRAINED LONG-RANGE TRANSPORTATION PLAN (CLRP)

The Financially Constrained Long-Range Transportation Plan (CLRP) must be updated at least every four years under SAFETEA-LU and is updated annually with amendments. These amendments generally adjust the phasing or other aspects of some of the projects or actions in the plan, include new projects with identified new funding sources, or change specific projects as new information on them became available. Updates that occur every four years include a financial analysis of

transportation revenues expected to be available.

The Transportation Vision, which was adopted by the TPB in October 1998, contains a vision statement, long-range goals, objectives, and strategies to guide transportation planning and implementation in the region. It addresses the eight planning factors in SAFETEA-LU. The Vision is the TPB Policy Element of the CLRP.

In FY 2008, the TPB will adopt the first CLRP that must be SAFETEA-LU compliant. The CLRP program element will address the following new SAFETEA-LU requirements: 1) consultation with natural resource and environmental agencies, 2) a discussion of potential environmental mitigation strategies and 3) user-friendly, web-based materials on the long-range plan that help the public visualize projects in the CLRP.

The CLRP will be documented in several ways and public materials will be provided during plan development and after plan approval. The TPB “long-range plan web page” ([www.mwcog.org/clrp](http://www.mwcog.org/clrp)) will be utilized to document the CLRP by describing the process, related planning activities, the major projects, the performance of the plan and how the public can get involved. The website also makes CLRP related-process and technical documentation readily accessible. Information on the plan, on the website and in hard copy, will continue to be improved so that the materials are more useful to a variety of audiences, less technical and easier for the public to understand.

### The 2007 CLRP

In December 2006, the TPB issued a “call for projects” document requesting project, programs or strategies for inclusion in the 2007 CLRP. The 2007 CLRP will include a discussion of potential environmental mitigation strategies. During the development of the plan, a dialogue will be started with natural resource and environmental agencies to kick-off the required-consultation process. Web-based visualization techniques will be utilized to show the major highway and transit projects in the 2007 CLRP.

Materials describing the draft 2007 CLRP were developed in the Spring of 2007. The materials included maps, major project descriptions, and analysis from the previous year's CLRP. The purpose of the materials would be to make recent information on the current plan more accessible to facilitate public comments on the update to the plan. Draft materials on the 2007 CLRP and interactive web-based maps will be prepared for review by the TPB Technical Committee, the TPB, and the public between March and October 2007.

### The 2008 CLRP

In December 2007, TPB will issue a “call for projects” document requesting project, programs or strategies for inclusion in the 2008 CLRP. Draft materials describing the

CLRP will be prepared for review by the TPB Technical Committee, the TPB, and the public between March and September 2008. The TPB is scheduled to adopt the 2008 CLRP in November 2008.

Oversight:	Technical Committee
Cost Estimate:	<del>\$558,100</del> <b>\$508,100</b> (\$558,100 after \$50,000 carryover from FY 2007)
Products:	Documentation of 2007 CLRP and draft amendments for 2008 CLRP on TPB plan webpage with interactive maps and related materials
Schedule:	2007 CLRP documentation - March 2008 Draft amendments for 2008 CLRP - June 2008

#### D. FINANCIAL PLAN

As required under federal planning regulations, both the TIP and the financially-constrained long-range transportation plan (CLRP) for the Washington region must have a financial plan that demonstrates how they can be implemented and show the sources of funding expected to be made available to carry them out. During FY 2006, a new financial analysis and plan for the 2006 CLRP update was prepared, including cost estimates for the new system expansion projects and revised cost estimates for system maintenance and rehabilitation. New revenue projections were also prepared. All cost and revenue estimates were through 2030.

The project solicitation document for the 2007 CLRP requested that the implementing agencies review and revise the cost estimates for the system expansion projects. During FY 2007, a review and update will be made of the financial analysis and plan for the 2006 CLRP, including cost estimates for the new system expansion projects and revised cost estimates for system maintenance and rehabilitation. The revenue projections will also be reviewed and updated.

#### The Transportation Improvement Program

The preparation of the financial plan for the FY 2009-2014 TIP will be similar to that for the FY 2008-13 plan. Since SAFETEA-LU funding is apportioned to states, financial summaries for all TIP projects from agencies in the District of Columbia, Maryland and Virginia as well as WMATA and other transit agencies will be prepared. All projects submitted by these agencies will be grouped by the proposed SAFETEA-LU program funding categories under Surface Transportation (Title I) and Transit (Title III).

The funds programmed in the TIP for each state by SAFETEA-LU program category will be compared with the information provided by the states and transit operators on the estimated available Federal and State funds for the program period. The funds

programmed in the TIP for each state by SAFETEA-LU program category in the first and second years will be compared with the trends of the annual funding programmed in previous TIPs and with the funding reported in the annual listings of TIP projects that have federal funding obligated. Comparisons that indicate significant changes from past trends will be reviewed with the implementing agency to clarify the change. Implementing agencies will ensure that only projects for which construction and operating funds can reasonably be expected to be available will be included in the TIP. In the case of new funding sources, strategies for ensuring their availability will be identified by the implementing agency and included in the TIP. The product will be a financial summary that focuses on the first two years of the six-year period of the TIP, and it will be incorporated as a main section of the TIP for review by the public and approval by the Technical Committee and the TPB.

Oversight:	Technical Committee
Cost Estimate:	\$84,000
Products:	Financial plans for draft 2008 CLRP and FY 2009-2014 TIP
Schedule:	June 2008

## E. PUBLIC PARTICIPATION

### Background

Federal planning regulations require participation by interested parties in the development of the CLRP and the TIP. Citizens, freight shippers, public transit users, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested persons must be given a reasonable notice of and opportunity to comment on the development of both the CLRP and the TIP. The TPB has a public involvement policy with eleven general requirements and criteria and eight specific activities, which was revised on October 20, 1999.

The evaluation of the TPB's current public involvement activities will be completed in early 2007 and the Public Participation Plan required by SAFETEA-LU will be utilized for the 2007 CLRP subsequent CLRP amendments. It provides the public an opportunity to comment on the plan, including bicyclists, pedestrians and people with disabilities. SAFETEA-LU also stresses methods for public involvement such as convenient meeting times and locations and visualization techniques to describe the plan.

### FY 2008 Activities

Work activities include:

Staff will support the TPB Public Participation Plan and conduct the activities as specified in it. Staff will assist the CAC chair in preparing meeting agenda, assembling, and mailing meeting materials and preparing the CAC chair's report to the TPB. The CAC chair will also provide to the TPB an evaluation of the CAC activities by the end of November each calendar year for the first three years, and every three years thereafter. Staff will support the CAC and conduct the activities as specified in the adopted participation plan.

All public involvement efforts will be coordinated with the public outreach activities for the 2007 CLRP and the new TIP and draft 2008 CLRP. Workshops and events will be developed and held to engage the public and community leaders on key regional transportation issues. Two or more Community Leadership Institute workshops will be conducted to focus particularly on engaging community leaders who have not traditionally been involved in the regional transportation planning process. Consultant support for these activities is anticipated.

Working with staff of the state DOTs and the District of Columbia, staff will coordinate the TPB public participation plan with the state public involvement processes wherever possible to enhance public consideration of the issues, plans, and programs and reduce redundancies and costs.

Staff will produce and distribute monthly edition of *TPB News* to inform citizens, freight shippers, public transit users, affected public agencies, representatives of transportation agency employees, private providers of transportation, and other interested persons of all TPB on-going activities.

#### TPB Access for All Advisory Committee

The TPB established the Access for All Advisory Committee in 2001. The Access for All (AFA) Advisory Committee advises the TPB on transportation issues, programs, policies, and services that are important to low-income communities, minority communities and people with disabilities. The mission of this committee is to identify concerns of these groups and to determine whether and how these issues might be addressed within the TPB process. Committee membership includes approximately twenty-five engaged community leaders as well as ex-officio representation from the major transportation implementing agencies within the Metropolitan Washington Region.

The committee chair is currently Catherine Hudgins, TPB Chair and Supervisor for Fairfax County. Chair Hudgins was appointed as the chair of the committee in December 2006, after the former chair, Kathy Porter, lead the committee for three years. The AFA has developed several reports since its inception in 2001 to provide guidance to the region's transportation decision makers on ways to address the issues and concerns of persons that are typically not represented in the transportation planning process. The two most recent reports include the February 2006 "Improving Demand Responsive Services for People with Disabilities" and the July 2006 report

“Transportation Issues for Low-Income Populations”.

In FY 2008, staff will be responsible for organizing and staffing the advisory committee, conducting research on issues, organizing a disability awareness event, and writing a 2007 report identifying priority projects, programs, services and issues that are important to community groups.

Oversight:	Transportation Planning Board
Cost Estimate:	\$323,900
Products:	TPB Public Participation Plan with a proactive public involvement process that provides complete and user-friendly information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs; the monthly TPB News  Access for All report on projects, programs, services and issues important to low-income, minority and disabled communities.
Schedule:	On-going activity with forums and meetings linked to preparation of plan and TIP

#### F. PRIVATE ENTERPRISE PARTICIPATION

In June 1987, the TPB adopted its Private Enterprise Participation Policy and Procedures designed to afford maximum opportunity to private providers to participate in the development and provision of mass transportation services in the region. In April 1994, the Federal Transit Administration (FTA) rescinded its private participation guidance and changed the federal requirements regarding private enterprise participation. During FY 1995, the TPB reviewed its policy and revised it in light of the new requirements. Under this task, DTP staff will conduct the activities as specified in the policy adopted on July 19, 1995 by the TPB.

The following activities are anticipated:

- The procedures for involving private transportation providers in urban mass transportation and the activities accomplished will be documented as a section of the Transportation Improvement Program (TIP).
- To facilitate early consultation, TPB will conduct an annual forum for key transit staff from the local jurisdictions and WMATA to meet with interested private providers to discuss in general terms their plans for major bus service changes and expansions.

- Private transit providers will be afforded the opportunity to present their views on the CLRP, the TIP, and the Unified Planning Work Program while these documents are in a draft stage.
- Support will be provided to the Private Providers Task Force. This group will be the vehicle through which the above tasks are accomplished, and will advise the TPB of the private provider perspective on transit service through its chairman, who is a non-voting member of the TPB. Minutes will be prepared for Task Force meetings, as well as other documentation as required.
- Through their representation on the TPB, private transit and taxicab providers will be encouraged to contribute to the shaping of policies and strategies for the CLRP that promote effective, competitive provision of transit services, particularly in growing suburban areas and activity centers. This contribution will be reflected in the minutes and mailouts for TPB meetings, and in documentation prepared by the Private Providers Task Force.

Oversight:                    Transportation Planning Board

Cost Estimate:                \$18,300

Product:                        Documentation on Private Provider Involvement

Schedule:                      Annual Transit Forum - May 2008

   Draft in TIP for Public Comment - June 2008

G. TPB ANNUAL REPORT

Each year, DTP staff prepares a Transportation Special Report (*The Region*). This year's report will cover the main activities completed in 2007 and the 2007 CLRP. About 3,000 copies of the report will be printed and distributed around the end of FY 2008.

Oversight:                    Transportation Planning Board

Cost Estimate:                \$80,100

Product:                        *Region* magazine

Schedule:                      June 2008

H. TRANSPORTATION/LAND USE CONNECTION (TLC) PROGRAM



SAFETEA-LU stresses the importance of coordination between land use and transportation planning. This work activity was implemented as a pilot in November 2006. It created a clearinghouse to document local and state experiences with land use and transportation coordination, and offered short-term technical assistance through a consultant team to local jurisdictions to advance their coordination activities. The technical assistance provided to a locality will be specified on a task order basis for the consultant team and will be limited to \$20,000 per project.

This is a budget placeholder with a similar funding level as in FY 2007. In July 2007, after the demand for technical assistance is known and the efficacy of the pilot can be evaluated, it is anticipated that the work scope and budget will be revised.

Oversight:	TPB Technical Committee
Cost Estimate:	\$255,000
Products:	A web-based clearinghouse of information on experiences throughout the region, and technical assistance provided by a consultant team to localities that request services to advance their land use and transportation planning activities.
Schedule:	Technical assistance September 2007-June 2008

## I. DTP MANAGEMENT

This activity includes all department-wide management activities not attributable to specific project tasks in the DTP work program. Examples include the following:

- Supervision of the preparation, negotiation, and approval of the annual work program and budget, involving the State Transportation Agencies, the Technical Committee, the Program Committee, and the TPB.
- Day-to-day monitoring of all work program activities and expenditures by task.
- Day-to-day management and allocation of all staff and financial resources to insure that tasks are completed on schedule and within budget.
- Preparation for and participation in regular meetings of the TPB, the Steering Committee, the Technical Committee, and the State Technical Working Group.
- Attendance at meetings of other agencies whose programs and activities relate to and impact the TPB work program, such as local government departments.
- Response to periodic requests from TPB members, federal agencies,

Congressional offices, media, and others for information or data of a general transportation nature.

- Review of transportation proposals of regional importance submitted to TPB through the intergovernmental review process. Where significant regional impacts are likely, staff will obtain Technical Committee and Board review and approval of comments prepared.

In addition to salaries, nominal amounts are earmarked for travel related to non project specific meetings attended by the senior staff, data processing for financial monitoring and analysis, and conferences such as FTA and FHWA seminars on federal regulations and financial management. These activities represent three to four percent of the total amount allocated for DTP Management.

Oversight:	Transportation Planning Board
Cost Estimate:	\$452,100
Products:	Materials for the meetings of the TPB, the Steering Committee, the Technical Committee, and the State Technical Working Group; responses to information requests from elected officials, federal agencies and media; and participation in external meetings related to TPB work program.
Schedule:	Ongoing throughout the year

## 2. COORDINATION PLANNING

### A. CONGESTION MANAGEMENT PROCESS (CMP)

The regional Congestion Management Process (CMP) is a required component of the regional transportation planning process. The CMP is to address the systematic management of traffic congestion and provision of information on transportation system performance. A CMP is to include alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. Recommended components of a CMP include a system for data collection and performance monitoring, a range of strategies for addressing congestion, performance measures or criteria for identifying when action is needed, and a system for prioritizing which congestion management strategies would be most effective. No single occupant vehicle (SOV) capacity expanding project can receive federal funds unless it is part of a CMP.

Under this work task, TPB will compile information and undertake analysis for development of the CMP components of the Constrained Long-Range Plan. Major topics to be addressed include the following:

- Identify alternative strategies for alleviating congestion and enhancing the mobility of persons and goods.
- Identify CMP performance measures, costs, benefits, and evaluation information.
- Compile and analyze information on transportation systems usage and congested locations.
- Examine the impact on congested locations of current and potential alternate strategies, and provide information on strategy prioritization.
- Compile information on CMP strategies considered by implementing agencies in conjunction with major SOV capacity-expanding projects.
- Develop a CMP annual report in conjunction with the annual update of the CLRP, and ensure that the CLRP reflects CMP findings in all pertinent aspects.
- Coordinate CMP tasks with other UPWP and Commuter Connections Work Program tasks and advisory committees:
  - o the Travel Forecasting Subcommittee on the monitoring of recurring congestion as well as on alternatives analysis,
  - o the Commuter Connections Subcommittee on demand management considerations.
  - o the MOITS Policy Task Force and MOITS Technical Subcommittee on non-recurring congestion and incident management considerations, and
  - o the Regional Travel Trends Report and Regional Transportation Data Clearinghouse efforts.
  - o the TPB Technical Committee for inter-task coordination.
- Keep abreast of national, state, regional, and local requirements and issues.

Oversight:	TPB Technical Committee
Cost Estimate:	\$150,000
Products:	CMP Report; summaries, outreach materials, and white paper(s) on technical issues as needed; data sets
Schedule:	Quarterly

B. MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS (ITS) PLANNING

Management, operations, and intelligent transportation systems (MOITS) are key elements in the overall design of the region's transportation systems, and must be reflected in the metropolitan transportation planning process. SAFETEA-LU requires statewide and regional transportation plans to consider "Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods." Topics for regional "management and operations" (M&O) planning include traffic safety and flow, coordination between highway and transit operations, coordination among public safety and transportation agencies, traffic signalization, and planning for non-recurring special events, Transportation operations planning is also interrelated with planning for catastrophic events such as severe weather, terrorism, or major disasters or emergencies, and therefore will be coordinated with transportation emergency preparedness planning under that separate work task.

Under this work task, TPB will provide opportunities for coordination and collaborative enhancement of transportation technology and operations in the region, advised by its MOITS Policy Task Force and MOITS Technical Subcommittee. Major topics to be addressed include the following:

- **Metropolitan Area Transportation Operations Coordination (MATOC) Program and Related Activities:** Coordinate with member transportation agency efforts to strengthen regional coordination and communications on everyday conditions, management and major regional transportation incidents, particularly through the MATOC Program officially established in FY2007 under a SAFETEA-LU grant.
- **Emergency Coordination:** Facilitate links between everyday transportation operations planning and overall regional planning for emergencies, especially in coordination with the dedicated UPWP Emergency Preparedness Planning Task II.C.

- **Traveler Information:** Coordinate enhancement of the collection, processing, and public delivery of real-time roadway and transit condition information, including potential regional Internet-based and "511" telephone information systems and the University of Maryland's Regional Integrated Transportation Information System (RITIS) project.
- **Intelligent Transportation Systems (ITS) Architecture, and Transportation Technology Development and Application:** Maintain the regional ITS architecture in accordance with federal law and regulations; help provide coordination of the use of the regional ITS architecture as guidance to regional MOITS communications and technology project implementation; address regional ITS standards.
- **Traffic Signals:** Assist member agencies in the exchange and coordination of inter-jurisdictional traffic signal operations information and activities, including regional annual reporting of operations maintenance and improvement activities.
- **Non-Recurring Congestion:** Support regional efforts to monitor and analyze transportation systems conditions, particularly focusing on temporal variations from average conditions, congestion due to incidents, and other non-recurring congestion.
- **Traffic and Transit:** Coordination with the Regional Bus Planning Task 2. F and the Regional Bus Subcommittee on planning and information exchange for traffic management, bus operations, and advanced technology.
- **Member Agency Activities:** Work as needed with the MOITS activities of the state and D.C. departments of transportation, the Washington Metropolitan Area Transit Authority, and other member agencies.
- **National issues:** Monitor national emerging MOITS activities for potential application in the region.

Oversight: TPB MOITS Policy Task Forces and MOITS Technical Subcommittee

Cost Estimate: \$350,000

Products: Agendas, minutes, summaries, outreach materials as needed; white paper(s) on technical issues as needed; revised regional ITS architecture; review and advice to MOITS planning activities around the region

Schedule: Monthly

### C. TRANSPORTATION EMERGENCY/SECURITY PLANNING

Emergency preparedness is a critical element of overall metropolitan planning. SAFETEA-LU requires metropolitan transportation planning to look at ways to "increase the security of the transportation system for motorized and nonmotorized users". Under this work task, TPB will provide support and coordination for the transportation sector's role in overall regional emergency preparedness planning, in conjunction with the Metropolitan Washington Council of Governments (COG) Board of Directors, the National Capital Region Emergency Preparedness Council, and other COG public safety committees and efforts.

This task is the transportation planning component of a much larger regional emergency preparedness planning program primarily funded outside the UPWP by U.S. Department of Homeland Security and COG local funding. Within that overall structure, this task is where specialized needs for transportation sector involvement in Homeland Security-directed preparedness activities will be addressed. Efforts will be advised by a Regional Emergency Support Function #1 - Transportation Committee in the COG public safety committee structure, with additional liaison and coordination with the TPB's Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee.

Major topics to be addressed under this specific task include the following:

- Liaison and coordination between emergency management and TPB, MOITS, and other transportation planning and operations activities.
- Planning for the role of transportation as a support agency to emergency management in catastrophic or declared emergencies, including:
  - o emergency coordination and response planning through the emergency management and Homeland Security Urban Area Security Initiative (UASI) processes.
  - o Emergency communications, technical interoperability, and capabilities.
  - o Public outreach for emergency preparedness.
  - o Coordination with regional critical infrastructure protection and related security planning.
  - o Emergency preparedness training and exercises.

- o Conformance with U.S. Department of Homeland Security (DHS) directives and requirements.
- o Applications for and management of UASI and other federal Homeland Security funding.

Oversight: TPB MOITS Policy Task Force and MOITS Technical Subcommittee  
COG Regional Emergency Support Function (RESF) #1 - Transportation Committee

Cost Estimate: \$75,400

Products: Agendas, minutes, summaries, outreach materials as needed; white paper(s) on technical issues as needed; regular briefings and reports to TPB and the MOITS Task Forces as necessary; materials responding to DHS and UASI requirements

Schedule: Monthly

#### D. TRANSPORTATION SAFETY PLANNING

As required under SAFETEA-LU, TPB will provide opportunities for consideration, coordination, and collaboration planning for safety aspects of the region's transportation systems. Safety planning will be in coordination with the State Strategic Highway Safety Plan efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local efforts. The safety element of the regional Constrained Long-Range Plan will be developed.

Major topics to be addressed include the following:

- Safety data compilation and analysis.
- Coordination on metropolitan transportation planning aspects of state, regional, and local safety efforts, and with transportation safety stakeholders.
- Coordination with other TPB committees on the integration of safety considerations.
- Development and maintenance of the safety element of region's long-range transportation plan.

Oversight: TPB Technical Committee

Cost Estimate: \$75,000

Products: Safety element of the CLRP; summaries, outreach materials, and white paper(s) on technical issues as needed.

Schedule: Quarterly

#### E. BICYCLE AND PEDESTRIAN PLANNING

Under this work task, TPB will provide opportunities for consideration, coordination, and collaborative enhancement of planning for pedestrian and bicycle safety, facilities, and activities in the region, advised by its Bicycle and Pedestrian Subcommittee. An updated Regional Bicycle and Pedestrian Plan was adopted by the TPB in FY 2007, and provides guidance for continued regional planning activities. Major topics to be addressed include the following:

- Advise the TPB, TPB Technical Committee, and other TPB committees on bicycle and pedestrian considerations in overall regional transportation planning.
- Compile bicycle and pedestrian project recommendations for the FY 2008-2013 Transportation Improvement Program (TIP).
- Provide input to the annual "Street Smart" regional pedestrian and bicycle safety public outreach campaign.
- Transportation Safety: Examine regional bicycle and pedestrian safety issues, their relationship with overall transportation safety, and ensure their consideration in the overall metropolitan transportation planning process.
- Provide the public with information on the status of bicycle and pedestrian facilities planning and construction in the Washington region.
- Maintain the Web version of the regional bicycle and pedestrian plan, and compile project listing updates (such as project completions) from member agencies as necessary.
- Monitor and provide advice on the implementation of regional bicycle and pedestrian programs, including the Employer Outreach for Bicycles Transportation Emissions Reduction Measure (TERM) 70b, implementation of bicycle and pedestrian components of the green space and circulation system projects developed under the Transportation and Community and Systems Preservation (TCSP) Pilot Program grant, and other programs as necessary.
- Coordinate and host one or more regional bicycle and pedestrian planning or design training, outreach, or professional development opportunities for member agency staffs or other stakeholders.



- Provide staff support to the Bicycle and Pedestrian Subcommittee, supporting the regional forum for coordination and information exchange among member agency bicycle and pedestrian planning staffs and other stakeholders.
- Fund Phase I of the planning and implementation of a bicycle route-finding web site for the region. Consultant assistance for implementation is anticipated.

Oversight: Bicycle and Pedestrian Subcommittee

Cost Estimate: \$108,700

Product: Compilation of bicycle and pedestrian facilities for the FY 2009-2014 TIP; maintenance of the regional bicycle and pedestrian plan on the TPB Web Site; one or more regional outreach workshops; Subcommittee minutes, agendas, and supporting materials; white papers or other research and advisory materials as necessary

Schedule: Bimonthly

#### F. REGIONAL BUS PLANNING

Under this work task, TPB will provide opportunities for consideration, coordination, and collaborative enhancement of planning for bus transit services in the region. In January 2007, the TPB established the Regional Bus Subcommittee of the TPB Technical Committee.

The mission of the Regional Bus Subcommittee is to provide a permanent process for the coordination of bus planning throughout the Washington region, and for incorporating regional bus plans into the CLRP and TIP. High quality bus service in the region depends upon successfully linking vehicles, services, stops and stations, running ways, operating facilities, maintenance shops, storage yards, and passenger and operating support systems to produce a service that is easy to use, provides rider information where and when needed, and facilitates intra- and inter-agency service transfers. Increased customer satisfaction can broaden the appeal of transit in the transportation market place and generate increased ridership. Considerable cooperation among the agencies responsible for bus service and transportation in the region is required to implement these high quality bus services, owing to the complex nature of transit service provision and transportation facility ownership in this multi-state region.

Tasks to be addressed include the following goals of the Subcommittee:

1. Review and refinement and update of the recommendations of the Regional Bus

Study completed in 2002, and development of a priority list of near term service implementation strategies for inclusion in annual operations budgets.

2. Coordination and evaluation of CLRP and TIP proposals and amendments with regard to bus transit service plan implementation.
3. Coordination and input definition for the TPB regional travel forecasting model.
4. Provide technical advice and input for a regional transit network to be integrated into the variably-priced lanes scenario for TPB planning studies, including the Regional Mobility and Accessibility Scenario Study.
5. Facilitation of technology transfer and information sharing, as it relates to regional, state and local bus transit services.
6. Coordination with other regional committees regarding bus transit participation in planning and training activities, including but not limited to the Regional Emergency Support Function (RESF) #1 at COG, and the associated regional transit operators group.
7. Coordination with the TPB Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee regarding integrated planning for bus services and street operations.
8. Coordination with Commuter Connections regarding ridesharing facilities and joint promotional messages.
9. Coordination with the TPB Private Providers Task Force to sponsor the Nineteenth Annual Public Transit Forum in May 2008.
10. Coordination with the TPB Access for All Committee to enhance regional mobility for all populations.

Oversight: TPB Regional Bus Subcommittee

Cost Estimate: \$100,000

Products: Data compilation and outreach materials as needed;  
white paper(s) on technical issues as needed;  
structured interviews and summarized results

Schedule: Monthly

#### G. HUMAN SERVICE TRANSPORTATION COORDINATION PLANNING

In 2007, as required under SAFETEA-LU, the TPB will adopt the Human Service Transportation Coordination Plan for the Washington Region. The Coordinated Plan includes an assessment of needs, an inventory of service, strategies and actions to better meet users needs and coordinate existing services, priorities for funding and the framework for competitively selecting projects. The Coordination Plan will guide funding decisions for the following three FTA programs: 1) Formula Program for Elderly Persons and Persons with Disabilities (Section 5310); 2) Job Access and Reverse Commute for Low Income Individuals (JARC, Section 5316); and 3) New Freedom Program for Persons with Disabilities (Section 5317). In 2006, the TPB was designated by the Mayor of the District of Columbia, and the Governors of Maryland and Virginia as the designated recipient of JARC and New Freedom program funds. SAFETEA-LU also requires that the CLRP and TIP shall consider the design and delivery of non-emergency transportation services.

Work activities include:

- Under the guidance of the TPB Human Service Transportation Coordination Task Force, review how the initial 2007 coordination plan was utilized by sponsors to fund projects for the three FTA programs, and identify recommended changes and revisions to the plan and the framework for the competitive selection process.
- Provide staff support to the Coordination Task Force, as a regional forum to identify further options to coordinate transportation services
- Coordinate the activities of the Coordination Task Force with the TPB Access For All Advisory Committee and the COG Human Services Committee to effectively involve local jurisdictions and leaders of low- income, minority and disabled community groups.
- Continue to review the implementation of improvements to Metro Access service as identified in the February 2006 TPB study: "Improving Demand Responsive Services for People with Disabilities in the Washington Region."

Oversight:	Technical Committee and TPB Access For all Advisory Committee
Cost Estimate:	\$105,000
Products:	An updated human service transportation coordination plan
Schedule:	June 2008

## H. FREIGHT PLANNING

SAFETEA-LU stresses the importance of freight movement for the country. Truck, rail, and maritime goods movement considerations need to be included in our region's transportation planning and programs. Though trucks have long been accounted for in the TPB's transportation monitoring and forecasting, this work activity will respond to the need for enhanced regional freight planning with improved information compilation, outreach to stakeholders, and analysis.

Under this work task, TPB will provide opportunities for consideration, coordination, and collaborative enhancement of planning for freight movement, safety, facilities, and activities in the region. Major topics to be addressed include the following:

- Ensure consideration of freight planning issues in overall metropolitan transportation planning, including:
  - o Follow up on findings and recommendations from the FY2007 Regional Freight Planning Study.
  - o Work proactively with the private sector for consideration of private sector freight issues. Identify topics of interest to private sector, often competing trucking and freight stakeholders.
  - o Advise the TPB and other committees in general on regional freight planning considerations for overall metropolitan transportation planning.
  - o Obtain expert input on freight considerations for metropolitan transportation planning.
  - o Coordinate with federal, state, and local freight planning activities.
  - o Coordinate with TPB travel monitoring and forecasting activities on freight considerations.
  - o Examine truck safety issues.
  - o Keep abreast of regional, state, and national freight planning issues.
- Undertake data compilation and analysis on freight movement and freight facilities in the region.
- Undertake freight stakeholder outreach with representatives of the freight community, including carriers, shippers, and other stakeholders, to gain their input on regional freight movement, safety and other issues and to gauge their interest in state and MPO planning and programming processes.

Oversight:	TPB Technical Committee
Cost Estimate:	\$101,000
Products:	Data compilation and outreach materials as

needed; white paper(s) on technical issues as needed; structured interviews and summarized results

Schedule: Bimonthly

### 3. FORECASTING APPLICATIONS

#### A. AIR QUALITY CONFORMITY

This work area is designed to ensure that TPB plans, programs and projects meet air quality requirements. The 1990 Clean Air Act Amendments require the performance of detailed technical analysis at the systems level to assess conformity of transportation plans and programs. Procedures and definitions for conducting the analysis, originally issued as EPA regulations in the November 24, 1993 FEDERAL REGISTER, were subsequently amended and issued, most recently, in the March 10, 2006 FEDERAL REGISTER; in addition, federal guidance has also been published at various times by the EPA, FHWA and FTA.

A work program to analyze the 2007 constrained long range plan and the FY 2008-2013 TIP for air quality conformity consistent with these regulations is now being drafted for review and comment. This work program will address ozone, wintertime carbon monoxide, and fine particles (particulate matter, PM2.5) requirements, including differing geographical boundaries, inventory time periods, and evaluation criteria by pollutant. The current schedule for adoption of the updated plan and TIP calls for many of the work activities to be performed in FY2007, with the final report, response to comments, and adoption in November 2007. Subsequent major activities in FY2008 will include development and execution of a work program for the conformity assessment of the 2008 CLRP and FY 2009-2014 TIP.

TPB procedures to address interagency and public consultation requirements, also originally specified in the November 1993 regulations, were formally adopted by the Board initially in September 1994. The current version of the consultation procedures, amended to reflect additional requirements in August 15, 1997 regulations, was adopted by the TPB in May 1998. These procedures address preparation of the annual UPWP and TIP and any updates to the regional plan or programs. The procedures involve timely announcement of upcoming TPB activities relating to conformity and distribution of relevant material for consultation purposes.

The FY2008 air quality conformity work program will include the following tasks.

1. Complete conformity analysis of the 2007 constrained long range plan and the FY2008-2013 TIP, including addressing any emissions mitigation needs, preparing a draft report to document procedures and results and to address comments and testimony received, and documenting and organizing all data files for use in subsequent regional and corridor / subarea planning studies.
2. Keep abreast of federal requirements as updated air quality conformity regulations and guidance are issued, and revise work program elements as necessary.
3. Execute TPB interagency and public consultation procedures; this includes

funding for review and coordination work on the part of COG/DEP staff to reflect MWAQC=s involvement in the public and interagency consultation process.

4. Prepare and execute a work program for analysis of the 2008 constrained long range plan and the FY2009-14 TIP, using updated project inputs, planning assumptions, travel demand model, software, and emissions factor model, as each update is incorporated into the transportation and air quality planning process; prepare a draft report on the conformity assessment.
5. Review and comment on PM2.5 hotspot analyses and project level conformity assessments performed by implementing agencies.
6. Coordinate project solicitation, documentation, and emissions reduction analysis associated with CMAQ projects.
7. Perform incidental air quality conformity reviews (non-systems level), as required throughout the year.

Oversight: Technical Committee and Travel Management Subcommittee, in consultation with MWAQC committees

Cost Estimate: ~~\$563,200~~ **513,200**  
(\$563,200 after carryover of \$50,000 from FY 2007)

Products: Final report on Air Quality Conformity Determination of 2007 CLRP and FY2008-2012 TIP; Preliminary materials on Air Quality Conformity Assessment of 2008 CLRP and FY2009-2013 TIP

Schedule: June 2008

## B. MOBILE EMISSIONS ANALYSIS

In FY2007 staff proceeded with state air quality implementation plan (SIP) activities to address requirements for the 8-hour ozone standard. An updated ozone attainment plan, along with new mobile source emissions budgets, is on schedule for completion in Spring 2007. With continuing consultant assistance as needed, in FY2008 eight hour ozone planning activities will include follow-up activities necessary to analyze, refine and report on the mobile source emissions estimation or transportation emissions reduction measures (TERM)s processes associated with the 8-hour ozone SIP.

In FY2007, planning work to address new fine particles requirements (particulate matter 2.5 microns or less) continued for both air quality conformity assessments and

for SIP planning. FY2008 work activities will build upon this work, and will include the following tasks: (1) prepare mobile source emissions inventories for use in analysis of attainment of the PM2.5 standards, including direct PM2.5 emissions and any required precursors; (2) translate data inventories into EPA format; (3) analyze new transportation emissions reduction measures and other mobile source control strategies; and (4) participate in MWAQC technical and policy discussions to assist in development of the SIP, including work with TPB and MWAQC committees in development of mobile source emissions budgets.

This project also includes the following routine activities within DTP.

1. Provide support to Commuter Connections staff in developing implementation plans for adopted, as well as future, TERMS adopted by the TPB.
2. Perform VMT tracking analyses to compare estimated travel demand to observed travel.

For the above work elements, in conjunction with DTP staff and in consultation with the TPB, provide funding to COG's Department of Environmental Programs for the following activities: (1) provision of data, progress reports and written reports in response to TPB requests relating to air quality work activities; (2) provision of timely updates to the TPB and its committees on the status of emissions and emissions reduction research / implementation strategies associated with all emissions source categories; and (3) provision of assistance to TPB in development / review of emissions factors required for mobile source emissions inventories associated with air quality conformity and SIP planning.

Oversight: Technical Committee and Travel Management Subcommittee, in consultation with MWAQC committees

Cost Estimate: \$640,100

Products: Mobile source emissions inventories, analysis of reduction requirements, TERMS and control strategies to meet PM2.5 requirements; Draft mobile source emissions budgets for direct PM2.5 and any required precursors; Report on VMT comparison.

Schedule: June 2008

C. REGIONAL STUDIES

Regional Mobility and Accessibility Scenario Study



In FY2008, under the direction of the TPB, and with technical insight and guidance from a Joint Technical Working Group composed of members from the TPB Technical Committee, the Planning Directors' Technical Advisory Committee and the MWAQC Technical Advisory Committee, continue to analyze alternative transportation and land use scenarios specified for the scenario study.

Staff will develop methods to better visualize the features and the impacts of the alternative transportation and land use scenarios specified for the scenario study. These enhanced visualization techniques will be incorporated into public outreach materials that will be used to obtain additional "feedback" on the results of the first phase of the scenario study and the analysis of the Regional HOV/HOT/Express Tolls Lanes scenario.

The results of the first phase of the scenario study and the Regional HOV/HOT/Express Tolls Lanes scenario will be communicated to a larger audience through meetings with local community groups, regional briefings and web materials and obtain additional public comment on the alternative land use and transportation scenarios analyzed to-date.

Based on the public comment received on the alternative land use and transportation scenarios analyzed in the scenario study, including the Regional HOV/HOT/Express Tolls Lanes scenario, staff will specify two or three new scenarios for analysis that would be developed using updated regional growth and transportation planning assumptions, including BRAC-related changes.

Oversight:	Technical Committee, Joint Technical Working Group
Estimated Cost:	\$415,800
Products:	Enhanced Visualization Techniques and Public Outreach Materials for Regional Mobility and Accessibility Study, Specification of Additional Scenarios
Schedule:	June 2008

#### D. COORDINATION OF COOPERATIVE FORECASTING AND TRANSPORTATION PLANNING PROCESSES

In FY 2008, staff will support the Metropolitan Development Policy Committee (MDPC) and the Planning Directors Technical Advisory Committee (PDTAC) in the coordination of local, state and federal planning activities and the integration of land use and transportation planning in the region. Planning databases and analytical tools will be enhanced to support regional planning goals and strategies and goals, including the update and refinement of regional activity center maps and supporting data, the update

of the Transportation Analysis Zone (TAZ)- level employment and housing data and the “Composite Map of adopted Land Use Plans”.

Staff will continue to work with the Cooperative Forecasting Subcommittee, the region’s Planning Directors, and members of the TPB Technical Committee to develop the needed area land activity data for the new, smaller, more refined Transportation Analysis Zones (TAZs) and Regional Activity Centers and Clusters developed in FY 2007.

Staff will update and maintain Cooperative Forecasting land activity databases that are used as input into TPB travel demand-forecasting model. Staff will also update the Round 7 population, household, and employment forecasts for both COG member and non-member jurisdictions in the expanded cordon area and preparation of Cooperative Forecasting TAZ-level land activity data files.

Working with the Cooperative Forecasting Subcommittee and the region’s Planning Directors, staff will assess the effects of significant transportation system changes on the Cooperative Forecasting land activity forecasts. Key land use and transportation assumptions used in making updates to the Cooperative Forecasting land activity forecasts will be documented. Staff will respond to public comments on updated to the Round 7 forecasts and the Cooperative Forecasting process.

Staff will also develop and publish useful economic, demographic and housing-related information products including the monthly Regional Economic Monitoring Reports (REMS) reports and the annual “Economic Trends in Metropolitan Washington” and “Commercial Development Indicators” reports.

Oversight:	TPB Technical Committee, Planning Directors Technical Advisory Committee.
Products:	Coordination of Land Use and Transportation Planning in the Region, Update of Regional Planning Databases, Development and Distribution information and technical reports.
Estimated Cost:	\$676,800
Schedule:	June 2008

## 4. DEVELOPMENT OF NETWORKS AND MODELS

### A. NETWORK DEVELOPMENT

FY 2008 efforts will focus on the development of TP+ highway and transit networks in Version 2.2 model format on the 2,191-zone modeled area using information gathered electronically and/or in paper format. This process will make use of available information in COG's GIS and the Data Clearinghouse to facilitate development of networks supporting 1) air quality conformity analysis and 2) scenario testing as part of TPB regional studies.

Activities in FY 2008 will begin with the compilation of the latest available transit route and schedule information from WMATA and other transit providers in the peak and off-peak formats required for the travel demand models. All traffic count data will be converted to AWDT format for use in highway networks required for these models. A set of TP+ networks for highway and transit will be coded from this information depicting current year conditions.

Using these networks as a starting point, a series of FY2009-2014 TIP and Plan Conformity networks will be developed for the following analysis years: 2008, 2009, 2010, 2020, and 2030 and other years as specified in upcoming federal guidance. Tasks involved are as follows:

- receive and organize project inputs to the FY2009-2014 TIP and amended CLRP;
- code, edit, and finalize networks for highway, HOV, and transit;
- develop transit fare matrices consistent with these networks;
- provide documentation and training in the development of these highway and transit networks.

TPB currently manages highway networks in a time-series fashion within a geographic database using GIS. This practice has increased the efficiency and quality of highway network coding, but current highway coding methods could be improved. Moreover, the need to add transit network features as a part of the TPB geo-database is also identified as an immediate need. Demands on the network development program have been more difficult to meet as transit network alternatives have increased in complexity and as new high occupancy toll (HOT) lane alternatives have emerged.

~~To improve network coding procedures and to better manage network development, consultant support is being sought to review the current highway and transit network development processes. The consultant will 1) interview TPB staff and develop a user requirements document, and 2) recommend options for improving network coding~~

~~efficiency and data quality/consistency. Refined network coding procedures will not only benefit existing modeling needs, but will also enable staff to accommodate future Transportation Analysis Zone (TAZ) refinements that are being planned.~~

Oversight:	Travel Forecasting Subcommittee
Cost Estimate:	<del>\$844,500</del> <b>694,500</b> (\$769,500 after carryover of \$75,000 from FY 2007)
Products:	Series of updated transportation networks by mode, including technical training and documentation
Schedule:	June 2008

## B. GIS TECHNICAL SUPPORT

In FY 2008 staff will continue to provide data and technical support to staff using the COG/TPB GIS for development and distribution of data and information developed by the TPB planning activities, including Regional Studies, the CLRP, the TIP, Congestion Monitoring and Analysis, Cooperative Forecasting, Regional Transportation Data Clearinghouse, Network and Models Development, and Bicycle Planning.

Staff will continue to enhance the methodology for seamless editing of regional highway and transit networks and provide ongoing maintenance of existing GIS network editing tools. Staff will enhance the methodology for "seamless" editing of regional highway and transit networks and provide ongoing maintenance of existing GIS network editing tools and develop new tools for the editing of highway, transit and HOV networks. Staff will also implement GIS Spatial Data Library restructuring that will include both transportation and non-transportation mapping features.

Staff will provide GIS training on the use of GIS software applications and databases for transportation planning to COG/TPB and local agency staff. In addition to technical support and training activities, staff will also support on-line and other access to COG/TPB GIS metadata, databases, and applications for state and local transportation planners. Staff will update COG/TPB GIS user documentation and training materials, as required.

Because GIS has become a key component of local, regional, and state transportation planning activities, staff will continue to coordinate its GIS efforts with state DOTs, WMATA, and the local governments through quarterly meetings of COG's GIS Committee and other activities. Staff will also work with local and state agency staff to facilitate GIS data sharing.

Staff will also continue to maintain and update COG/TPB GIS hardware and software as required. This will include upgrades to ArcGIS and Oracle software and additional GIS

hardware to accommodate greater use of GIS by COG/TPB and local agency staff.

Oversight:	Technical Committee
Estimated Cost:	\$498,800
Products:	Updated GIS software, databases, User Documentation, Training materials
Schedule:	June 2008

### C. MODELS DEVELOPMENT

The Models Development program functions to improve the TPB travel forecasting practice on a continuing basis. The program encompasses short-term improvements to the existing travel model, as well as longer term improvements that may require several years to become operational. Specific travel modeling improvements are identified on the basis of recommendations that result from periodic travel model reviews, from special needs identified by the TPB, or from methodological advances emerging from the research community. A Transportation Research Board (TRB) committee has completed a report documenting a national survey of MPO state-of-the-practice with respect to regional travel demand modeling. This document will set the stage for an on-going multi-year program to improve the TPB travel demand models.

Having completed the development of the commercial vehicle model and having made progress on developing a nested logit mode choice model during FY2007, the FY2008 model development activities will focus on the continuation of some FY2007 activities aimed at improving the current application model as well as the activities supporting longer term improvements.

The primary application improvement will be completing the replacement of the older multinomial logit mode choice model with a nested logit (NL) mode choice model which began development during FY2007 (with consultant assistance). The NL model will be migrated into the speed feedback loop in a manner similar to that accomplished previously with the multinomial model. Since the NL model apportions person trips among auto and transit modes, an auto occupancy sub-model will need to be developed to split auto person trips into auto drivers and auto passengers. The NL model will also allow for the opportunity to better assign trips on the transit network.

All mode choice work in the U.S. is now affected by the requirements of the FTA SUMMIT model, a software package that is used to analyze the mode choice model output in fine detail (it may also be used as a diagnostic tool for assessing the reasonability of network-based inputs to the mode choice model). The SUMMIT package is currently used by FTA as an evaluation tool for allocating discretionary funding for proposed transit projects. The output generated from the newly

implemented NL mode choice model will be used to execute the SUMMIT model during FY2008. An analysis of the resulting SUMMIT output may indicate the need for further refinements to the mode choice model inputs and/or the final NL model specification.

The existing medium and heavy truck models have not been updated in many years, and the need to revisit these model components has been identified as a priority. During FY2007, a commercial vehicle model was successfully integrated into the regional travel model, and developmental work on updated medium and heavy truck models also commenced. The updated truck models will be integrated into the regional model during FY2008.

The TPB has recently established a task order arrangement with a consultant to perform research into areas that are relevant to models development. TPB staff has found this to be especially valuable because it has informed us about the state of the practice across the U.S., and has also enabled the TPB to deploy staff resources in advancing incremental model improvements that would have otherwise been spent by staff conducting independent research. This task order arrangement will continue during FY2008 **at a reduced budget level.**

In the course of recent ETL / HOT lane studies, TPB staff has become increasingly aware that fine-scale traffic operations can have a potential impact on regional travel demand patterns. Consequently, TPB staff has recently begun testing software which is used to simulate and visualize traffic operations at mesoscopic (corridor) and microscopic (subarea or intersection) levels of analysis. Such analysis at finer levels of geography can be valuable for better understanding the performance of regionally significant facilities. It can also be useful for communicating alternative transportation futures to board members and to the general public. The testing of micro-simulation software will continue during FY2008.

The TPB has played a leadership role in establishing a national forum comprised of travel modelers from across the U.S., in cooperation with the Association of Metropolitan Planning Organizations (AMPO). The forum has served to promote understanding between modelers regarding the travel forecasting methods presently being implemented at MPOs. It is working to develop guidelines for acceptable standards of practice. The forum, now known as the AMPO Travel Modeling Working Group, meets twice a year and has been steadily gaining members over the past few years. This activity is planned to continue during FY2008.

Air passenger travel in the Washington region is particularly complicated, given that area residents are served by three international airports. The airports are, of course, major traffic generators in the region. The dynamics underlying how individual airports are selected, and how travel to the selected airport is chosen, is difficult to forecast. Air passengers have a wide choice of public or private transportation options for getting to a selected airport. Some of these travel options are reflected in the regional travel model,

while others are not (hotel limousine service and airport taxi service, for example). At present, simulated travel to and from the airports are based on fixed travel patterns that have been observed in air passenger surveys and projected growth based on FAA enplanement projections. During FY2008, TPB will continue to monitor airport modeling techniques developed at other locations in order to improve the way that ground travel to the airports is currently treated in the regional model.

Tour-based and activity-based travel forecasting methods have the potential to augment or replace conventional four-step modeling in the future. The 2007 Household Travel Survey has been designed to support both conventional four-step and advanced modeling methods. During FY2008, staff will explore approaches to the development of advanced methods in an effort to make use of the new survey for this purpose.

Staff will continue to review best practice and advanced practice in travel demand modeling through participation in the Travel Model Improvement Program (TMIP), Transportation Research Board, and literature reviews during FY2008. Staff will also continue to provide complete documentation for all products from the models development program.

Oversight:	Travel Forecasting Subcommittee
Cost Estimate:	<del>\$1,029,200</del> <b>969,200</b>
Products:	Recommendations for continued updating of the travel demand modeling process, documentation of all activities
Schedule:	June 2008

#### D. SOFTWARE SUPPORT

This work element supports the maintenance of the COG/TPB microcomputer-based travel demand forecasting model set as used in applications work, and maintenance of the mobile source emissions factor model and emissions postprocessor as used in air quality conformity and state implementation plan (SIP) work. Development and testing of revisions and upgrades to software currently in use and the testing of new software including micro simulation, text editor and scripting software and data storage, retrieval and transfer systems for possible adoption are included in work done under this element. Training of DTP staff in use of models and adopted systems is also included in this element.

Staff monitors the development of microcomputer hardware and other microcomputer-based transportation software as well as data storage, retrieval and transfer systems and evaluates such software and systems through in-house testing on a demonstration basis or through acquisition as warranted.

Oversight: TPB Technical Committee

Cost Estimate: \$ 178,900

Products: Operational travel forecasting model set and new software selected / installed in FY 2008.

Operational emissions factor model and postprocessor software and interface.

Operational data storage and retrieval systems.

Operational data transfer systems to serve inside and outside users.

Schedule: June, 2008



## 5. TRAVEL MONITORING

### A. CORDON COUNTS

During FY 2007, data collection was completed for the Regional HOV Monitoring Project, and data files were constructed to be processed in FY 2008. In the fall of FY 2008, staff will process this data and prepare a report documenting the results of this project. Information in the report will include vehicle volumes by time of day, vehicle classification, auto occupancy, transit passenger volumes, and the results of travel time runs.

Oversight:	Travel Forecasting Subcommittee
Cost Estimate:	\$230,000
Products:	Report on the results of the Spring 2007 Regional HOV Monitoring Project.
Schedule:	Regional HOV Monitoring Project Report – Jan 2008

### B. CONGESTION MONITORING AND ANALYSIS

This project addresses monitoring efforts on both the freeway system and the arterial roadway system. For all freeways and limited access highways in the region, aerial surveys are conducted on a rotating basis to monitor the performance of the system during: 1) peak periods, and 2) midday during the week, and on weekends. In FY 2008, am and pm peak period vehicular density data will be collected during Spring 2008 and will be the sixth survey in a series dating back to 1993, which is repeated every three years. Data analysis will be completed in FY 2009 including the final report (Summer and Fall).

Performance of the arterial highway system is monitored each year through the conduct of travel time/speed runs on a sample of arterial roadways totaling 363 miles drawn from the National Highway System. Each year approximately one third of the sample roadways are monitored; data are collected and are subsequently analyzed and reported by the end of the fiscal year. In FY 2008, the third year of the third cycle of monitoring will be completed. The results will be compared with the 2002 and 2005 results to study changes to the system over time.

In FY 2007, a pilot program to expand the coverage of arterial highway program was undertaken. The goal of the pilot program was to monitor additional roadways (a larger sample) and obtain daily variation. Based on the experience gained the program details will be developed and implemented starting in FY 2008.

**Figure 7**

**Congestion Monitoring Work Program**

Activity	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Freeway peak period congestion	=====		=====		
Freeway off-peak congestion	=====				
Arterial highway congestion-Traditional	Yr 1 of 3	Yr 2 of 3	Yr 3 of 3		
Arterial highway congestion-Enhanced			Yr 1 of 3	Yr 2 of 3	Yr 3 of 3

Note: Freeway off-peak congestion monitoring is on a 5 year interval.

Total Cost: \$ 521,200

Oversight: Travel Forecasting Subcommittee

Products: Freeway peak period density data files (analysis to be completed in FY 2009)  
 Arterial Travel Time Report  
 Technical memorandum documenting first year's results executing new methods for the expanded arterial highway program

Schedule: June 2008.

C. TRAVEL SURVEYS AND ANALYSIS

1. Household Travel Survey

Beginning in January 2007, over a 12-month period, approximately 10,000 households will be surveyed to collect detailed information on the socio-economic characteristics and travel behavior of persons residing in the TPB modeled region. The information collected in this survey will be used in future fiscal years to develop and calibrate regional travel demand forecasting models that are used to predict future travel demands based on projected household and employment growth and planned improvements to the regional transportation system. The last large scale regional household travel survey of this type was conducted more than 10 years ago.

In FY 2008, the data collection for the regional household travel survey will be completed. Staff will manage and supervise the survey contractor and coordinate survey activities with state and local government staff as appropriate. The data collected in the 2007 regional household travel survey will be processed, edited, geocoded and tabulated. Staff will then prepare a technical report documenting the results of the survey.

Staff will also continue to provide data files, user documentation and technical support to the users of existing COG/TPB travel survey databases. This work will include special tabulations from these databases to support improvements in travel forecasting procedures and other COG/TPB transportation planning activities as required.

Oversight: Travel Forecasting Subcommittee

Cost Estimate: ~~\$1,254,900~~ **1,128,400**  
 (\$2,328,400 after \$1,200,000 carryover from FY 2007)

Products: Geocoded and edited Travel Survey Data, Technical

## Report

Schedule: June 2008

### D. REGIONAL TRANSPORTATION DATA CLEARINGHOUSE

Efficient access to a comprehensive data set containing current and historic data on the characteristics and performance of the region's transportation system is vitally important for transportation planning, air quality analysis, models development, congestion management and project evaluations.

In FY 2008 staff will continue and expand formal arrangements with local, state, WMATA, and other regional agencies to transfer data to and from the Regional Transportation Data Clearinghouse. Staff will also update Clearinghouse databases with FY 2007 highway and transit performance data, as they become available. This updated data will include AADT traffic volume estimates, hourly directional traffic volume and classification counts as well as transit ridership data received from WMATA, PRTC, VRE, MTA and local transit agencies including Ride-On, The Bus, ART, DASH and the Fairfax Connector systems. Additionally, staff will add updated Cooperative Forecasting data to the Clearinghouse by TAZ. Staff will also continue to develop the data infrastructure necessary to incorporate ITS data into the Clearinghouse and refine procedures for filling gaps where current data might not be available. Staff will also update the Regional Transportation Clearinghouse user manuals and documentation, as appropriate.

Once the Regional Clearinghouse database has been updated with FY 2007 data, staff will distribute a draft CD-ROM version of the updated Clearinghouse database with associated documentation to state and local transportation agency Clearinghouse contacts for their review. After this local review has been completed and all comments have been addressed, staff will distribute the final FY 2007 Clearinghouse database to all TPB participating agencies.

Staff will implement the methodology to improve annual estimates of regional vehicle miles of travel (VMT) and traffic volumes on major segment of the regional highway network based on the enhanced HPMS sample for the TPB modeled region. In FY 2007 staff will also work with State DOTs and local agency staff to implement a enhanced Highway Performance Monitoring System (HPMS) sample of traffic counting locations in the TPB modeled region and an improved methodology to estimate regional vehicle miles of travel (VMT) and annual average weekday traffic volumes on major segments of the regional highway network for the TPB modeled region.

Oversight: Technical Committee

Cost Estimate: \$267,900

Products: Technical Report on Enhanced HPMS sample  
and VMT Estimates; Updated Clearinghouse  
Databases and Documentation

Schedule: June 2008

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## 6. TECHNICAL ASSISTANCE

The TPB work program responds to requests for technical assistance from the state and local governments and transit operating agencies. This activity takes the form of individual technical projects in which the tools, techniques, and databases developed through the TPB program are utilized to support corridor, project, and sub-area transportation and land use studies related to regional transportation planning priorities. The funding level allocated to technical assistance is an agreed upon percentage of the total new FY 2008 funding in the basic work program. The funding level for each state is an agreed upon percentage of the total new FTA and FHWA planning funding passed through each state. The funding level for WMATA is an agreed upon percentage of the total new FTA funding. The specific activities and levels of effort are developed through consultation between the state and WMATA representatives and TPB staff.

Technical assistance projects anticipated in FY2008 are described below. Total funds allocated to the District of Columbia, Maryland, Virginia, and WMATA for technical assistance in FY 2008 are shown in Table 2. Work on each project is directed by staff from the respective state DOT or WMATA and is conducted by TPB staff or consultants as noted.

### A. DISTRICT OF COLUMBIA

#### Program Development, Data Requests and Miscellaneous Services

This project is established to account for staff time spent in developing scopes of work for requested projects and in administering the resulting work program throughout the year. Work activities involve meeting with DDOT staff to discuss proposed projects, drafting and finalizing work statements and tasks, creating project accounts when authorized, and progress reporting throughout the projects.

Additionally, this project establishes an account to address requests from DDOT which are too small or too short-lived to warrant separate scopes of work. Requests may include staff time to participate in technical review committees and task forces and execution of small technical studies.

Cost Estimate:	\$17,500
Product:	specific scopes of work
Schedule:	on-going activity

#### DDOT Traffic Counts

Perform machine traffic counts at 187 locations (26 seven day and classification counts and the remaining 3 day total volume counts). These counts are to include HPMS Representative Legs. Counts are to avoid proximity to holidays or unusual days; will be reported in 15 minute increments (in DDOT/Traffic Services Administration (TSA) Excel Format) with hourly and daily summaries; and will include daily (for weekdays) 10 to 24 hour factors (ratios of 7 am to 1 pm and 2 pm to 6 pm to 24 hour volumes); daily (for all days of the week) peak hour volumes, times and K factors; directional splits and peak hour (by direction and two way) to 24 hour factors. **These counts will include quality control checking and tabulation and analysis of data collected in FY 2007.**

Cost Estimate:           \$170,000  
                                  **(\$205,000 after \$35,000 carryover from FY 2007)**

Products:                 Machine traffic counts

Schedule:                June 2008

#### Recommend Supplemental Traffic Counts

In 2007 travel survey data will be collected from 10,000 households in the metropolitan region. WMATA is also planning a spring 2007 Metrorail survey. These data along with transit ridership data obtained from transit agencies in the region will be used to develop and calibrate a new regional travel demand forecasting model. To support this new model development and calibration, it would be extremely useful and important to have additional traffic counts conducted at many geographic locations throughout the metropolitan region in 2007. These traffic counts would be in addition to and would supplement traffic counts already planned by the DOTs. The supplemental counts would ensure a large and representative regional sample of highway traffic volume data for model development and calibration.

Approximately 100 supplemental traffic counts will be conducted during in FY 2008 on selected arterials in Suburban Maryland to augment the counts in District's planned HPMS data collection activities and to assist in the validation of the regional travel demand forecast model.

Cost Estimate:           \$78,000

Product:                 additional traffic counts

Schedule:                on-going activity

\$37,000 carryover from FY 2007 remains to be specified.

TOTAL DISTRICT OF COLUMBIA COST ESTIMATE:           **\$372,600 after  
\$72,000 carryover**



B. MARYLAND

Program Development

This project is set up to account for staff time spent in developing detailed scopes of work for requested projects and in administering and reporting on the resulting work program throughout the year. Work activities involve meeting with requesting agencies to discuss proposed projects, drafting and finalizing work statements and tasks, creating projects when authorized, and progress reporting throughout the project schedule.

Cost Estimate:       \$20,000

Product:             Detailed scopes of work as needed, progress reports.

Schedule:            On-going activity

Miscellaneous Services

The miscellaneous account is a mechanism established to address requests from MDOT, SHA, MTA, MdTA and local jurisdictions, which are too small or too short-lived to warrant separate work scopes. Authorizations to execute specific tasks are usually given by email or fax; this is particularly useful for quick turnaround. Past work has included requests for electronic data files, hard copy, or plots from any of the planning work activities at COG. Other requests have included participation in technical review committees and task forces and execution of small technical studies.

Cost Estimate:       \$78,400

Schedule:            On-going activity

MDOT Training / Technical Support - As part of technical assistance work activities in previous years staff installed the regional travel demand modeling process in the offices of SHA's Travel Forecasting Section. Staff has subsequently worked with SHA in executing alternatives at the regional level and has provided staff training to both SHA and MTA staff members.

As part of these work activities, staff updates the transportation networks, land activity data files and travel demand models in SHA's offices to reflect the latest regional data files and modeling procedures. Staff will continue to work with SHA and MTA staff to apply these modeling procedures and to provide specific project assistance as requested under categories of: project planning, feasibility studies in selected corridors, and other planning studies. Staff also reviews and provides comment on milestone

documentation reports, e.g., draft environmental impact statements, alternatives retained for detailed study, for various project planning studies in Maryland.

Cost Estimate: \$50,000

Schedule: As developed with Maryland staff

### **SHA - Western Mobility / Capital Beltway Studies**

**This project represents system level forecasting work which is performed in support of ongoing SHA project planning activities. In recent years, COG staff developed and analyzed travel forecasts for various alternatives in each of these corridors. These activities will be continued within this category on a specific request basis, as tasks are received.**

**Cost Estimate: \$85,000 (using FY2007 carryover funds)**

### **MTA - Corridor Cities Transitway / Bi-County Transitway**

**Recent activities on these project planning studies have primarily been conducted by consultants to the Maryland MTA. This project is designed to provide technical support to MTA and their consultants, including application of the primary travel demand models (assistance with development of model inputs, execution and evaluation of model outputs), incorporation of new transit analysis at the corridor level, and evaluation of results including through use of FTA's Summit model to compare results among the transit alternatives studied.**

**Cost Estimate: \$85,000 (using FY2007 carryover funds)**

### **Project Planning Support**

**This project provides funding throughout the fiscal year as needed to support the above listed project planning activities. Work efforts may address ongoing corridor / subarea studies, such as the Capital Beltway and I-270, as well as the initiation of new planning studies, ranging from major new corridor analyses to the development of travel demand forecasts for individual facilities. Specific project authorizations will occur throughout the fiscal year as priorities dictate.**

**Cost Estimate: \$61,500 (using FY2007 carryover funds)**

### **Managed Lanes - Planning**

**This project, initiated in FY2007, involves executing travel demand forecasts for managed lane facility operations in individual corridors, as well as for an integrated**

system of such lanes, throughout the Maryland portion of the Washington area. The current study is designed to identify candidate corridors / system design where the operation of managed travel lanes appears feasible and effective.

Cost Estimate: **\$246,400 after \$75,000 carryover from FY 2007**

Product: Technical reports

Schedule: December 2007

#### Managed Lanes - Implementation

This phase of the Managed Lane project is designed to begin more detailed analyses of managed lane operations. The study will test alternative project limits, cross-sections, toll levels, for those corridors in the planning phase which appear as candidates for feasible and effective managed lane operations.

Cost Estimate: \$109,500

Product: Technical reports

Schedule: June 2008

#### Recommend Supplemental Traffic Counts

In 2007 travel survey data will be collected from 10,000 households in the metropolitan region. WMATA is also planning a spring 2007 Metrorail survey. These data along with transit ridership data obtained from transit agencies in the region will be used to develop and calibrate a new regional travel demand forecasting model. To support this new model development and calibration, it would be extremely useful and important to have additional traffic counts conducted at many geographic locations throughout the metropolitan region in 2007. These traffic counts would be in addition to and would supplement traffic counts already planned by the DOTs. The supplemental counts would ensure a large and representative regional sample of highway traffic volume data for model development and calibration.

Approximately 200 supplemental traffic counts will be conducted during in FY 2008 on selected arterials in Suburban Maryland to augment the counts in Maryland's planned statewide HPMS data collection activities and to assist in the validation of the regional travel demand forecast model.

Cost Estimate: \$150,300

Product: additional HPMS traffic counts

Schedule: on-going activity

TOTAL MARYLAND COST ESTIMATE: **\$886,100 after \$306,300 carryover from FY 2007**

C. VIRGINIA

Program Development

This project is established to account for TPB staff time spent in developing scopes of work for requested projects and for administering the resultant work program throughout the year.

Work activities will involve meeting with VDOT and VDR&PT staff to discuss projects, draft and finalize work statements and tasks, create project accounts when authorized, and report progress on projects throughout the year.

Cost Estimate: ~~\$10,000~~ **7,400**  
(\$3,600 carryover from FY 2007)

Product: scopes of work, progress reports

Schedule: on-going activity

Miscellaneous Services

A. This work element provides VDOT and VDRPT with the ability to undertake limited scope studies and or data gathering activities identified during its regional and sub-regional planning activity during fiscal year 2007.

B. The miscellaneous services account is also a mechanism established to address request that are too small or too short-lived to warrant separate work scopes. Authorizations to execute specific tasks are usually given by fax; this is particularly useful for quick turnaround. Work items include: requests for hard copy, plots, tape, or diskettes of data from any of the planning work activities at COG, participation in technical review committees and tasks forces and execution of small technical studies.

Cost Estimate: ~~\$15,000~~ **10,000**  
(\$7,000 carryover from FY 2007)

Schedule: on-going activity

Northern Virginia HOV Facilities Monitoring and Data Collection

VDOT desires an abbreviated monitoring program of the system of limited access high-occupancy vehicle (HOV) facilities in Northern Virginia during the fall of fiscal year 2008. The HOV corridors to be monitored are:

- I-95 from Triangle, Prince William County to its interchange with the Capital Beltway at Springfield, Fairfax County;
- I-395 from the Capital Beltway to (and including) the 14th Street Bridge in the District of Columbia;
- I-66 from Gainesville, Prince William County to the District of Columbia end of the T. Roosevelt Bridge; and
- Virginia Route 267 (Dulles Toll Road) from the Fairfax County / Loudoun County line to I-66 (including Dulles Connector and Dulles Access Road).

Monitoring will consist of the following data collection projects:

- Peak direction occupancy and classification counts (from 5 AM to 10 AM inbound and 3 PM to 8PM outbound) at a set of stations along these facilities. These stations will include the major count locations as specified by VDOT, and will be less than the usual number of locations.
- Off-peak direction traffic volume and classification counts during the peak period (same as above) at selected locations to be performed in the spring of 2005 in Northern Virginia.
- Staff will also research, purchase, test, and perform travel time runs using GPS technology in Northern Virginia.

Data will be transmitted to VDOT after field data collection work, editing, and reasonableness checking have been completed. Preliminary data will be transmitted to VDOT within one week of the count so that a timely determination can be made regarding the need for a re-count.

Cost Estimate:	<del>\$275,000</del> <b>270,000</b> (\$15,000 carryover from FY 2007)
Products:	Data files transmitted to VDOT
Schedule:	Fall counts completed by Nov. 30, 2007 Spring counts completed by June 15, 2008

#### High Occupancy / Toll (HOT) Lane Traffic Analyses

As requested by the Commonwealth, COG staff will perform traffic analyses of proposed HOT lane projects in order to assist decision-makers in evaluating the impacts of the proposed HOT lanes. The COG analysis will consider transit improvements (including commuter lots and expanded bus service).

Cost Estimate: ~~\$40,000~~ **30,000**  
(\$15,100 carryover from FY 2007)  
Products: Analysis results  
Schedule: Fall, 2007 or Spring, 2008

#### Public Safety / Information Pamphlets

Production or re-printing of public safety pamphlets for distribution at public meetings on 1) bike safety and use of highways, 2) state code provisions applicable to cyclists and pedestrians, and / or 3) regional map of commuter parking lots.

Cost estimate: \$15,000 **0**  
(\$15,000 carryover from FY 2007)  
Product: pamphlets  
Schedule: Fall 2007 or Winter 2008

#### Recommend Supplemental Traffic Counts

In 2007 travel survey data will be collected from 10,000 households in the metropolitan region. WMATA is also planning a spring 2007 Metrorail survey. These data along with transit ridership data obtained from transit agencies in the region will be used to develop and calibrate a new regional travel demand forecasting model. To support this new model development and calibration, it would be extremely useful and important to have additional traffic counts conducted at many geographic locations throughout the metropolitan region in 2007. These traffic counts would be in addition to and would supplement traffic counts already planned by the DOTs. The supplemental counts would ensure a large and representative regional sample of highway traffic volume data for model development and calibration.

Approximately 167 supplemental traffic counts will be conducted during in FY 2008 on selected arterials in Northern Virginia to augment the counts in Virginia's planned statewide HPMS data collection activities and to assist in the validation of the regional travel demand forecast model.

Cost Estimate: ~~\$135,500~~ **107,000**  
(\$18,000 carryover from FY 2007)  
Product: additional HPMS traffic counts  
Schedule: on-going activity

#### Enhanced Commuter Corridor Count Program Continuation

This work element will continue prior work under this task and will dovetail with the scheduled TPB count program to obtain additional data on modal use in either the I-66 or I-95 / 395 corridors. This additional data will provide statistically reliable information on modal use in the selected corridor that will be beneficial to planners and decision makers. While technical assistance funding will be used for the TPB data collection effort, the success of this work element is predicated on transit providers providing ridership data, free of charge, to be integrated into the overall data analysis. This ridership data must be collected on the same day as the TPB data collection effort in order to accurately depict modal shares.

Cost Estimate:        ~~\$40,000~~ **30,000**  
   (\$25,000 carryover from FY 2007)

Schedule:             Data collection to occur in FY 2008

TOTAL VIRGINIA COST ESTIMATE:    ~~\$522,500~~ **454,400**  
   **(\$553,000 total after \$98,700**  
   **carryover from FY 2007)**

#### D. WMATA

##### Program Development

This project is established to account for DTP staff time spent in developing scopes of work for requested projects and for administering the resultant work program throughout the year. Work activities will involve meeting with WMATA staff to discuss projects, drafting and finalizing work statements and tasks, creating project accounts when authorized, and reporting progress on projects throughout the year. In addition, this project will provide staff with resources to attend required meetings at WMATA.

Cost Estimate:        \$10,000

Schedule:             on-going activity

##### Miscellaneous Services

This miscellaneous account is a mechanism established to address requests which are too small or too short-lived to warrant separate work scopes. Past work has included requests for hard copy, plots, tape, or diskettes of data from any of the planning work activities at COG.

Cost Estimate:        \$6,300

Schedule: on-going activity

### Accessible Pathways Analysis for MetroAccess Customers

In this project TPB and WMATA staff will review and assemble relevant regional transportation and MetroAccess data needed to conduct an Accessible Pathways Analysis for MetroAccess Customers. After this information has been assembled, it is anticipated that consultant assistance would be obtained to develop and test a methodology for prioritizing the need for and general routing of accessible pathways for MetroAccess trips. These accessible pathways would achieve two objectives:

- Connect concentrations of MetroAccess patrons with fixed route transit service; and
- Connect fixed route transit service and high-frequency destinations based on existing MetroAccess trip data.

Cost Estimate: \$200,000 using carryover from FY 2007

Schedule: December 2007

### Geocode 2007 WMATA Rail Survey Data

This project will Geocode the home address data collected in the Spring 2007 WMATA rail passenger survey to Transportation Analysis Zones (TAZs) for the TPB Modeled Region. For this project TPB staff will (1) geoprocess all of the home address data; (2) hire, train and supervise the temporary geocoding clerks; and (3) provide overall project management and quality control. COG/TPB will deliver to WMATA an updated rail passenger survey file with TAZ geocodes and other appropriate geoprocessing flags appended to each survey record.

Cost Estimate: \$25,000  
(75,000 after \$50,000 carryover from FY 2007)

Schedule: October 2007

### Geocode 2007 WMATA Bus Passenger Survey

This project will Geocode the home address data collected in the Fall 2007 WMATA bus passenger survey to Transportation Analysis Zones (TAZs) for the TPB Modeled Region. For this project TPB staff will (1) geoprocess all of the home address data; (2) hire, train and supervise the temporary geocoding clerks; and (3) provide overall project management and quality control. COG/TPB will



**deliver to WMATA an updated bus passenger survey file with TAZ geocodes and other appropriate geoprocessing flags appended to each survey record.**

**Cost Estimate: \$75,000**

**Schedule: March 2008**

**Impact of Highway Congestion on WMATA Bus Operations**

**This project will study the impact of highway congestion on WMATA bus operations & fleet needs. This project will also identify potential improvements that could mitigate the adverse effects of this congestion on bus operations and reduce WMATA overall bus fleet needs and operating costs.**

**Cost Estimate: \$50,000**

**Schedule: June 2008**

**TOTAL WMATA COST ESTIMATE: \$166,300  
\$416,300 after \$250,000 carryover  
from FY 2007**

**VI. CONTINUOUS AIRPORT SYSTEM PLANNING PROGRAM**

The goal of the CASP program is to provide a process and products that support the planning, development and operation of airport and airport-serving facilities in a systematic framework for the Washington-Baltimore region. The program is overseen by the Aviation Technical Subcommittee. The elements of the multi-year CASP work program to be performed during FY 2008 are as follows:

**Update Ground Access Forecast - Phase 2**

This project will complete the update of the Ground Access Forecasts begun in the Update Ground Access Forecasts - Phase 1 (FY 2007). In this next phase of the update, the trip generation rates calculated in Phase 1 will be used to develop new forecasts of ground access trips from all local area aviation analysis zones to each of the region's three commercial airports by time of day and major mode of travel used to reach the airport.

**Cost Estimate: \$ 67,592**

## **Ground Access Element Update**

The purpose of this project is to update the Ground Access Element of the Regional Airport System Plan using the results of the most recent Regional Air Passenger Surveys and the latest Updated Ground Access Forecasts. Ground access and landside congestion problems are expected to increase in the future. This update will provide an analysis of current and forecast ground access problems at Ronald Reagan Washington National, Washington Dulles International, and Baltimore-Washington International airports. This plan element will also integrate airport system ground access and facility planning into the overall regional transportation planning process for the National Capital Region and include recommendations for improving ground access to the region's airports.

Cost Estimate:                      \$ 250,000

Total 7. COST ESTIMATE: \$317,592

**3. PROPOSED FY 2008 STATE TRANSPORTATION AGENCY  
STATE PLANNING AND RESEARCH PROGRAMS (SPR)**

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**District of Columbia Department of Transportation**  
**SPR Program Elements Supporting the Washington Area Work Program**

The following work program element descriptions identify the transportation planning activities proposed for the District of Columbia Statewide Planning Work Program for FY 2008 which support the Unified Planning Work Program for the Metropolitan Washington Region.

CITYWIDE PROJECT DEVELOPMENT BRANCH

Develops policies, plans and programs to improve citywide transportation systems and services. Includes coordination of Great Streets Program, Transportation Enhancements Program and citywide streetscape and other citywide transportation system policies and programs.

NEIGHBORHOOD TRANSPORTATION DEVELOPMENT BRANCH

Formulate plans and policies as they pertain to the development of transportation systems for individual wards in the District. Develop multi-modal transportation solutions. Prepare neighborhood components of the Capital Budget and the Capital Improvement Program.

TRANSPORTATION DEMAND MANAGEMENT BRANCH

Develops policies, plans and programs to encourage non-vehicular travel, especially during periods of peak travel demand. Develops and promotes bicycle and pedestrian facilities and programs, as well as works with major employers to encourage non-vehicular methods of commuting.

TRANSPORTATION POLICY BRANCH

Develops the State Transportation Programs and plans, budgets, allocates, and optimizes fiscal resources to meet Federal Highway-Aid and District capital program investment priorities. Prepares the capital budget, financial spending plans, and the Highway Trust Fund Cash Flow Pro forma.

DEVELOPMENT REVIEW BRANCH

Responsible for improving access to and movement within local area neighborhoods and increasing safety for all modes of traffic. Reviews and comments on transportation impacts of proposed development projects (Board of Zoning Adjustment, Zoning Commission, Large Tract Reviews, Planned Unit Development, Environmental Impact Statement Forms, Street and Alley Closings) and streetscape review.

TRANSPORTATION COMPLIANCE BRANCH

Ensures District compliance with all Federal-aid requirements and provides environmental planning and coordination. Assures that transportation projects meet federal environmental review requirements as a part of project development. Manages consultant contracts related to environmental studies and participation in the regional process for air quality conformity determinations and state implementation plans for emissions reductions as required by the Clean Air Act. Responsible for the development, implementation and management of the State Planning & Research Program.

#### ASSET MANAGEMENT DIVISION

Responsible for the classification of highways into functional systems providing a stable framework for planning, financing, and executing long range programs, and for implementing transportation system management policies and actions. Provides up to date information on the physical characteristics and conditions of the D.C. Roadway System. Assists decision makers in finding optimum strategies for maintaining pavements in a serviceable condition over a period of time, improves the efficiency of decision making, and provides for safe and efficient movement of goods and people by identifying and prioritizing roadway segments for rehabilitation.

#### TRAFFIC SAFETY CHARACTERISTICS

Develops, implements, and manages the production of a viable and useable information system that provides knowledge about travel on the streets, highways and pathways of the District of Columbia. Improves data collection capabilities regarding traffic volumes, speed data, vehicle classification and weight in motion data.

#### TRAFFIC AUDIT STUDIES AND IMPLEMENTATION

Examines unsafe traffic conditions on federal-aid routes and develops comprehensive solutions to increase transportation safety.

#### HIGHWAY PERFORMANCE MONITORING SYSTEM COORDINATION

Program management for the coordination of the HPMS program at DDOT. Tracks the progress of the Continuous Process Improvement approach and shares results with partners. Documents DDOT's policies and procedures for the HPMS program.

#### DEVELOPMENT OF MAINTENANCE MANAGEMENT SYSTEM

This is a Federal Highway Administration and DDOT Joint Performance Goal.

#### PEDESTRIAN MASTER PLAN

The DC Pedestrian Master Plan is a year long study of pedestrian safety and access

across the District. The plan will feature in-depth public involvement, review of existing policies, plans, and studies, analysis of crash data, and detailed analysis and countermeasure recommendations for high crash corridors in all areas of the city.

### RESEARCH AND TECHNOLOGY DEVELOPMENT PROGRAM

The Research and Technology Program is dedicated to ensuring that all persons who live, work and travel in the District of Columbia enjoy safe and efficient modes of transport. The Research Program studies, identifies and supports the implementation of innovative ways to improve safety, reduce congestion, achieve environmental excellence, increase public involvement, utilize best practice planning processes, and improve the efficiency of DDOT's maintenance and operations.

The Program is responsible for evaluating and supporting a number of DDOT's transportation safety initiatives such as the installation of pedestrian countdown timers, red light running cameras, and driver feedback signs. The Program supports both pedestrian and bicycle safety studies. Other projects include researching best practices for curb pricing, street and bridge maintenance and construction materials. Currently, the Research Program is implementing an agency wide Environmental Management System that will help DDOT move toward an organizational culture of environmental excellence.

In addition to conducting research projects and technology activities, the program also supports education and training opportunities for DDOT employees and the general public through technology transfer initiatives and active participation in national and regional transportation associations. Through strategic partnerships with the Federal

Highway Administration and Howard University's Transportation Research Center, DDOT's Research Program delivers tangible transportation improvements to the City.

### METROPOLITAN PLANNING

Provides a mechanism for the coordination of transportation planning activities in the area. Develops transportation plans and programs for urbanized areas of the State. Provides for the development and management of transportation systems and facilities that will function as an intermodal transportation system for the metropolitan region.

### PROGRAM FUNDING

The FY 2008 SPR Program funding is under development. The FY 2007 SPR Program funding was \$3,373,512 (Federal = \$2,698,810 and District = \$674,702).

**Maryland Department of Transportation  
State Highway Administration  
State Planning and Research (SPR) Program Elements Supporting the**

## Washington Area Work Program

### I. Systems and Programming

#### A. Programs

1. Preparation of the Annual Statewide Transportation Improvement Program
  - Prepare and submit an annual program for use of available federal funds in accordance with Title 23 U.S.C and SAFETE-LU.
  - Coordinate the STIP with the regional TIPs, CTP and local jurisdiction's highway improvement programs
2. Preparation and development of the 6 year Consolidated Transportation Program
  - Develop the FY 2007-2012 CTP.
  - Coordinate with appropriate State and local planning staffs, MPOs and State, county and municipal elected officials.
  - Prepare presentation materials for the annual tour.
3. Local Government Liaison
  - Coordinate between all levels of Federal, State, and local governments to ensure that transportation plans are compatible per the 3-C process.
  - Notify review agencies and review other agency plans and programs, via the State Clearinghouse process.
  - Coordinate and review county and municipal master plans.
  - Assess transportation impacts of proposed major development.
4. Long Range Planning
  - Update the Highway Needs Inventory (HNI).
  - Evaluate long-term highway needs and investment levels for various program categories and sub-categories.
  - Review and provide input on updates to the statewide long range plan and Annual Attainment Report on Transportation System Performance.

### II. Traffic

#### A. Traffic Monitoring Program



- Monitor the characteristics of highway traffic
- Enhance procedures to collect, process and disseminate traffic data.
- Ensure that the traffic monitoring system meets State needs and the requirements and guidelines of FHWA and AASHTO.
- Study, and as appropriate, implement methods to improve the efficiency and effectiveness of traffic monitoring through statistical analysis.
- Improve the monitoring of traffic on freeways, particularly in urban areas.
- Ensure the collection of traffic volume, classification and weight data on SHRP monitoring sites.

### III. Metropolitan Planning Organization Liaison

#### A. Urbanized Areas

- Work with the MPOs in modifying and adhering to their planning process.
- Work with the MPOs in the development of the UPWPs, CLRPs, TIPs, clean air conformity determinations, and management systems.

### IV. Highway Statistics

#### A. Mileage

##### 1. Federal System

- Develop new Federal Functional Classification and NHS maps and mileage tables for approval and distribution.
- Update and maintain statistical records summary tables.

### V. Urban Transportation Planning

#### A. Elements of the Washington Region UTPP

##### 1. 3-C Process

- Maintain inventory of regional transportation and socio-economic data; improve technical capabilities within the region; provide technical support to project planning activities, and conduct special studies.
- Develop necessary plans and programs to ensure certification of the regional transportation planning process.
- Develop new planning programs as required by SAFETEA\_LU and the Clean Air Act.
- Continuation of the campaign of public education and voluntary measures aimed at informing the general public about the regional air quality program, identifying

voluntary measures that employers and individuals could take to reduce emissions.

VI. Special Studies

A. Ridesharing Coordination

- Encourage ridesharing and transit usage.
- Develop a network of ridesharing facilities to support Maryland's planned highway and transit networks.
- Reduce reliance on single occupant vehicles for travel.
- Expand the use of ridesharing facilities in Maryland.
- Incorporate ridesharing strategies where appropriate as a travel demand measure.

B. Preliminary Studies

- Prepare engineering and feasibility studies.
- Develop preliminary purpose and need statements.
- Develop access control plans for selected primary highway corridors.
- Prepare interstate access point approval requests.

C. Bicycle Affairs Coordination

- Improve bicycle safety and educational awareness.  
Implement MDOT/SHA bicycle and pedestrian policies.  
Provide MDOT representation and staff support for the Maryland Bicycle Advisory Committee (MBAC).

Federal	\$4,532,197
State	\$5,110,776
Total	\$9,642,973

NOTE: The funding total is based on Maryland's statewide SPR program. MDOT/SHA does not sub-allocate SPR funds to the individual MPOs. In general terms, approximately 33 percent of this statewide total is attributed to the Washington Region or \$3,182,181.

## **FY 2008 NoVA District SPR Request**

### **A. SPR Funds for MPO Support (\$128 K requested)**

The requested funds will partially cover the salary, travel, and other costs for the NoVA District Planner plus four NoVA District planning personnel directly engaged in MPO activities and support. Unlike FY07, for FY08 all such time, regardless of whether spent at the MPO's location or in the District Office, will be charged against the allocated SPR funding in order to more accurately reflect the amount of time spent in direct coordination, management of contracts with the MPO, MPO-related meetings, and preparation for those meetings.

### **B. SPR funds for special in-house studies**

#### **1. NOVA Planning Methodology Applications (\$55 K + \$30 K consultant funding)**

This continues an on-going study begun in FY 2007 to enhance existing NoVA Planning tools, build on findings and recommendations developed during the Choke Point Mitigation / MOBIS study (completed in FY06), and explore congestion / mobility topics and their application to the District's transportation network.

The GIS database that supports the planning function will continue to be updated and upgraded with input from District Planning function staff. Examples include improved functionality of CLRP layer, congested systems update (existing conditions) and / or future year congestion development, select data coding (such as TIP projects that provide capacity increase, Comp. Plan or ranking model output data).

Continuing with the methodology developed under the MOBIS study for Corridor / Sub-area assessments and analyses, this effort will continue performing planning level assessments of selected areas of the district on topics related to congestion and mobility (such as travel time reliability factors and effect on capacity and congestion, analysis of driver information measures and identification of deficiencies, safety patterns in sub-areas, Origin / Destination data collection, reverse commute observations, feasibility evaluation of intermediate- to long-term improvements previously identified).

Due to recent changes in land use decisions and management priorities, some of the originally planned evaluations (particularly related to land use patterns) were not conducted. The work outlined above will likely not be completed in FY08 but will extend into, and be completed in, early FY09. It is anticipated that the majority of the tasks will be completed by VDOT staff (\$60,000), with consultant support (\$30,000) primarily for data collection or feasibility evaluation tasks. We reaffirm the need for the \$90,000 FY08 funding already approved and still remaining.

## **2. Analysis for Dulles Corridor Rapid Transit (DCRT) (\$45 K requested)**

This continues an on-going effort to coordinate planned expansion of the heavy rail (Metrorail) system through Tysons Corner westward to Dulles Airport with proposed highway improvements to minimize rail / highway conflicts. We reaffirm the need for \$45,000 – either from the \$49,000 funding remaining for the study [per 1/8/07 FMSII report] if it will carry over into FY08, or \$45,000 in new funds. Much of the analysis work envisioned in this study has been completed, including congestion mitigation program coordination for the Dulles Rail project. We plan to use available funding to study, identify and conduct preliminary evaluation of transportation network improvements (pedestrian, bike, roadway) to the VA 7 / 123 intersection vicinity in order to develop projects for improvements in the area of influence of the DCRT project. Given the high cost of right-of-way in Tysons Corner and limited accuracy of traditional planning R/W definitions, it is possible that preliminary survey work will be needed to determine availability of public R/W and hence the effect on a project's feasibility.

The timing of this task continues to be largely dependent on the schedule for plan development by the DCRT project but it is expected to be completed in FY08.

## **3. NoVA Regional Bikeway & Trail GIS map (\$ 40 K requested)**

Having completed the *NoVA Regional Bikeway & Trail Network Study* in 2003, NoVA Transportation Planning wants to augment study findings and create new applications and additional information from the maps that were produced. A GIS map (and related database) is proposed for development that builds on current information and is compatible with VDOT's GIS system. This will allow us to calculate (in miles) the amount of existing trails in the NoVA district, proposed miles of improvements, and completed miles of improvements (per annum) in a GIS data layer and map. This tracking mechanism will provide a powerful tool to monitor our bicycle and pedestrian projects / accommodations.

Portions of the information are already available; however, this information does not include network on-road routes that are wide shoulders or shared lanes, and does not provide a method for the tracking of proposed and completed miles. Also, with a new GIS map, missing links can be visually highlighted and prioritized for construction funding.

The project is anticipated to be completed by VDOT-NoVA staff in two phases.

Phase one - FY '07: Completion of the map/ database - \$10,000 (previously \$40,000 but due to use of internal resources cost has decreased)

Phase two - FY '08: Input / test the product by tracking new and completed projects. There may be additional refinement and modification needed to the final product (GIS based Tracking System). Cartographic

elements will be revisited and redesigned - \$40,000 (This phase will likely be more labor intensive than previously envisioned)

#### **4. Pedestrian/ Bicycle Educational Campaign - Va. Law (\$90 K requested)**

Pedestrian and bicycle safety have become increasingly serious problems in Northern Virginia. With promotion and development of a multi-modal transportation system, the need arises to address conflicts between motorists / bicyclists / pedestrians. According to the Virginia Department of Motor Vehicles, in 2003 there were 615 pedestrians and 192 bicyclists injured in the Northern Virginia area; 20 of these conflicts resulted in fatalities.

The intent of this project is to educate the public, throughout the NoVA region and for possible statewide distribution, regarding Virginia law (the Code of Virginia) and the responsibilities of pedestrians, bicyclists and motorists when using public roads, paths and sidewalks. A comprehensive outreach campaign will be developed to reach a region-wide audience focusing on areas pertaining to bicycle and pedestrian law, as well as other VDOT related programs.

This campaign will identify various activities that reach a broad range of target audiences, including non-English speaking populations. It may include prints (such as bus placards, leaflets, brochures, promotional items), as well as public service announcements for radio and television to be produced and distributed.

A public awareness and educational campaign will be implemented reaching a broad audience base and directed to improving pedestrian, bicycle and driver awareness and responsibilities. Specific campaign messages will be developed of general pedestrian / bicycle / motor vehicle safety as well as promotion of bicycle and pedestrian enhancements.

The project is anticipated to be completed by consultant services in two phases:

Phase one – FY '07 (on-going): Research of Virginia laws in coordination with Central Office. Steering team will direct the project's process and progress. Prepare accurate interpretation for public consumption, prepare a prioritized list of activities that should be conducted, identify the target audiences. – \$10,000 (previously estimated at \$60,000)

Phase two – FY '08: Develop outreach layout and publication materials, investigate inclusion for non-English speaking populations, identify free media opportunities (especially public service announcements). Design and produce (may include direct mail) promotional / educational tools (may include giveaways) and begin distribution of material. This may also include further refinement / modification / additions. – \$90,000

## 5. Comparing Traffic Calming Methods on Shared Use Paths (\$50 K requested)

As more people use shared use paths for commuting, there are an increasing number of locations where fatalities occur at the intersection of major roads and major paths especially, where the topography encourages the bicyclist to ride at excessive speeds (such as on downhill grades). Traditional methods to treat high accident locations have included cutting trees to increase sight distance, addition of warning signs on the roadways, addition of advance warning signs on the paths, as well as stop signs and pavement markings. Unfortunately, these messages are often ignored by the bicyclists. As a result, many jurisdictions are trying to implement bicycle traffic calming measures, such as introducing curves in the path. While there is a lot of data on traffic calming procedures there does not appear to be any study data comparing the effectiveness of different methods.

This project proposes to identify 2 or 3 locations on a heavily used shared use path where site conditions can not be addressed by conventional methods. Ideal test sites would have a downhill grade of at least 4%, a crossing roadway, and limited site distance issues on both the roadway and the path. Partnering with NoVA safety personnel will be required for this project to ensure that dangerous situations are not created.

Once a location has been identified, we will collect baseline data on the average and maximum speeds achieved by the bicyclists. This can be done by obtaining a "velocity radar gun". We are not sure whether this can be borrowed from a different section in VDOT or whether one would need to be purchased. Models used to record baseball speeds can be purchased at costs between \$200 and \$300. Once baseline data is obtained, different traffic calming methods can be installed at the test location. These may include but will not be limited to:

- a. Adding just advance warning signs and pavement markings
- b. Adding orange/yellow colored asphalt to see if such color affects behavior encouraging a reduction in speed.
- c. Adding a high friction surface
- d. Adding a soft surface product such as is used on athletic tracks
- e. Curving the approach path width
- f. Adding rumble strips for bicycles via various means (such as imprinting concrete pad with a pattern using a metal mesh, sawcut grooves, or other method). (Care will be needed to ensure that this measure is not too rough and does not cause a problem for wheelchairs)

It is anticipated that there will be cost associated with some of the traffic calming measures. It will also require extensive participation from Traffic Engineering Section and will also include the use of State Forces for temporary in-ground

installations. The measures are planned to be in place for a period of 3-6 months.

This data will be supplemented by surveys handed out at the site to determine the users' impression of the change. The results of the survey, field observations, speed data and technical findings will be summarized in a report for distribution. The report may also be a candidate for a TRB paper.

### **C. SPR funds for consultants / other entities**

#### **1. NoVA Planning Methodology Applications (\$30 K requested for consultant work)**

The requested consultant support is anticipated to focus on data collection and feasibility analysis, as outlined for this project under the in-house studies text. While the total study work is expected to extend into FY09, the consultant work should be completed in FY08.

#### **2. Bicycle and Pedestrian Count Program (\$35 K requested)**

In FY 2006, 25 count locations were identified and prioritized for a Count Study (SPR 00067938). In summer / fall of 2005 and early spring of 2006, 21 bicycle and pedestrian counts were completed by the NoVA Traffic Engineering section. Counts were generally performed during a 12 hour time period; a few counts were modified to accommodate daylight savings. All counts included peak a.m. and p.m. travel. Eighteen weekday counts and 3 weekend counts were performed. Locations were determined by: (a) inclusion in the NoVA Trail Network, and (b) cross representation from all four counties in the district. Nominations for count locations came from NoVA Transportation Planning Staff as well as solicited from county agencies and local trail organizations. The scope of this Study is to continue this effort by performing additional counts at the same and / or different locations using video camera technology, which will enable us to accurately split the counts between the two modes (bicyclists and pedestrians). This information will be compared with the traditional human counting method.

The initial count and associated database was focused on trail network locations, as the number of bike lanes along streets/highways do not make up a predominant portion within our NoVA Trail Network. The continuum of trail counts fits well into the overall SPR scope by giving VDOT the opportunity to gather additional information. Creation of a regional database of count information springboards future studies, counts, and surveys, and will be useful for many planning purposes such as to:

- Establish a baseline of usage trends per locale of our current bike and pedestrian community

- Establish historical data for use by other sections/divisions as well as local jurisdictions
- Perform further studies and provide supporting information for future needs
- Become familiar with methods and technical procedural requirements to conduct accurate bicycle and pedestrian counts
- Determine various characteristics of bicyclists and pedestrian movements
- Establish critical locations for follow-up
- Assess the effectiveness and accuracy of the NoVA Bikeway and Trails Network
- Determine if, and by how much, bike/ped usage is increasing in our region
- help prioritize project administration / funding

The program will be implemented using consultant services with cameras since the NoVA Traffic Engineering Section does not have this capability nor the time. With the ability to conduct camera counts the time frame is shorter and the work can be completed quickly at a relatively low cost. Additionally, utilizing consultant services gives us an opportunity to complete counts at all the previous locations as well as several new ones; with completion of all identified counts, the analysis will be comparatively stronger.

With resource availability, converting the database into a GIS layer to look at corridor movement, and for comparison with the trails data layer, would also make a good augmentation of these bicycle/pedestrian usage counts

### **3. Northern Region Smart Travel Operations Program Plan Expansion (\$350 K requested)**

VDOT's Northern Region Operations (NRO) needs to update the "Northern Virginia District Smart Travel Program" originally developed in 1999 and updated in FY 2006. This consultant effort will include:

- Identification and inclusion of revised NRO Goals and Objectives
- Review of all Program Activity Areas with revised statement of existing condition, vision, and project activities.
- Discussion of Program Activity Areas mapped to NRO Goals and Objectives
- Overview of Integrated Strategic Planning and Investment Process
- Evaluation and inclusion of projects and programs ongoing and planned for the areas of Fredericksburg and Culpeper Districts that were incorporated with NoVA to form the Northern Region Operations Directorate.
- Development of both a detailed Plan document and an executive summary
- Professional design and printing.



The bulk of the effort will be conducted in FY08 with FY09 being used to complete any remaining tasks from the above work scope. It should be noted that funds currently remaining on this project (\$67,360) are planned to supplement the requested FY08 funding of \$350,000.

#### **4. Northern Region ITS Architecture Expansion, Maintenance, and Support (\$350 K requested)**

The existing Northern Region ITS Architecture needs to be expanded geographically to cover the areas of Fredericksburg and Culpeper Districts that have been added NoVA to form the VDOT Northern Region Operations Directorate. The existing architecture is a VDOT-centric architecture; this expansion will make the architecture a truly regional ITS Architecture that other agencies in the Northern Region can use. Additionally, the Architecture needs to be updated to include new stakeholders and revised interconnects and information flows within the existing VDOT NoVA footprint.

This proposed effort will include:

- Review of existing Architecture
- Identification of new or changed stakeholders within original footprint
- Identification of additional stakeholders within the newly added areas
- Outreach to stakeholders across Region
- Development of a Strawman Architecture using latest version of Turbo Architecture
- Validation of the Architecture
- Completion of the updated NRO Architecture
- Review and update of the NRO Rule 940 Checklist
- Re-development of the NRO Architecture Website
- Preparation of summary report with professional design and printing.
- Development of other outreach materials as appropriate.
- Training for project managers to use the Architecture in project development
- Ongoing support including review of project architectures and maintenance of turbo files.

As with the ITS Architecture effort described above, the bulk of the effort will be conducted in FY08 with FY09 being used to complete any remaining tasks from the above work scope. It should be noted that funds currently remaining on this project (\$115,580) are planned to supplement the requested FY08 funding of \$350,000.

#### **5. Northern Region Operations Year-End Performance Report and Ops Planning Tool Promotion (\$25 K requested)**

At the end of each calendar year, VDOT NRO will produce a Year-End Performance Report. Target audiences for this report will be:

- Elected officials
- Funding decision-makers
- Other VDOT Operations Regions
- Industry peers and stakeholders
  - i. Agencies
  - ii. Academia
  - iii. Private-Sector practitioners
- General Public

The Report will include:

- Overview Program Investment Plan under each program activity area with analysis of measures of success, project status, and future actions.
- Detailed breakdown of project-level measures of success, by NRO Section. This will be based upon the Section summary of the ongoing Investment Tracking Spreadsheet, along with our work plan spreadsheet.
- Financial summary showing sources and uses of funds. In the future, it is desirable to develop measures of Return on Investment (ROI).
- Highlights of major projects and achievements.

The report will be professionally designed and printed, with distribution to Target Audiences. Approximately the same work effort (described above) will be conducted in FY08 and FY09.

## **6. Northern Region Telecommunications Master and Implementation Plan (\$400 K requested)**

This project is to develop a Telecommunications Master Plan detailing preferred communications architecture, technologies, and specific enhancements to move toward that architecture. It will include reviewing the previously completed “Go-Forward Telecommunications Assessment”, as well as various extant telecommunications project work plans.

The current methods of communications with ITS field assets throughout the NRO need modification to accommodate the anticipated growth over the next 10 years. Telecommunications have been designed and implemented in haphazard fashion, leading to inefficient utilization of resources. Developing a Telecommunications Master Plan will position the NRO to enhance and further expand the system quickly, easily, and efficiently.

Additionally, implementation of a new NRO ATMS located at the Public Safety Transportation Operation Center (PSTOC) will place more demands on the already taxed existing system. Enhancement is a necessity.

Currently, VDOT uses SONET (Synchronous Optical Network) to communicate over the fiber backbone. When first introduced, SONET was an extremely popular innovation because of the network capacity that it provided. It is widely

used today and is a proven technology. However, with the anticipated growth in the Northern Virginia area, and VDOT's planned projects to coincide with that growth, newer technologies have emerged that will prove to be less expensive while providing the same capacity as SONET. The Go-Forward proposal recommends that the NRO implement a Gigabit Ethernet network running over the existing fiber optic backbone.

Looking forward to the anticipated growth in this area and VDOT's plans to expand the ITS system to coincide with that growth, it has become evident that the SONET method VDOT currently uses will not handle the increased demand without a significant investment in hardware. Newer technologies and standards have emerged which VDOT can utilize that will provide greater expandability and scalability, and cost less.

A disadvantage to the current network is that in order to add capacity, costly hardware must be procured for multiple parts of the network. With a more mainstream network, such as Gigabit over Ethernet, hardware upgrades are more readily available and generally cost less.

Developing a Telecommunications Master Plan is an essential first step to efficiently upgrading and expanding the telecommunications backbone that will support the NRO ATMS.

Use of a more modern common standard such as Ethernet will provide for a much more open system in terms of expandability and future advances.

As with the ITS Architecture effort described above, the bulk of the effort will be conducted in FY08 with FY09 being used to complete any remaining tasks from the above work scope.