

ITEM 9 – Information
February 17, 2016

Briefing on the Draft FY 2017 UPWP

Staff

Recommendation: Receive briefing.

Issues: None

Background: The Board will be briefed on the draft Unified Planning Work Program (UPWP) for FY 2017 (July 1, 2016 through June 30, 2017). The Board will be asked to approve the FY2017 UPWP at its March 16 meeting.

**NATIONAL CAPITAL REGION
TRANSPORTATION PLANNING BOARD**

FY 2017

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

DRAFT

February 9, 2016

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 2017 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, 2016 through June 30, 2017. The UPWP provides a mechanism for the coordination of transportation planning activities conducted by the National Capital Region Transportation Planning Board (TPB), 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). The Metropolitan Washington Council of Governments (COG) serves as the administrative agent for the TPB, The TPB is staffed by COG's Department of Transportation Planning. COG provides the administrative functions necessary to meet federal fiducial and other regulatory requirements required in order to receive FHWA and FTA funds.

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. The work program identifies state and local matching dollars for these federal planning programs, as well as other closely related planning projects utilizing state and local funds.

Planning Requirements

The planning activities outlined in this work program respond to a variety of regulatory requirements. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) of 2005 defines the structure of the metropolitan planning process. On February 14, 2007, the FHWA and FTA issued final regulations regarding metropolitan planning in response to SAFETEA-LU. The Moving Ahead for Progress in the 21st Century (MAP-21) Act of 2012, made some important modifications to the metropolitan planning process, primarily requiring metropolitan planning organizations (MPOs) to establish and use a performance-based approach to transportation decision making and development of transportation plans. The Fixing America's Surface Transportation (FAST) Act became law on December 4, 2015 and continued this approach. This work program has been developed to comply with the MAP-21 requirements regarding metropolitan planning essentially as presented in the proposed metropolitan planning rule published June 2, 2014. However, this FY2017 work program also provides for consideration of metropolitan planning provisions under FAST, as described at the end of this section.

On October 15, 2014, the TPB approved the 2014 Financially Constrained Long Range Transportation Plan (CLRP) for the National Capital Region. In January 2015, FHWA and FTA found that the 2014 CLRP and FY 2015-2020 Transportation Improvement Program (TIP) conform to the region's State Implementation Plans.

In June 2015, the FHWA and FTA jointly certified that the TPB's planning process complies with metropolitan planning regulations and issued a certification report. On October 28 and 29, 2014, FHWA and FTA conducted a certification review of the metropolitan planning process in the Washington, DC-VA-MD Transportation Management Area (TMA) which is the responsibility of the TPB and the Fredericksburg Metropolitan Area Metropolitan Planning Organization (FAMPO). While the recommendations from the certification report were addressed in FY 2016, improvements and enhancements identified in the report continue to be integrated into the TPB's ongoing planning process.

The Clean Air Act

The Clean Air Act Amendments (CAAA) of 1990 requires 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.

Title VI and Environmental Justice: Ensuring Non-Discrimination

It has been the long-standing policy of both COG and TPB to actively ensure nondiscrimination under Title VI of the Civil Rights Act of 1964. Title VI states that “no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance”. Executive Order 12898, issued February 11, 1994, requires that the TPB identify and address, as appropriate, disproportionately high or adverse effects of its programs, policies, and activities on minority populations and low-income populations. While COG, as the TPB’s administrative agent, has the primary responsibility for meeting Title VI requirements, ensuring non-discrimination is an underlying tenant that permeates this work program. The TPB has a two-pronged approach to ensuring nondiscrimination: 1) analysis of the long-range plan for disproportionately adverse impacts, and 2) engaging traditionally transportation disadvantaged-populations in the planning process. The specific tasks related to Title VI analysis is under Activity 1: Long Range Planning and engaging transportation disadvantaged-populations, primarily through the Access for All Advisory Committee, is found in Activity 8: Public Participation. COG’s Title VI Plan (including the Language Assistance Plan), the Title VI notice to the public, and complaint procedures can be found [here](#).

MAP-21 and FAST Requirements for Performance-Based Planning and Programming

MAP-21 and FAST call for metropolitan planning organizations, public transportation providers and states **to establish and use a performance-based approach to transportation decision making to support seven national goals**. The USDOT must establish performance measures related to seven goal areas for the federal-aid highway system. The goal areas include: safety, infrastructure, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays. Additional goal areas for public transportation address transit safety and transit asset management.

Once the performance measures are finalized, the states and public transportation providers will have up to a year to establish performance targets in support of those measures; and the MPO subsequently has 180 days to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the metropolitan transportation plan and the transportation improvement program (TIP) are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The metropolitan transportation plan will also have to include a system performance report evaluating the condition and performance of the transportation system with respect to the established targets. The TIP is also required to include a description of the anticipated effect of the TIP toward achieving the performance targets set in the plan.

Addressing Changing Planning Priorities

Regional and federal planning factors that are non-regulatory may evolve from one year to the next, but are nonetheless influential in the planning activities that are conducted and described in this work program.

As these factors continue to evolve, the UPWP is adjusted annually to focus on new and emerging priorities. 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. This UPWP 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 also 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.

Regional Planning Goals

In 1998, the TPB adopted a set of policy goals that have since served to guide its planning work program. These goals are:

- The Washington metropolitan region's transportation system will provide reasonable access at reasonable cost to everyone in the region.
- The Washington metropolitan region will develop, implement, and maintain an interconnected transportation system that enhances quality of life and promotes a strong and growing economy throughout the entire region, including a healthy regional core and dynamic regional activity centers with a mix of jobs, housing, services and recreation in a walkable environment.
- The Washington metropolitan region's transportation system will give priority to management, performance, maintenance, and safety of all modes and facilities.
- The Washington metropolitan region will use the best available technology to maximize system effectiveness.
- The Washington metropolitan region will plan and develop a transportation system that enhances and protects the region's natural environmental quality, cultural and historic resources, and communities.
- The Washington metropolitan region will achieve better inter- jurisdictional coordination of transportation and land use planning.
- The Washington metropolitan region will achieve enhanced funding mechanisms for regional and local transportation system priorities that cannot be implemented with current and forecasted federal, state, and local funding.
- The Washington metropolitan region will support options for international and inter-regional travel and commerce.

Known as the TPB Vision, these goals are broad in scope, and also encompass a variety of strategies and objectives. Together, these goals, strategies, and objectives provide a framework for setting out core principles for regional transportation planning. MAP-21 requires the planning process to consider projects and strategies that address eight planning factors. These eight planning factors are encompassed by the TPB Vision's policy goals and are considered when developing the CLRP. Each planning factor is included in one or more of the TPB Vision goals, objectives and strategies, except for security, which is implicitly addressed in the TPB Vision.

On January 15, 2014, after a three-year process, the TPB approved the Regional Transportation Priorities Plan (RTPP) for the National Capital Region. The Priorities Plan developed a comprehensive set of regional transportation goals and challenges, and then identified three regional priorities that local, state, and regional agencies should consider when developing projects. In FY 2017, the Priorities Plan will influence policy actions, funding strategies and potential projects considered for potential incorporation into the CLRP.

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 Metropolitan Washington Region. 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.

The TPB is composed of representatives from the 20 cities and counties, including the District of Columbia, that are members of the Metropolitan Washington Council of Governments (COG), 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. 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 ensure 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 state 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, which formed the Region Forward Coalition in 2010 to foster collaboration in these areas, 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 are forwarded to the governors and mayor for inclusion in the State Implementation Plans (SIPs) they submit to EPA.

In the Washington Metropolitan region, the roles and responsibilities involving the TPB, the three state DOTs, the local government transportation agencies, WMATA, and the local government public transportation operators for cooperatively carrying out state transportation planning and programming have been established over several years. As required under the final planning regulations, the TPB, the state DOTs and the public transportation operators have documented their transportation planning roles and responsibilities in the Washington Metropolitan Region in a Memorandum of Understanding (MOU) that was executed by all parties on January 16, 2008. The 2008 MOU will be reviewed in FY2017 and changes identified for updating the MOU following the promulgation of FAST planning regulations. The MOU is included in the Appendix and the responsibilities for the primary planning and programming activities are indicated in Figure 3.

With regards to coordination with other MPOs near the TPB's planning area, there are two agreements in place that lay out responsibilities for planning, programming and air quality conformity analysis, both of these agreements can be found in the Appendix. In Virginia, the TPB has an agreement with the

Fredericksburg Area MPO (FAMPO) from 2004 in which FAMPO assumes responsibility for meeting the transportation management area (TMA) planning and programming requirements within the Washington, DC-VA-MD Urbanized Area portion of Stafford County and producing the required planning documents for the TPB's current planning cycle. This agreement was reviewed in 2012 by both FAMPO and TPB staff, and it was mutually agreed that no changes were necessary. In Maryland, the TPB formalized an agreement between the TPB, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO) and Calvert County, MD regarding the conformity analysis of transportation plans, programs, and projects in Calvert County. Calvert County is in the Washington, DC-MD-VA 8-Hour Ozone Nonattainment area, and is also a member of the new southern Maryland MPO, The agreement between the three parties was signed in January 2016.

FY 2017 Regional Planning Priorities

In March 2015, the USDOT issued planning emphasis areas for MPO's to consider in Unified Planning Work Programs. The three areas are 1) MAP-21 Implementation: Transition to Performance-based Planning and Programming; 2) Regional coordination of transportation planning beyond traditional boundaries; and 3) Ladders of Opportunity. This section provides a summary of how the work activities in this UPWP addresses these three priority areas.

Transition to Performance-Based Programming and Planning

An overview of the transition to performance-based programming and planning was provided earlier in this Introduction. This transition is an articulated priority of the TPB as demonstrated in Activity 2 "Performance-Based Planning and Programming" in this UPWP. Efforts will continue to address establishing performance measures and targets in coordination with the three state DOTs, WMATA and the local government public transportation operators in accordance with the MAP-21 and FAST planning regulations and performance management requirements for MPOs. With the completion in January 2014 of the three-year process to develop the RTPP, the focus has turned to assessing what policy actions, funding strategies and potential projects are proposed for inclusion in the CLRP.

Focusing on the TPB's desire to improve the performance outcomes of the CLRP, an unconstrained long range plan (LRP) will be developed during FY 2017. The LRP will include a limited set of regionally significant unfunded multi-modal priority projects that the region broadly supports and which are expected to improve upon the performance of the transportation system included in the CLRP. This work will be designed to be integrated into the next quadrennial update of the TPB's long-range plan in 2018.

Regional Approach to Transportation Planning

As a multi-state MPO, the TPB fully embraces the need for regional cooperation and coordination across state and agency boundaries. Each work activity in this UPWP reflects regional coordination between jurisdictions and agencies in D.C., Virginia and Maryland, notably in the development of performance measures and targets, the unfunded regional priority projects, MATOC, congestion management, safety, public transportation, and freight. As stated earlier, the TPB will review the 2008 planning agreement with the State DOT's and WMATA after FAST planning regulations are issued. The TPB coordinates with MPO's near to its planning area, such as with FAMPO, the Calvert-St. Mary's Metropolitan Planning Organization (C-SMMPO) and Baltimore Regional Transportation Board (BRTB). With regards to air quality conformity analysis, transportation projects and land use forecasts from these other MPO's are reflected in the technical analysis. Formal agreements on the coordination and consultation processes for transportation planning exist with FAMPO and C-SMMPO, as described above under "Responsibilities for Transportation Planning".

The Transportation-Land Use Connections (TLC) program continues to improve the coordination between land use and transportation planning in the region. The Public Transportation Subcommittee plays a key

role in fostering cooperation and coordination among the many public transit providers in the region. COG has been designated by the Governor of Maryland, the Governor of Virginia and the Mayor of the District of Columbia to coordinate with the State DOT's in the development of an agency to oversee Metrorail safety, as required under MAP-21.

Ladders of Opportunity: Access to Essential Services

The TPB has identified connectivity gaps in accessing essential services for older adults, people with disabilities and those with low-incomes in its Coordinated Human Service Transportation Plan, adopted by the TPB in November 2014. These unmet transportation needs are used to develop priorities for FTA's Enhanced Mobility of Seniors and Individuals with Disabilities grant program. COG serves as the designated recipient for this program in the Washington DC-VA-MD Urbanized Area and the TPB solicits and selects the projects; these projects provide key access to essential services such as health care, education, employment and recreation.

In FY2016, an expanded analysis of the Constrained Long Range Transportation Plan (CLRP) identified potentially vulnerable populations and examined access to employment, hospitals and educational institutions by these populations. The TPB's efforts to develop a list of unfunded regional priority projects will include the consideration of infrastructure needs that improve connectivity to essential services for traditionally -disadvantaged populations. The TPB's Bicycle and Pedestrian plan identifies improvements and policies to encourage more walking and biking. The Access for All Advisory Committee provides input to the TPB on projects, programs and services that are important to low-income individuals, minority communities, and persons with disabilities.

FAST Metropolitan Planning Provisions

The Fixing America's Surface Transportation (FAST) Act became law on December 4, 2015 and includes some changes to metropolitan transportation planning. For Metropolitan Planning Organization's (MPOs), such as the TPB, the most significant change continues to be the MAP-21 performance-based planning requirements which FAST retains. However, this UPWP will provide for an ongoing review of the metropolitan planning provisions and USDOT guidance related to FAST with a consideration of what additional work activities may be called for. The TPB will need more guidance on how MPOs should implement the provisions. As the new USDOT planning regulations are released, the UPWP will integrate such new work activities. The TPB will work with the state DOTs, public transit providers and other stakeholders to identify any specific changes or amendments that will be necessary to address them. Table X below provides an overview of FAST's major changes to metropolitan planning provisions that will likely need to be integrated into the next UPWP organized by work activity; note that this is not an exhaustive list of all of the changes called for in FAST.

FAST Provisions for Consideration in Future UPWPs By Work Activity

UPWP Work Activity	FAST Provisions for Consideration in Future UPWPs
Long-Range Planning (Activity 1)	<ul style="list-style-type: none"> <li data-bbox="695 1661 1455 1797">The TIP and Plan will need to identify and consider "intermodal facilities that support intercity transportation, including intercity buses and intercity bus facilities, and commuter vanpool providers";

	<ul style="list-style-type: none"> • A ninth planning factor is added: system resiliency and reliability and reduce or mitigate storm water impacts on surface transportation; • Capital investments in the Plan should include strategies to reduce vulnerability due to natural disasters; and • In addition to other consultation, MPOs will be encouraged to consult with State agencies that plan for tourism and natural disaster risk reduction.
Performance-Based Planning and Programming (Activity 2)	<ul style="list-style-type: none"> • The definition of travel demand reduction is expanded to include intercity bus operators and employer-based commuting programs; and •
Planning Programs (Activity 4)	<ul style="list-style-type: none"> • The Congestion Management Process (CMP) requirement is retained, but a Congestion Management Plan is optional; and • If the Congestion Management Plan is continued, it shall include projects and strategies to reduce congestion and improve connections between low-income households and jobs.
Public Participation (Activity 8)	<ul style="list-style-type: none"> • Interested parties also include public ports, intercity bus operators, and commuter vanpool providers.
Transportation and Land Use Connection Programs (Activity 9)	<ul style="list-style-type: none"> • The Transportation Alternatives Program (TAP) is repealed but virtually the same program will be under the Surface Transportation Block Grant Program (STBGB) ; and • MPO involvement with the selection of STBGB projects as a portion of the State allocation is retained and for some of this funding, there will be additional eligible activities.

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

MARYLAND

Frederick County	City of Greenbelt
Montgomery County	City of Rockville
Prince George's County	City of Takoma Park
Charles County	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
Private Transportation Service Providers
Metropolitan Washington Airports Authority
Federal Highway Administration
Federal Transit Administration
National Capital Planning Commission
National Park Service

Figure 2
Membership of the
National Capital Region
Transportation Planning Board

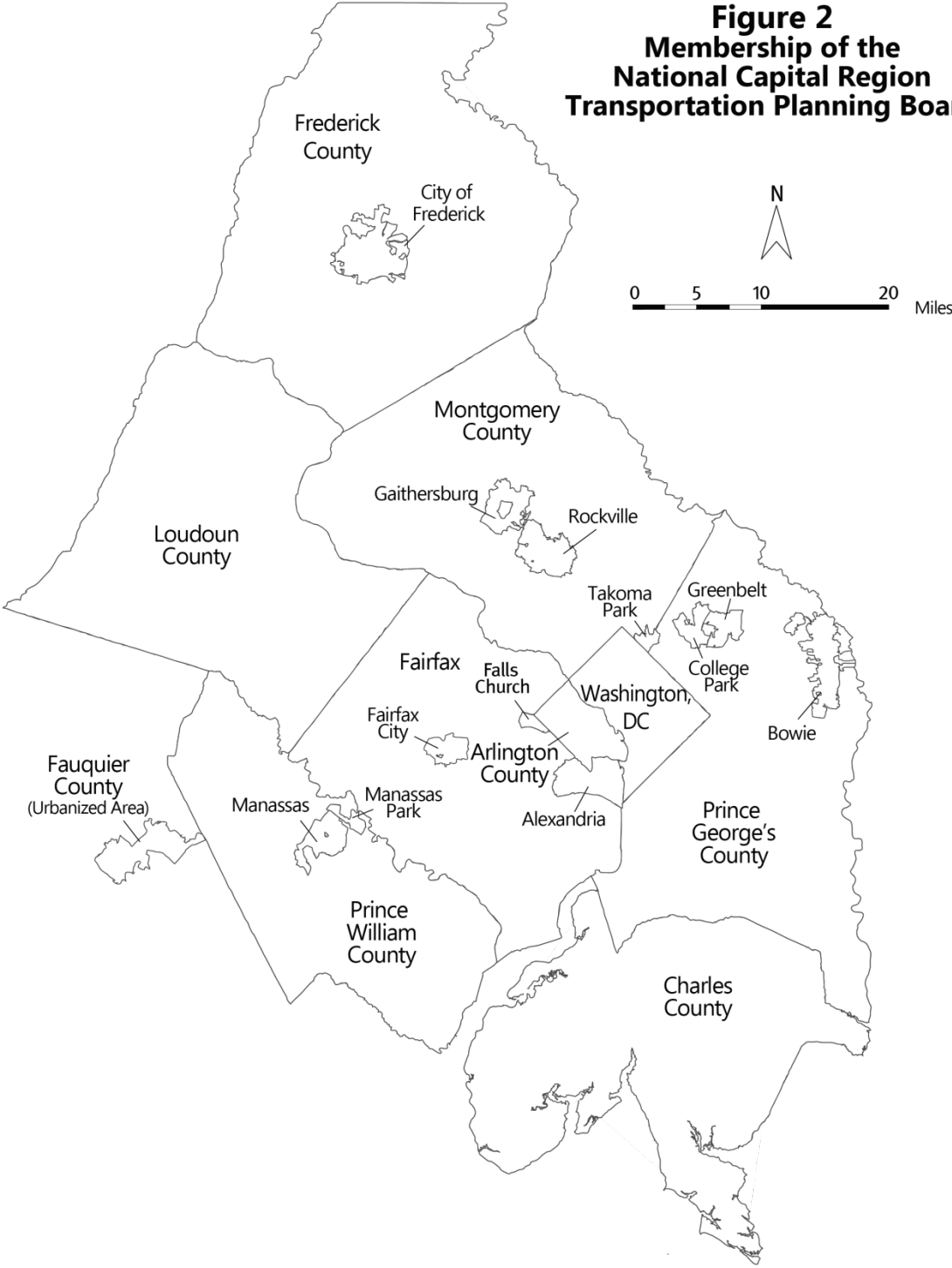


Figure 3

TRANSPORTATION PLANNING AND PROGRAMMING RESPONSIBILITIES

RESPONSIBILITY	AGENCIES
UPWP Development	TPB, DOTs, WMATA, Local Gov'ts
Planning Certification	TPB, DOTs
Performance-based Planning	TPB, DOTs, WMATA, Public Transportation Providers
CLRP Development	
Transportation/Land-Use Planning Plan Inputs/Update	TPB, MDPC, Local Gov'ts DOTs, WMATA, Local Gov'ts, NVTA, PRTC, FAMPO
Project Selection	TPB, DOTs, WMATA, and Local Gov'ts
Air Quality Conformity	TPB, FAMPO
Financial Plan	TPB, DOTs, WMATA, Local Gov'ts
Congestion Management Process	TPB, DOTs, Local Gov'ts, FAMPO
Safety Element	TPB, DOTs, Local Gov'ts,
Participation Plan	TPB
Freight Plan	TPB, DOTs, Local Gov'ts.
TIP Development	
TIP Inputs	DOTs, WMATA, Local Gov'ts, NVTA, PRTC,
Project Selection	TPB, DOTs, WMATA
Air Quality Conformity	TPB, FAMPO
Financial Plan	TPB, DOTs, WMATA, Local Govt., NVTA, PRTC
Human Service Transportation Coordination Planning	TPB, WMATA, human services agencies
Private Enterprise Participation	TPB, WMATA, Local Gov'ts, NVTC/PRTC
Public Involvement Plan	TPB
Projects Fed Funding	TPB, DOTs, WMATA
Air Quality 2010 Attainment Plan	MWAQC, TPB, DOTs
CO ₂ Mobile Emissions Reduction	WMATA, state AQ agencies
Climate Change Adaptation	TPB, DOTs, WMATA, Local Gov'ts
Corridor Studies	DOTs, WMATA, TPB
Travel Demand Forecasting	TPB
Travel Monitoring	TPB, DOTs, WMATA, Local Gov'ts

Figure 4**TRANSPORTATION PLANNING STUDIES WITHIN THE WASHINGTON METROPOLITAN AREA 2016**

Name	Primary Agencies	Schedule	Products
Regional			
Amendments to the Constrained Long-Range Plan	TPB, state DOTs, WMATA, local govts.	2016	CLRP
Station Area Plans (multiple stations)	WMATA	on-going	Plans
Station Access Studies (multiple stations)	WMATA	on-going	Plans
Station Capacity Studies	WMATA	on-going	Plans
Priority Corridor Performance Evaluation (multiple corridors)	WMATA	on-going	Plans
Bus Service Eval. Studies	WMATA	on-going	Studies
Metrobus Recalibration 2.0 – Short-Term Actions	WMATA	2016	Plans
Policy Alternatives to the 2040 RTSP Build Network	WMATA	2016	Report
Expansion Guidelines	WMATA	2016	Report
Late-Night Bus Service	WMATA	2016	Studies
Vienna and Franconia-Springfield Station Study	WMATA	2016	Studies
Metrobus Emerging Corridor Studies	WMATA	ongoing	Report
Orange/Blue/Silver Corridor Junction Study	WMATA	2016	Report
Metro Operating Cost Model Update	WMATA	2016	Application/Model

Figure 4 PLANNING STUDIES (Continued)

Name	Primary Agencies	Schedule	Products
Metrorail Station Area Strategic Investment Plan	WMATA	2016	Report/Application Model
Virginia	PLANNING STUDIES		
I 66 Tier 2 EIS (Outside the Beltway)	VDOT	2016	FEIS
I 66 Environmental Study (Inside the Beltway)	VDOT	2016	CE Report
Significant Projects Ratings Study (HB 599) Round 2	VDOT	2016	Ratings
VA Rte. 28 Study	VDOT	2015	Improvement Options
Fairfax County Pkwy Study Phase 1	VDOT/Fairfax County	2016	Near-term Operational Improvements
VRE Gainesville-Haymarket Extension Study and NEPA	VRE	2017	NEPA Document
NOVA Bike & Pedestrian Trails	VDOT	2016	Report Update
Route 7 Transit Alternatives Analysis Study, Phase II	Northern VA Transportation Commission (NVTC)	2016	Identify referred mode, alignment, termini and funding.
I-395/95 Transit/TDM Study	VDRPT	2016	Report
I-395 Environmental Study	VDOT	2016	Draft EA
TransAction update	NVTA	2017	Report
Maryland	PLANNING STUDIES		
I-95/I-495 Capital Beltway Study (American Legion Bridge – Woodrow Wilson Bridge)	MDOT, VDOT, Montgomery & Prince George's Counties	On-hold	DEIS

Figure 4 PLANNING STUDIES (Continued)

Name	Primary Agencies	Schedule	Products
I-270/US 15 Multimodal Corridor Study (I-370 - North of Biggs Ford Road)	MDOT/SHA, MTA Montgomery & Frederick Counties	On-hold	FEIS
I-495/I-270 West Side Study (Potomac River - I-370)	MDOT/SHA Montgomery Co.	TBD	TBD
MD 3 Widening/Upgrade Study (US 50 to MD 32)	MDOT/SHA	On-hold	DEIS
MD 5 Transportation Study (I-95/I-495 - US 301)	MDOT/SHA	2016	DEIS
MD 28/MD 198 Corridor Study (MD 97 - I-95)	MDOT/SHA	2017	TBD
MD 97 Montgomery Hills Study (MD 390 - MD 192)	MDOT/SHA	2016	TBD
MD 97 Bus Rapid Transit Study (MD 586 - MD 108)	MDOT/MTA Montgomery Co.	cancelled	N/A
MD 223 Corridor Study (Steed Road - MD 4)	MDOT/SHA Prince George's Co.	2016	Report
MD 355 Bus Rapid Transit Study (MD 410/MD 187 - Clarksburg)	MDOT/SHA/MTA Montgomery & Frederick Counties	2016	Report
MD 586 Bus Rapid Transit Study (MD 97 - MD 355)	MDOT/SHA/MTA Montgomery Co.	2016	TBD
US 29 Bus Rapid Transit Study (MD 410 - MD 198)	MDOT/SHA/MTA Montgomery Co.	2016	Report
US 301 South Corridor Transportation Study (I-595/US 50 - Potomac River)	MDOT/SHA Charles Co.	on hold	TBD
US 301 Waldorf Study (T.B. - South of Waldorf)	MDOT/SHA Charles Co.	2018	Feasibility Study
US 50 Feasibility Study (DC Line - Capital Beltway)	MDOT/SHA Prince George's Co.	2016	Feasibility Study

Figure 4 PLANNING STUDIES (Continued)
 Name Primary Agencies Schedule Products

Name	Primary Agencies	Schedule	Products
District of Columbia PLANNING STUDIES			
14th Street Bridge Feasibility Study	FHWA, DDOT, VDOT	on-going	EIS
South Capitol Street (EIS)/AWI	DDOT	on-going	EIS
First Place and Galloway NE Redesign (Fort Totten Metrorail Station)	DDOT/WMATA	on-going	Report/Design
Managed Lane Study	DDOT	2015	NEPA
DC Streetcar - Union Station to Georgetown	DDOT/FTA/FHWA	2015	NEPA
DC Streetcar- Benning Rd Ext Environmental	DDOT/FTA/FHWA	2015	EA
DC Streetcar – M Street Ext Environmental	DDOT/FTA /FHWA	2015	EA
Long Bridge Study	DDOT/ FRA	2015	Study
Long Bridge Environmental	DDOT / FRA	2015	NEPA
C Street N.E. Implementation Study	DDOT	2015	Study
North South Corridor Study	DDOT	2015	Study
State Rail Plan	DDOT	2015	Plan
Florida Avenue NE Study	DDOT	2015	Study
16 th Street NW Transit Priority	DDOT	2015	Study
East End Bike Lane Study	DDOT	2015	Study
Florida Avenue NE Study	DDOT	2015	Study
East-West Crosstown Study	DDOT	2015	Study

Total Proposed Funding by Federal Source for FY 2017

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 17.

The new FY 2017 funding level in Table 1 under the "FTA Section 5303" column is assumed to be the same as the FY 2016 level, and new funding under the "FHWA Section 112" column is assumed to be the same as the FY 2016. The total FY 2017 budget for the Basic Program with unobligated funding from FY 2015 is assumed to be the same as the FY 2016 total. The FY 2017 funding levels and budget will be amended in the mid 2016 after the new federal funding amounts are determined.

**TABLE 1
ESTIMATED FUNDING FOR FY 2017 UPWP**

	FTA SECT 5303 80% FED & 20% STA/ LOC	FHWA SECT 112 80% FED & 20% STA/ LOC	FAA CASP 90% FED & 10% LOC	TOTALS
ALLOTMENTS PROVIDED BY DDOT				
NEW FY 2017	\$532,855	\$2,150,307		\$2,683,162
UNOBLIGATED FY 2015	\$68,477	\$279,993		\$348,470
CARRYOVER FY 2016				\$0
SUBTOTAL	\$601,332	\$2,430,300		\$3,031,632
ALLOTMENTS PROVIDED BY MDOT				
NEW FY 2017	\$1,277,316	\$3,534,649		\$4,811,965
UNOBLIGATED FY 2015	\$194,173	\$538,451		\$732,624
CARRYOVER FY 2016				\$0
SUBTOTAL	\$1,471,489	\$4,073,100		\$5,544,589
ALLOTMENTS PROVIDED BY VDRPT & VDOT				
NEW FY 2017	\$1,028,771	\$2,826,433		\$3,855,204
UNOBLIGATED FY 2015	\$147,559	\$514,919		\$662,478
CARRYOVER FY 2016				\$0
SUBTOTAL	\$1,176,330	\$3,341,352		\$4,517,682
TPB BASIC PROGRAM				
TOTAL NEW FY 2017	\$2,838,942	\$8,511,389		\$11,350,331
TOTAL UNOBLIGATED FY 2015	\$410,209	\$1,333,363		\$1,743,572
SUBTOTAL	\$3,249,151	\$9,844,752		\$13,093,903
TOTAL CARRYOVER FY 2016	\$0	\$0		\$0
TOTAL BASIC PROGRAM	\$3,249,151	\$9,844,752		\$13,093,903
GRAND TOTAL	\$3,249,151	\$9,844,752	\$250,000	\$13,343,903

"New FY2017 funds" are flat lines estimates from the FY2016 UPWP

"Unobligated FY2015 funds" are unexpended funds from the completed FY2015 UPWP

"Carryover FY2016 funds" are funds from the FY2016 UPWP that will be determined and programmed to the FY 2017 UPWP in March 2016.

Technical Assistance

8.6% of New Funds¹

DDOT	\$230,752
MDOT	\$413,829
VDOT	\$331,547

5.2% of New Funds²

WMATA	\$146,490
Total Technical Assistance	\$1,122,618

¹ Proposed reduction from 10% allocation in FY 2016 to fully fund FY 2017 Core Program

² Proposed reduction from 6% allocation in FY 2016 to fully fund FY 2017 Core Program

II. PROPOSED FY 2017 TPB WORK PROGRAM AND BUDGET

Program Structure

The TPB is responsible for the federally required planning process, serves as a forum for regional coordination, and provides technical resources for decision-making. This work program presents the work activities that support the TPB responsibilities. The structure of this work program has been reorganized from that in the FY 2016 program which showed more than 35 work activities with budgets and now comprises major activities. The tasks to be completed under each of the 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 identifies the major work products to be developed, the linkages between them, and the TPB entity responsible for oversight of the products. Figures 5 and 6 on pages 21-22 illustrates the relationship between and among the TPB work activities.

The **first four major activities** support the coordination, preparation and documentation of the policy and planning products required by federal law and regulations.

The first activity, **Long Range Transportation Planning**, includes a performance analysis of the FY 2016 financially-constrained long-range plan (CLRP) and initial preparation for the financial analysis of the quadrennial update of the CLRP in 2018. It also includes developing an unconstrained long range plan which identifies a subset of currently unfunded regionally significant projects that would improve the performance of the region's transportation system.

The second major activity, **Performance-Based Planning**, includes establishing a performance-based planning framework for regional transportation decision-making and coordinating the development of measures and targets to be incorporated into performance-based planning for the CLRP and TIP. It also includes supporting the FY 2017-2022 TIP by updating the projects and programs in it and processing any administrative modifications and amendments.

The third major activity, **Mobile Emissions Planning**, includes developing input data and running the mobile emissions (MOVES) model and completing the air quality conformity analysis for the 2016 CLRP and FY 2017-2022 TIP.

The fourth major activity, **Planning Programs**, encompasses a number of activities that ensure inclusion of specific aspects in the metropolitan transportation planning process:

- the regional congestion management process (CMP);
- systems performance, operations and technology (SPOT) planning;
- emergency preparedness;
- safety;
- freight planning;
- bicycle and pedestrian planning;
- public transportation planning, and
- planning support for the Metropolitan Area Transportation Operations Coordination (MATOC) Program.

The fifth major activity, **Travel Forecasting**, includes developing the highway and transit networks in support of the long range planning activities and maintaining and improving the TPB's travel demand model and forecasting methods.

The sixth major activity, **Travel Monitoring and Data Programs**, provides empirical travel information from traffic counts, high occupancy vehicle (HOV) monitoring, and household survey and analysis activities. The data programs include GIS technical support for all planning activities and the regional transportation data clearinghouse.

The seventh major activity, **Coordination of Cooperative Forecasting and Transportation Planning**, coordinates local, state and federal planning activities in order to integrate land use and transportation planning in the region.

The eighth major activity, **Public Participation and Human Service Transportation Coordination**, includes all public involvement activities; outreach activities to low-income, older adults, minorities, and persons with disabilities; and communication activities to support of the development of the CLRP, TIP, and all other TPB activities. It also maintains the coordinated human service transportation plan for the region supports the MPO role in the FTA Section 5310 Enhanced Mobility program for elderly persons and persons with disabilities.

The ninth major activity, **the Transportation Alternatives and Land-Use Connections Program**, strengthens the integration of land use and transportation planning by offering short-term consultant technical assistance to local jurisdictions to advance their planning activities and incorporates the MPO role in the MAP-21 Transportation Alternatives Program.

The tenth major activity, **TPB Support and Management**, includes the staff and administrative management to provide support for the meetings of TPB, its committees and special work groups and the development and administration of the annual UPWP.

The eleventh major activity, **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.

Finally, the twelfth major activity, **Continuous Airport System Planning (CASP)** utilizes the methods and data work activities for airport and airport-serving facilities in the region.

Work Activity Budgets

In this FY 2017 UPWP approximately 35 work activities that have been conducted on an annual basis in previous years have been integrated and regrouped into 11 major activities. Funding for the TPB Basic Work Program is similar to the FY 2016 level.

The proposed budget levels for the 11 activities by funding source, which include FTA and FHWA funds together with state and local match, are shown in Table 2 on page 23. The TPB committee structure is shown in Figure 6 on page 25. The TPB committee or sub-committee responsible for the activities listed in Table 2 are shown under the descriptions for each task starting on page 27. A detailed breakdown of staffing, consultant costs and other budgetary requirements is provided in Table 3 on page 24.

Figure 5: Overview of Planning Products and Supporting Activities

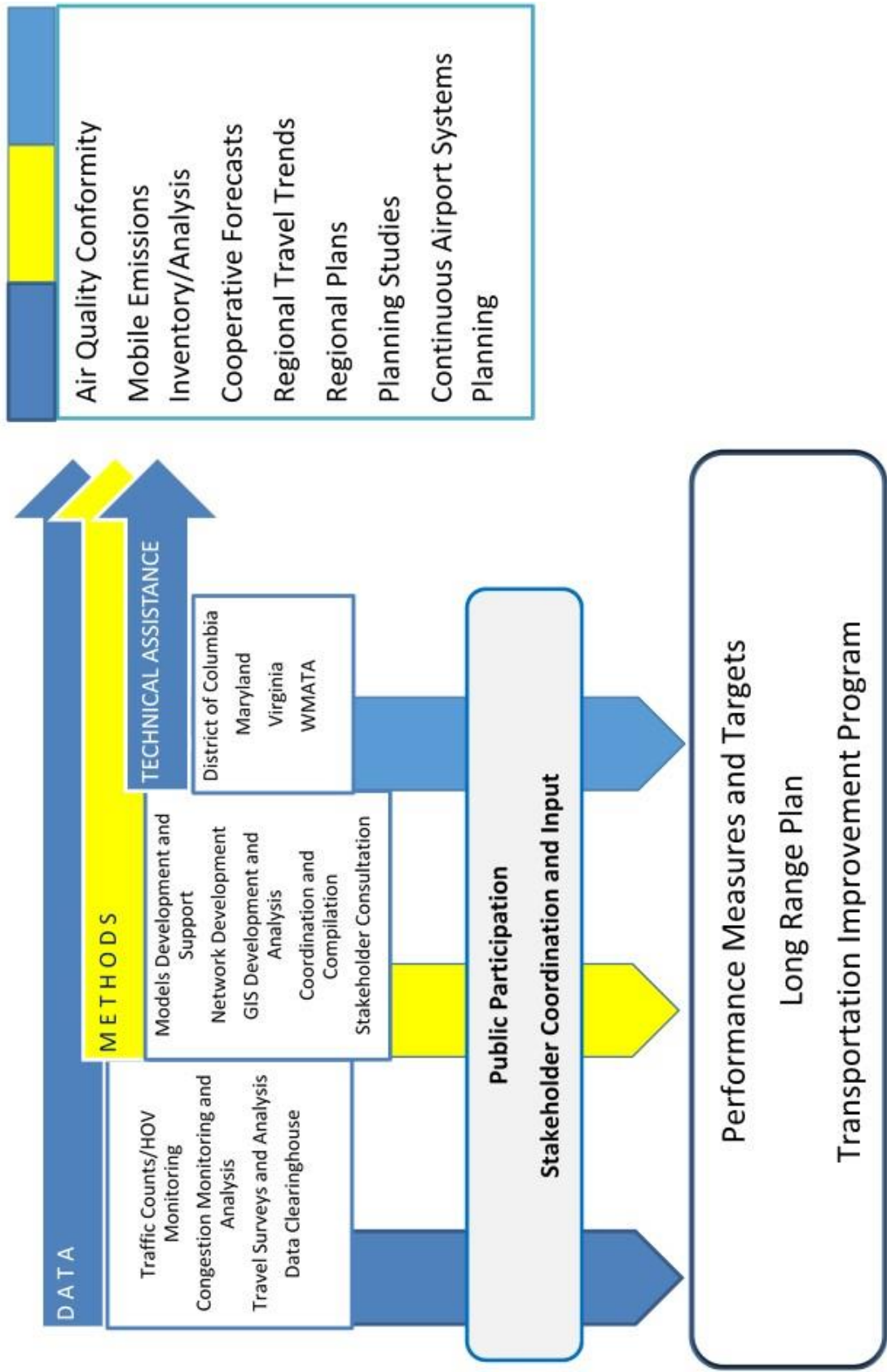


Figure 6: Major Components of UPWP Work Activities

1. Long Range Planning

- Constrained Long Range Plan (CLRP)
- Title VI And Environmental Justice
- Environmental Consultation
- Financial Planning
- Unfunded Regional Priority Projects

2. Performance Based Planning And Programming

- Performance Measurements and Targets
- Transportation Improvement Program (TIP)

3. Mobile Emissions Planning

- Air Quality Conformity
- Mobile Emissions Analysis

4. Planning Programs

- Congestion Management Process (CMP)
- Systems Performance, Operations, and Technology (SPOT) Planning
- Transportation Emergency Preparedness Planning
- Transportation Safety Planning
- Bicycle and Pedestrian Planning
- Regional Public Transportation Planning
- Freight Planning
- Metropolitan Area Transportation Operations Coordination (MATOC)

5. Travel Forecasting

- Network Development
- Models Development and Support

6. Travel Monitoring And Data Programs

- Traffic Monitoring Counts/Studies
- Household Travel Surveys
- GIS Data and Analysis
- Regional Transportation Data Clearinghouse

7. Cooperative Forecasting And Transportation Planning Coordination

8. Public Participation And Human Services Transportation Coordination

- Public Participation and Outreach
- Communications
- Title VI And Environmental Justice
- Environmental Consultation
- Human Service Transportation Coordination

9. Transportation Alternatives And Land Use Connection

- Transportation Alternatives Program
- Transportation and Land Use Connection Program

10. TPB Support And Management

- TPB And Committees Support
- UPWP Administration

11. Technical Assistance

- District of Columbia
- Maryland
- Virginia
- WMATA

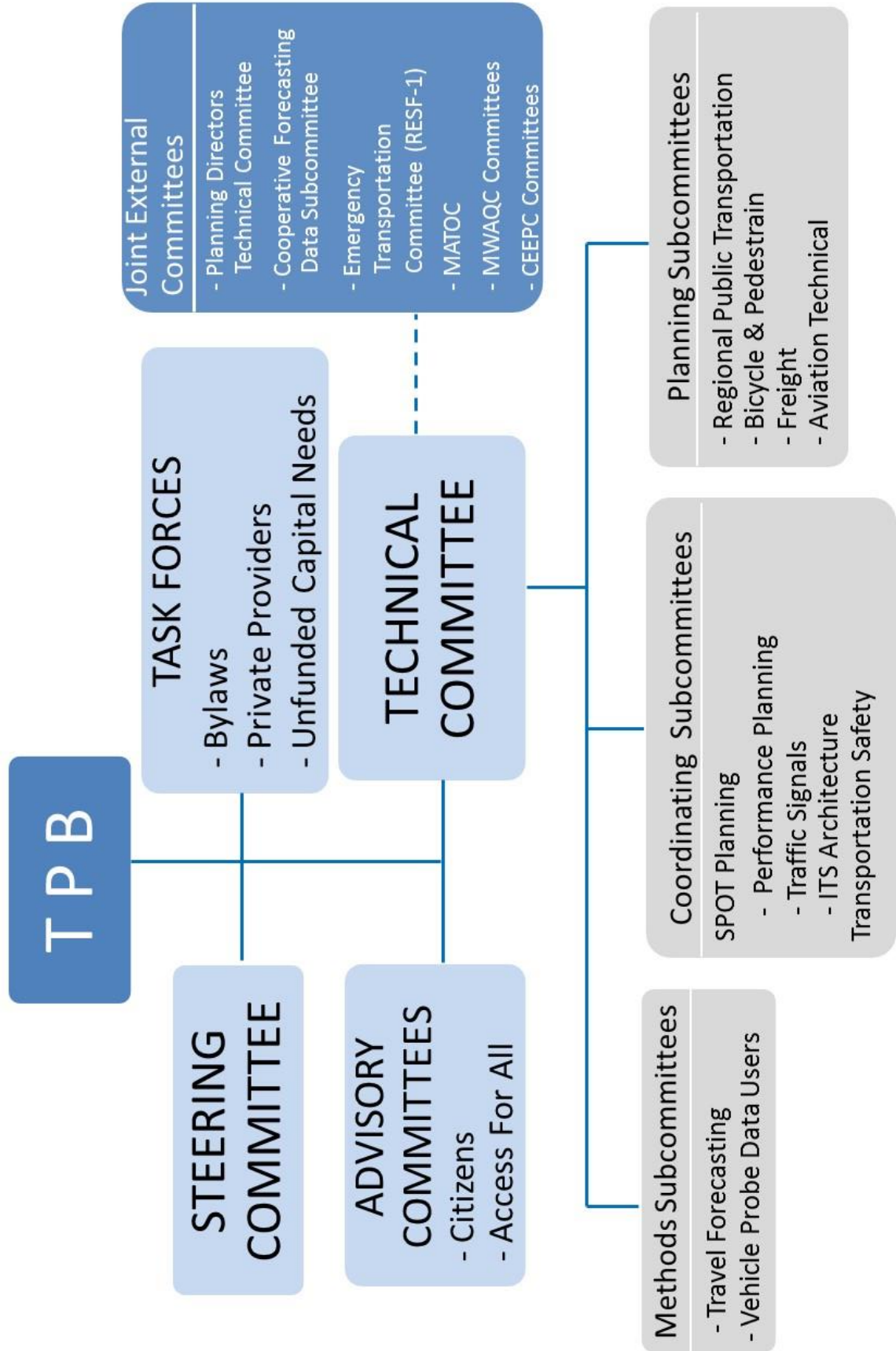
12. Continuous Airport System

- Air Passenger Survey
- Ground Access Forecast & Element Update

**TABLE 2
TPB FY 2017 WORK PROGRAM BY FUNDING SOURCES**

WORK ACTIVITY	TOTAL COST	FTA/STATE / LOCAL	FHWA/STATE / LOCAL	OTHER FUND
CORE PROGRAMS				
1. Long-Range Planning	\$1,104,800	\$274,148	\$830,652	
2. Performance-Based Planning and Programming	\$360,800	\$89,530	\$271,270	
3. Mobile Emissions Planning	\$1,598,800	\$396,730	\$1,202,070	
4. Planning Programs	\$1,714,200	\$425,366	\$1,288,834	
5. Travel Forecasting	\$2,266,800	\$562,489	\$1,704,311	
6. Travel Monitoring and Data Programs	\$1,987,200	\$493,108	\$1,494,092	
7. Cooperative Forecasting and Transportation Planning Coordinatio	\$860,000	\$213,402	\$646,598	
8. Public Participation and Human Transportation Service Coordinati	\$830,200	\$206,008	\$624,192	
9. Transportation Alternatives and Land Use Connection Programs	\$422,700	\$104,890	\$317,810	
10. TPB Support and Management	\$825,785	\$204,912	\$620,873	
Core Program Total	\$11,971,285	\$2,970,582	\$9,000,703	
TECHNICAL ASSISTANCE				
A. District of Columbia	\$230,752	\$31,287	\$199,465	
B. Maryland	\$411,829	\$55,839	\$355,990	
C. Virginia	\$331,547	\$44,953	\$286,594	
D. WMATA	\$146,490	\$146,490	\$0	
Technical Assistance Program Total	\$1,120,618	\$278,569	\$842,049	
Total, Basic Program	\$13,091,903	\$3,249,151	\$9,842,752	
CONTINUOUS AIRPORT SYSTEM PLANNING				
A. Process 2015 Air Passenger Survey - Phase 2	\$125,000			\$125,000
B. Ground Access Forecast and Element Update	\$125,000			\$125,000
Continuous Airport System Planning Total	\$250,000			\$250,000
GRAND TOTAL UPWP	\$13,341,903	\$3,249,151	\$9,842,752	\$250,000

Figure 7 T P B COMMITTEE STRUCTURE



**TABLE 3
TPB FY 2017 BUDGET AND WORK PROGRAM ACTIVITY BY EXPENDITURE CATEGORY**

Work Activity	Direct Salaries DTP Staff	Direct Salaries Other COG Staff	M&A 22%	Leave Benefits 20%	Fringe Benefits 25%	Indirect Costs 31%	Data & PC	Consultant	Direct Costs	Total
CORE PROGRAMS										
1. Long-Range Planning	414,565	30,000	97,049	110,977	164,127	255,633	1,250	25,000	6,200	1,104,800
2. Performance-Based Planning and Programming	138,923	0	30,327	34,679	51,288	79,883	200	25,000	500	360,800
3. Mobile Emissions Planning	575,600	71,711	141,308	161,588	238,977	372,215	4,000	0	33,400	1,598,800
4. Planning Programs	678,384	0	148,091	169,345	250,449	390,082	0	45,000	32,849	1,714,200
5. Travel Forecasting	775,704	0	169,336	193,639	286,378	446,043	1,000	325,000	69,700	2,266,800
6. Travel Monitoring and Data Programs	514,027	0	112,212	128,316	189,771	295,574	41,500	515,000	190,800	1,987,200
7. Cooperative Forecasting and Transportation Planning Coordination	148,046	184,440	72,582	82,998	122,749	191,185	2,500	0	55,500	860,000
8. Public Participation and Human Transportation Service Coordination	270,964	0	59,151	67,641	100,036	155,809	0	90,000	86,600	830,200
9. Transportation Alternatives and Land Use Connection Programs	46,622	20,000	14,543	16,631	24,596	38,309	0	260,000	2,000	422,700
10. TPB Support and Management	250,395	0	54,661	62,506	92,442	143,981	100	10,000	211,700	825,785
Core Program Total	3,813,230	306,151	899,261	1,028,320	1,520,811	2,368,713	50,550	1,295,000	689,249	11,971,285
TECHNICAL ASSISTANCE										
A. District of Columbia	54,040	0	11,797	13,490	19,951	31,074	0	95,000	5,400	230,752
B. Maryland	103,779	0	22,655	25,906	38,314	59,675	0	160,000	1,500	411,829
C. Virginia	116,721	0	25,480	29,137	43,092	67,117	0	50,000	0	331,547
D. WMATA	60,731	0	13,257	15,160	22,421	34,921	0	0	0	146,490
Technical Assistance Program Total	335,271	0	73,190	83,694	123,777	192,787	0	305,000	6,900	1,120,618
Total Basic Program	4,148,501	306,151	972,451	1,112,013	1,644,588	2,561,500	50,550	1,600,000	696,149	13,091,903
CONTINUOUS AIRPORT SYSTEM PLANNING PROGRAM (CASPP)										
	100,098	0	21,851	24,987	36,955	57,558	0	0	8,550	250,000
GRAND TOTAL	4,248,600	306,151	994,302	1,137,001	1,681,543	2,619,058	50,550	1,600,000	704,699	13,341,903

III. MAJOR WORK ACTIVITIES

1. LONG RANGE TRANSPORTATION PLANNING

Long-range planning activities in FY 2017 will include finalization and approval of the 2016 CLRP Amendment and the development of a Plan of Unfunded Regional Priority Projects. Activities will also include preparation for the development of the 2018 quadrennial update of the TPB's long-range plan, which will include a "Constrained Element" that meets federal requirements (serving essentially the same purpose as the current CLRP) and an unfunded element reflecting regional aspirations.

Unlike previous years, an annual amendment to the CLRP will not be developed in FY 2017. The staff capacity that would have been used to compile and analyze such an amendment will instead be devoted to developing the Plan of Unfunded Regional Priority Projects, which will provide essential components for the 2018 long-range plan.

The following work tasks will be performed in FY 2017:

CONSTRAINED LONG-RANGE TRANSPORTATION PLAN (CLRP)

The CLRP is currently the TPB's official long-range transportation plan, developed and approved to meet federal metropolitan planning requirements. It includes all "regionally significant" projects that the TPB realistically anticipates can be funded and implemented by 2040. When the plan undergoes major amendments, it must be analyzed to ensure that it meets federal requirements.

The TPB initiated the 2016 CLRP Amendment development process in December 2015 with the Call for Projects. The Amendment, along with the FY 2017-2022 TIP, will be finalized in the summer and fall of 2016. Approval is scheduled for October 2016.

Finalization and approval of the 2016 CLRP Amendment will include the following activities:

- Documentation – The CLRP Amendment will be documented via the website and written materials. Public materials about the plan will be released during plan development and after plan approval. Materials will be designed to be useful to a variety of audiences, less technical, and easier for the public to understand. In addition, public information will effectively utilize visualization technologies. Public access to the plan will include informative maps and graphics for web and print media, and an online, searchable database.
- Analysis – A variety of analysis products related to the 2016 CLRP Amendment will be developed and presented in the fall of 2016. The performance analysis of the 2016 CLRP Amendment will detail how well the future transportation system laid out in the plan is expected to meet the needs of area travelers in 2040. The analysis uses forecasts of future population and job growth patterns along with the system of roadways and transit planned in the CLRP to predict future changes in travel patterns and travel conditions. In addition to examining changes in daily travel patterns, the analysis will examine changes in congestion on area roadways and on the Metro system, as well as changes in the job accessibility by highway and transit. The performance analysis will also include the findings of the Air Quality Conformity Analysis of the 2016 CLRP Amendment and a forecast of future greenhouse gas emissions under the plan. A qualitative assessment will also be conducted to of how well the three overarching priorities identified in the Regional Transportation Priorities Plan (RTPP) are being met by the transportation system laid

out in the 2016 CLRP Amendment.

- Title VI and Environmental Justice Analysis – A separate Title VI analysis will evaluate the plan for disproportionately high and adverse effects on low-income and minority population groups; this analysis will build upon the FY2016 work for a more robust analysis that takes into consideration specific concentrations of low-income and minority population groups, areas of potentially vulnerable populations, and additional measures of benefits and burdens for the CLRP, per the 2014 FWHA and FTA planning certification recommendation.
- Environmental Consultation – For past updates, staff consulted with federal, state and local agencies responsible for natural resources, wildlife, land management environmental protection, conservation and historic preservation on environmental considerations in relation to spatial location of long-range plan improvements and potential environmental mitigation activities. During the 2016 CLRP Amendment development, staff will review previous consultation efforts to determine if any updates or revisions are necessary.
- Financial Planning – As required under federal planning regulations, both the TIP and the CLRP must have a financial plan that demonstrates how they can be implemented and shows the sources of funding expected to be made available to carry them out. The last major financial analysis for the CLRP was conducted in 2014. Staff will ensure this financial information is updated for the 2016 CLRP Amendment.

PLAN OF UNFUNDED REGIONAL PRIORITY PROJECTS

A range of planning activities will be conducted throughout FY 2017 to develop a Plan of Unfunded Regional Priority Projects. These activities will include analysis and outreach. The plan will identify a limited number of specific priority projects and make a persuasive case for their implementation. These projects will be selected to address key deficiencies in the current Constrained Long-Range Plan and to support implementation of regional policies, as articulated in the Regional Transportation Priorities Plan. The Plan of Unfunded Regional Priority Projects will be developed for inclusion in the TPB's long-range plan update in 2018.

The process for developing the Plan of Unfunded Regional Priority Projects, which will begin in the spring of 2016 but continue throughout FY 2017, will include the following steps:

- Agree Upon Objectives and Identify Deficiencies in the CLRP – Planning activities will elaborate upon the following broad objectives: Alleviate deficiencies in the CLRP (e.g., relieve congestion, improve access); Promote system efficiency (use strategies from the RTPPP); Support emissions reductions (use VMT reduction strategies in the MSWG work); Serve economically disadvantaged communities (coordinate efforts with the TPB's Environmental Justice analysis)
- Define Criteria for Project Selection – Based upon input received from the Unfunded Needs Capital Working Group, the project team will develop a draft list of criteria for selecting projects that meet key objectives. The agreed-upon selection process may use: 1) analysis (e.g., using the Congestion Management Process [CMP] to identify projects to alleviate bottlenecks); 2) professional judgment (including consultation with the staff of TPB members), and 3) outreach to stakeholders and to the wider public to obtain input on preferences and project viability. The working group will discuss and refine the draft criteria and selection process. The project team will seek input from the TPB's member jurisdictions on the draft criteria. Outreach may also include discussions with stakeholder groups and with

the public.

- Select an Initial List of Projects for Analysis and Discussion – The project team will develop a draft list of projects selected to meet key criteria. Road and transit projects will be selected from the TPB’s extensive Inventory of Unfunded Projects. Pedestrian and bicycle projects/priorities will be identified through a separate but integrated process that will be conducted under the guidance of the TPB’s Bicycle and Pedestrian Subcommittee. The draft list will be extensively discussed—by the working group and with the TPB’s members. It will also be the subject of a range of public outreach activities.
- Analyze the Initial Draft of List of Projects – Using the regional travel demand model, staff will conduct performance analysis of the list of projects, which will be packaged as a scenario. The measures for this study will be comparable to the analysis conducted for the CLRP. In addition to using the TPB’s travel demand models, the project team may determine to use other methods of analysis, including methods aimed at identifying the impacts of pedestrian and bicycle improvements.
- Refine the Unfunded Priority Projects List – The project team, with direction from the Working Group, will use a combination of quantitative and qualitative measures to refine and finalize the list of priority projects. Evaluation at this stage will include consideration of: 1) effectiveness (based in part on the analysis in the earlier steps), 2) feasibility and readiness (based on judgment of jurisdiction staff); 3) support for implementation (based in part on various outreach activities); and 4) funding potential (opportunities/likelihood to raise new revenue to implement the project). Road and transit projects on the list will be drawn primarily from the Inventory of Unfunded Projects, but consideration will also be given to regional projects not included in the inventory that can be shown to address key gaps and to have broad regional support.
- Develop and Approve a Plan of Unfunded Priority Improvements – An official Plan of Unfunded Priority Improvements will be approved by the TPB at the end of FY 2017. This plan will reflect a broad level of regional consensus and will be designed to be useful for decision-makers at the state and local levels in their identification of projects for the Constrained Element of the long-range plan. It will be ready to be folded into the 2018 regional long-range transportation plan.

PREPARATION FOR THE 2018 LONG-RANGE PLAN

Toward the end of FY 2017, the TPB and its staff will begin preparations for the development of the next quadrennial update to the region’s long-range transportation plan, which is scheduled for approval in 2018. The new plan will replace the current CLRP and will represent a new approach.

Compared to the current CLRP, the new long-range plan will be redefined to include unfunded priorities (based upon the Plan of Unfunded Priority Improvements) and a Constrained Element, which will meet federal requirements for financial constraint and air quality conformity. To a large degree, the Constrained Element will perform the same function as the current CLRP.

While the majority of work on the new long-range plan will occur in FY 2018, several key work tasks will be initiated in FY 2017:

- The Call for Projects for the Constrained Element of the 2018 Long-Range Plan will be developed in the spring of 2017 and released in the summer of 2017. This solicitation

document will ask implementing agencies to consider the Plan of Unfunded Priority Improvements and the policies of the Regional Transportation Priorities Plan in determining their project submissions.

- The next major financial analysis for the TPB's long-range plan, which is conducted every four years according to federal law, will be developed in FY 2018. Preparations for this quadrennial financial analysis will occur during the second half of FY 2017.

LONG RANGE TRANSPORTATION PLANNING ACTIVITY

Oversight:	Technical Committee
Major Products:	2016 CLRP Amendment, including plan documentation, performance analysis, environmental justice analysis, and financial analysis.
	Plan of Unfunded Regional Priority Projects
	Call for Projects for the 2018 Long-Range Plan
TOTAL COST ESTIMATE:	\$1,104,800

2. PERFORMANCE-BASED PLANNING AND PROGRAMMING

This activity will encompass the following work tasks in FY 2017:

PERFORMANCE-BASED PLANNING

Federal surface transportation law, as developed in MAP-21 and continued under FAST, requires “a transition to performance-driven, outcome-based approaches” for the federal highway and transit programs. Metropolitan planning organizations, states, and public transportation providers will establish and use a performance-based approach to transportation decision making in planning and programming.

To implement this mandate, rulemakings on performance provisions are being issued by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Most rulemakings have been issued in proposed form, with the final rules anticipated to be published through FY 2017. The proposed Statewide and Non-Metropolitan and Metropolitan Transportation Planning Joint Rulemaking provides for the implementation of performance-based planning within the planning process. The basic framework of the planning process is largely untouched from previous federal surface transportation reauthorization acts. However, the law directs changes to the planning process by requiring States, MPOs, and providers of public transportation to select performance targets and link investment priorities in the TIP and CLRP to the achievement of performance targets.

The proposed performance management framework initially created in MAP-21 requires coordination between States, MPOs, and public transportation providers. Integration of elements of other performance-based plans into the metropolitan planning process will also be required, including the:

- Highway Safety Improvement Plan including the State Highway Safety Plan
- Public Transportation Agency Safety Plan
- NHS and Transit Asset Management Plans
- Congestion Mitigation and Air Quality Program Performance Plan
- State Freight Plan

As the USDOT continues its rulemaking, TPB working groups in each area of expertise are coordinating the development of regional performance measures and targets for the metropolitan planning area. TPB staff are coordinating with the local DOTs and public transportation providers to evaluate the requirements for data collection, analysis, and reporting. Both the collection of current data and the forecasting of future performance are being evaluated. Following USDOT final rulemaking, working groups will propose necessary revisions to the data processes used to establish measured performance.

Once the performance management rulemaking is finalized by USDOT, the states will have two years (anticipated for mid-2018) to establish performance targets in support of those measures; and the MPO subsequently has 180 days (anticipated for December 2018) to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the CLRP and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The CLRP will also include a system performance report evaluating the condition and performance of the transportation system with respect to the established targets. The TIP will also include a description of the anticipated effect of the TIP toward achieving the performance targets set in the CLRP.

This task includes:

- Coordinate with DDOT, MDOT and VDOT on their setting of the state performance targets in support of the performance measures, and also coordinate with the DOTs to develop the specific performance targets in relation to the applicable performance measures for the TPB planning area. Similarly, coordinate with WMATA, VDRPT, and other public transportation agencies on their setting of performance targets for the established performance measures in transit state of good repair and safety. Preliminary measures and targets will be developed in FY 2017, with the first formal target-setting process anticipated in FY 2018.
- Coordinate with the State DOTs and public transportation providers in the development of the initial system performance report to evaluate the condition and performance of the transportation system with respect to the coordinated performance targets established for the TPB planning area. It is expected the first formal system performance report will be due in FY 2018.
 - Update the current Memorandum of Understanding on Metropolitan Transportation Planning Responsibilities for the National Capital Region which includes the TPB, the State DOTs, and Providers of Public Transportation to include transportation systems performance data sharing, the selection of performance targets, the reporting of performance targets, the reporting of system performance to be used in tracking progress toward attainment of critical outcomes for the region of the MPO, and the collection of data for the asset management plans for the NHS.
 - Begin to design the process to ensure that the Transportation Improvement Program (TIP) will contain projects that are consistent with and reflect CLRP investment priorities; demonstrates progress toward achieving transportation system performance targets; links investment priorities to the performance targets; and describes the anticipated effect of the TIP toward achieving the performance targets.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

Federal surface transportation law, as developed in MAP-21 and continued under FAST, calls for MPOs, states, and public transportation providers to establish and use a performance-based approach to transportation decision making. States and MPOs must integrate performance based plans into their planning process, including goals, objectives, performance measures, and targets, either directly or by reference. The USDOT will establish performance measures and subsequently states and public transportation providers will establish performance targets in support of those measures. The MPO subsequently has 180 days to establish performance targets coordinated with those of the states and public transportation providers. After these targets are set, the CLRP and TIP are required to include a description of the performance measures and targets used in assessing the performance of the transportation system. The MPO should use targets to track progress towards attainment of critical performance outcomes for MPO region

Under the performance provisions, the TIP shall include the following, in coordination with the long-range metropolitan transportation plan.

- Contain projects consistent with the metropolitan transportation plan.
- Reflect investment priorities from the metropolitan transportation plan.
- Be designed to make progress toward achieving transportation system performance targets.

- Describe the anticipated effect of the TIP toward achieving the performance targets established in the metropolitan transportation plan.
- Link investment priorities to performance targets.

This task includes:

- Update the projects and programs in FY 2017-2022 TIP in conjunction with the approval of the 2016 CLRP amendment.
- Prepare and review amendments to the currently approved TIP.
- Enhance documentation of the TIP will be enhanced with additional analysis as a part of the CLRP/TIP brochure and the CLRP web site.
- Provide public access to CLRP and TIP project data through an improved online searchable database and a linked GIS database.
- Prepare annual certification of compliance with regulations on the provision of transit services to persons with disabilities.
- Prepare an annual listing of projects for which federal funds have been obligated in the preceding year for the FY 2017-2022 TIP.
- Process amendments and administrative modifications to the TIP will be processed.

PERFORMANCE-BASED PLANNING AND PROGRAMMING ACTIVITY

Oversight:	Technical Committee
Products:	Development of preliminary performance measures and targets.
	Updated projects and programs in FY 2017-2022
TOTAL COST ESTIMATE:	\$360,800

3. MOBILE EMISSIONS PLANNING

This activity will encompass the following work tasks in FY 2017:

AIR QUALITY CONFORMITY

The 1990 Clean Air Act Amendments require that detailed systems level technical analyses are conducted to assess air quality conformity of transportation plans and programs. This task will complete the air quality conformity analysis, or determination of the 2016 CLRP and FY2017-2022 TIP to ensure that they meet air quality requirements.

The updated CLRP and TIP 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 schedule for adoption of the updated plan and TIP calls for significant amount of the work to be completed in FY2017. The finalization of the plan is scheduled for middle of FY 2017. The final steps are the incorporation of public comments, development of the final report, adoption by the TPB, and subsequent transmittals.

This task includes:

- **Documentation:** This includes technical memoranda describing the development of inputs and procedures, a scope of work, organizing comments and testimony received from the consultation process and a final report detailing the modeling process, results, and the findings of the analysis.
- **Preparation of technical inputs in accordance with current planning assumptions:** TPB staff coordinates with several parties within the agency as well as with regional transportation agencies as part of the conformity effort. The inputs correspond to the latest plan, the currently adopted land activity forecasts, and non-travel related inputs to the mobile emissions model.
- **Travel demand modeling:** Modeling process includes execution of travel demand model and preparation of subsequent summaries, plots and technical data for quality assurance / quality control purposes.
- **Keeping abreast of federal requirements –** as they are updated throughout the year – on air quality conformity regulations and as guidance is issued; revision of work program elements as necessary.

MOBILE EMISSIONS ANALYSIS

This task conducts a range of analyses to quantify emissions levels of various pollutants in support of air quality planning, as well as assesses the performance of Transportation Emissions Reduction Measures (TERMs) associated with PM2.5 and 8-hour ozone State Implementation Plan(SIP)s.

This task includes:

- **Develop and review input data to the mobile emissions (MOVES) modeling runs for the 2016 CLRP & FY2017-22 TIP Air Quality Conformity Assessment, and the development of a financially constrained Long Range Plan.**

- Execute MOVES sensitivity tests to assess the impacts of changes to model inputs, changes in MOVES software, or changes in hardware platforms.
- Estimate on-road mobile emissions reductions attributable to current and future Transportation Emissions Reduction Measures (TERMs).
- Provide technical assistance to the Commuter Connections Program in support of developing implementation plans and evaluating current and future TERMS.
- Develop on-road mobile emissions inventories using MOVES emissions model.
- Follow established TPB interagency and public consultation procedures and coordinate with the COG/DEP staff to involve the Metropolitan Washington Air Quality Committee (MWAQC) in the public and interagency consultation process.
- Coordinate project solicitation, documentation, and emissions reduction analysis associated with CMAQ projects. Perform incidental air quality conformity reviews (non-systems level), as required throughout the year.
- Inventory travel and emissions modeling that is in readily accessible formats for use by local planning agencies for regional and corridor/subarea planning studies.
- Coordinate with and provide technical support to the State Implementation Planning (SIP) activities that are undertaken by state air agencies.
- Respond to requests for technical assistance by governmental entities and/or their consultants working on technical analyses or municipal transportation planning.
- Develop presentations on mobile planning activities for TPB, MWAQC and CEEPC meetings or other public forums.
- Monitor FAST Act planning requirements related to mobile emissions planning and follow the development and release by EPA of the newest version of MOVES (MOVES2014a).
- Conduct follow-on work related to the development of the Action Plan by the COG Multi-Sector Working Group (MSWG) to reduce Greenhouse Gas (GHG) emissions in the region.

MOBILE EMISSIONS PLANNING ACTIVITY

Oversight: Technical Committee in consultation with MWAQC

Major Products: Final report on 2016 CLRP and FY2017-2022 TIP Air Quality Conformity Assessment; and supporting technical documents

Reports on TERM evaluation and on greenhouse gas emissions reduction strategies; Updated mobile source emissions inventories / reports as required addressing ozone and PM_{2.5} standards and climate change goals

TOTAL COST ESTIMATE: \$1,598,800

4. PLANNING PROGRAMS

This activity will encompass the following work tasks in FY 2017:

CONGESTION MANAGEMENT PROCESS

Under this task, the regional Congestion Management Process (CMP) informs the CLRP on current congestion on the region's roadways by analyzing congestion data as well as identifying potential multi-modal congestion management strategies.

The CMP will address FAST and MAP-21 requirements for performance-based planning congestion reduction and system reliability measurements, on both recurring and non-recurring congestion.

This task includes:

- Work will begin on a preliminary regional Congestion Management Plan (CMPL), which is identified as an option in FAST. The preliminary plan will be refined and published after the regulations for it are finalized (likely in FY 2018 or later).
- Produce four other major aspects of the CMP:
 1. CMP components of the CLRP that specifically address CMP and its subtopics, in the form of interlinked web pages of the on-line CLRP;
 2. CMP Documentation Form Information addresses federally-required CMP considerations associated with individual major projects, to be included with overall project information submitted by implementing agencies to the CLRP Call for Projects, and incorporated into the regional CMP;
 3. A CMP Technical Report, published biennially, compiling and summarizing the results of CMP monitoring and analysis; in FY2017, technical analysis will prepare for the next major update of the CMP Technical Report to be produced in FY2018; and
 4. National Capital Region Congestion Report, released quarterly on the TPB website, reviewing recent information on congestion and reliability on the region's transportation system and featured CMP strategies, with a "dashboard" of key performance indicators.
- Obtain data from cost-effective public-sector and private-sector sources, including the I-95 Corridor Coalition Vehicle Probe Project (VPP), the Regional Integrated Transportation Information System (RITIS) of the Metropolitan Area Transportation Operations Coordination (MATOC) Program, the FHWA National Performance Management Research Data Set (NPMRDS), and, if needed, specialized data collection efforts. Compile, format, and review transportation systems performance data from these sources.
- Analyze congestion on the region's freeway networks, non-freeway arterials, the transit-significant roadways and the freight-significant roadway network.
- Produce related analyses, such as following a major event, on an as-needed basis.
- In conjunction with the CMP, support the Vehicle Probe Data Users Group (VPDUG) in its role to foster technical and methodological coordination in the application of vehicle probe data by member agencies and jurisdictions, including conducting regular Users Group meetings and maintaining reference materials on the TPB website.

Oversight: Systems Performance, Operations and Technology Subcommittee (SPOTS)

Major Products: Updated CMP portions of the CLRP; Preliminary Congestion Management Plan materials; VPDUG website reference materials; documentation for FAST/MAP-21 performance and target reporting requirements

SYSTEMS PERFORMANCE, OPERATIONS AND TECHNOLOGY PLANNING

The performance outcomes of the existing and planned regional transportation system rely on systems management, operations, and deployment of technologies. This task addresses these considerations in metropolitan transportation planning, in conjunction with the federal requirements for regional transportation systems management and operations (RTSMO).

This task includes:

- Conduct planning for operations including systems monitoring, traffic incident management and response, multi-modal coordination, traffic signal coordination, public traveler information, and related strategies that address regional transportation systems management. Support the regional Traffic Signals Subcommittee and its information exchange, as well as annual regional surveys on traffic signal timing and power back-up systems.
- Conduct resiliency and reliability planning, focusing on outcomes-based applications of technology and operations strategies. Consider the resiliency of the region’s transportation systems to operate during and recover in a timely fashion from major disruptive events, (such as climate/extreme weather events), as well as its everyday reliability considering non-recurring congestion. Conduct related operations performance analyses. Resiliency and reliability are defined as metropolitan transportation planning factors in FAST.
- Advise the metropolitan transportation planning process regarding emerging technologies, including understanding and planning for connected and autonomous vehicles (CAVs) and related emerging “shared economy” aspects of transportation. Also support the longstanding regional Intelligent Transportation Systems (ITS) Architecture.
- In conjunction with FAST/MAP-21 performance-based planning requirements advise on congestion and reliability-related aspects of the FAST/MAP-21 requirements.
- Support the regional Systems Performance, Operations and Technology Subcommittee (SPOTS) (successor to the Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee). Also coordinate SPOTS activities with the Metropolitan Area Transportation Operations Coordination (MATOC) Program, including SPOTS’ defined advisory role for the MATOC Program on long-range planning topics.
- Maintain coordination with related member agency activities, and related COG and TPB committees including the Regional Emergency Support Function 1 (RESF-1) Emergency Transportation Committee.

Oversight: Systems Performance, Operations and Technology Subcommittee (SPOTS)

Major Products: Technology, operations and systems performance documentation for the CLRP; regional ITS architecture; annual regional surveys on traffic signal timing and power back-up systems; documentation for FAST/MAP-21 performance and target reporting requirements

TRANSPORTATION EMERGENCY PREPAREDNESS PLANNING

This task provides 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 and its public safety programs. This is a component of a much larger regional set of emergency preparedness activities funded primarily outside the UPWP by U.S. Department of Homeland Security (DHS) and COG local funding. The Regional Emergency Support Function #1 (RESF-1) Transportation Committee, within the COG public safety committee structure, advises these efforts and coordinates with emergency management agencies, police, fire, and other emergency response (RESF) committees. Regular meetings of the RESF-1 Committee as well as subject matter-specific special events will be supported.

This task includes:

- Plan for the role of transportation as a support agency to emergency management in catastrophic or declared emergencies
- Undertake emergency coordination and response planning through the emergency management and Homeland Security Urban Area Security Initiative (UASI) processes
- Coordinate planning for transportation-related emergency communications, technical interoperability, and related capabilities
- Plan for transportation aspects of public outreach for emergency preparedness
- Coordinate with regional critical infrastructure protection and related security planning
- Advise emergency preparedness training and exercises
- Advise conformance with U.S. Department of Homeland Security (DHS) directives and requirements
- Advise applications for and management of UASI and other federal Homeland Security funding.
- Support the RESF-1 Emergency Transportation Committee.

Oversight: Regional Emergency Support Function #1 Transportation Committee in coordination with the Technology, Operations, and Performance Subcommittee

Major Products: Documentation pursuant to DHS and UASI requirements

TRANSPORTATION SAFETY PLANNING

The Washington metropolitan area is a diverse and rapidly growing region, a major tourist destination, and a gateway for immigrants from all over the world. Growth has meant more people driving more miles and more people walking, especially in inner suburban areas where pedestrians were not common in years past. FAST requires metropolitan planning to increase the safety of the transportation system for motorized and non-motorized users. These and other factors, along with heightened awareness of the safety problem, have demonstrated the need for the regional transportation safety planning program.

This task includes:

- Address planning for safety aspects of the region's transportation systems, 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. Coordination will be maintained with the regional Street Smart pedestrian and bicycle safety outreach campaign.
- Support MAP-21/FAST traffic safety performance measure requirements, including providing information on performance measures for safety, compiling fatality and injury data to support the "safety" national goal for performance management, coordinating with member states on addressing safety targets, and providing safety-related information and support for Performance-Based Planning for the CLRP/TIP.
- Undertake other safety data compilation and analysis, including maintenance of the safety element of region's long-range transportation plan.
- Support the Transportation Safety Subcommittee, as well as coordinating with member agencies and transportation safety stakeholders.

Oversight: Transportation Safety Subcommittee

Major Products: Safety element of the CLRP; documentation for FAST/MAP-21 performance and target reporting requirements

BICYCLE AND PEDESTRIAN PLANNING

The enhancement of pedestrian and bicycle facilities, activities, and safety in the region is a critical component of the metropolitan transportation planning process. Advised by the regional Bicycle and Pedestrian Subcommittee, the 2015 Regional Bicycle and Pedestrian Plan provides the framework for this effort.

This task includes:

- Maintain the Regional Bicycle and Pedestrian Plan and support the Bicycle and Pedestrian Plan database on the TPB Web site for member agency and public access, including an on-line mapping and visualization of projects identified in the plan, and publication of an FY2017 biennial progress report on Regional Bicycle and Pedestrian Plan project implementation.
- Compile Bicycle and pedestrian project recommendations for the Transportation Improvement Program (TIP) and monitor Regional Complete Streets and Green Streets activities.
- Identify a list of unfunded bicycle and pedestrian projects serving the goals of the Regional Transportation Priorities Plan for the consideration by the TPB Unfunded Capital Needs Working Group. In conjunction with the Subcommittee and the Regional Trails Coalition, regional or long-distance bicycle routes/project needs will be identified, including potential circumferential "bicycle beltway" routes.
- Provide technical advice to the "Street Smart" regional pedestrian and bicycle safety public outreach campaign (Street Smart is supported by funding outside the UPWP); on the Capital Bikeshare system; on pedestrian and bicycle mapping and routing systems and information for

the region; on pedestrian and bicycle safety; and on bicycle and pedestrian systems usage and consideration in the overall metropolitan transportation planning process.

- Conduct two or more regional bicycle and pedestrian planning or design training, outreach, or professional development opportunities for member agency staffs, at least one of which will have a primary focus on pedestrian planning.
- Support the Bicycle and Pedestrian Subcommittee.

Oversight:	Regional Bicycle and Pedestrian Subcommittee
Major Products:	Compilation of bicycle and pedestrian facilities for the TIP; maintenance of the regional bicycle and pedestrian plan on the TPB Web Site; recommendations on circumferential bicycle routes; recommendations on unfunded bicycle and pedestrian projects; two or more regional outreach workshops

REGIONAL PUBLIC TRANSPORTATION PLANNING

The region has a variety of local and commuter bus, rail transit, and commuter rail operators and other agencies involved in public transportation planning and operation. It also is served by a number of private providers. This task advises the consideration of public transportation activities and needs as an important part of the metropolitan transportation planning process.

This task includes:

- Provide support to the Regional Public Transportation Subcommittee for the coordination of public transportation planning in the region, and for incorporating regional public transportation plans into the CLRP and TIP,
- Evaluate federal rulemaking for the performance-based planning requirements, specifically transit safety and transit state of good repair, including data collection, analysis of the performance measures, forecasting, and setting of targets.
- Provide a forum for discussion of the development of the performance measures and selection of performance targets for the metropolitan planning area, in order to coordinate with relevant providers of public transportation to ensure consistency to the maximum extent practicable.
- Provide support to the TPB Private Providers Task Force and document the involvement of private providers of public transportation in the TIP. Also support quarterly meetings of the TPB Regional Taxicab Regulators Task Force.
- Evaluate the performance of the corridor projects implemented by the TPB's Transportation Investments Generating Economic Recovery (TIGER) Grant for Priority Bus in the National Capital Region, including the submission of one year after and two year after reports for projects concluded in calendar year 2016.

- Produce an annual report on the “State of Public Transportation” to provide informative public transportation operations, customer, and financial facts, including recent accomplishments and upcoming activities, and a summary of the Subcommittee’s recommendations for improving services for consideration by the TPB.

Oversight: Regional Public Transportation Subcommittee

Major Products: Annual report, data compilation, reports on technical issues, and outreach materials
Private Provider involvement documentation

FREIGHT PLANNING

The TPB provides opportunities for consideration, coordination, and collaborative enhancement of planning for freight movement in the region. The Regional Freight Plan updated in FY2016 provides guidance for continued regional planning activities.

This task includes:

- Address MAP-21 and FAST requirements related to regional freight planning. Coordinate with member jurisdictions on the establishment of freight performance targets.
- Ensure consideration of freight planning issues in overall metropolitan transportation planning through outreach to the private-sector, regular interaction with the TPB and other committees on regional freight planning issues, and interactions with public-sector officials of member jurisdictions.
- Engage and inform the Transportation Planning Board and the TPB Technical Committee, and other TPB subcommittees on regional freight issues. Coordinate with TPB travel monitoring and forecasting activities on freight considerations. Engage the transportation safety subcommittee on truck safety issues.
- 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 engage them in the metropolitan planning process.
- Coordinate with relevant jurisdictions and committees on regional rail issues.
- Compile and analyze readily available data to support regional freight planning.
- Continue ongoing "Freight Around the Region" outreach efforts focusing on individual jurisdictions' freight activities and their linkages to the regional freight picture.
- Maintain the Regional Freight Plan and supporting materials on the TPB Web site for member agency and public access.
- Organize a Regional Freight Forum.
- Maintain and update the freight component of the Constrained Long Range Plan (CLRP).
- Support the TPB Freight Subcommittee.

Oversight: Freight Subcommittee

Major

Products: Freight Around the Region publication; Regional Freight Forum; documentation as necessary supporting MAP-21 and FAST requirements of freight planning

METROPOLITAN AREA TRANSPORTATION OPERATIONS COORDINATION PROGRAM PLANNING

TPB provides planning support for the Metropolitan Area Transportation Operations Coordination (MATOC) Program, in conjunction with the MATOC Steering Committee, subcommittees, and partner agencies. This task is the metropolitan transportation planning component of a larger set of MATOC Program activities, including operational and implementation activities, funded outside the UPWP. The Metropolitan Area Transportation Operations Coordination (MATOC) Program's mission is to provide situational awareness of transportation operations in the National Capital Region (NCR) through the communication of consistent and reliable information, especially during incidents. MATOC's information sharing is undertaken in large part through the Regional Integrated Transportation Information System (RITIS). RITIS is an automated system that compiles formats, and shares real-time traffic and transit data among the region's transportation agencies. RITIS was developed on behalf of the region by the Center for Advanced Transportation Technology Laboratory at the University of Maryland. Data provided through RITIS is in daily use by the region's major transportation operations centers.

As a complement to the externally-funded operations activities of MATOC, this UPWP task is to provide ongoing TPB staff planning assistance to the MATOC Program, as a part of the TPB's metropolitan transportation planning activities.

This task includes:

- **Committee Support:** Provide administrative support of MATOC Steering Committee and subcommittee meetings, including preparation of agendas and summaries and tracking of action items
- **TPB Reports:** Provide regular briefings to the TPB on MATOC Program progress
- **TPB Staff Participation:** Provide input and advice to the MATOC Information Systems Subcommittee and Operations Subcommittee
- **MATOC Annual Report:** Develop an Annual Report summarizing the 2016 accomplishments of the MATOC Program.
- **Supporting Materials:** Develop supporting or informational materials for the above activities as necessary.

Oversight: MATOC Steering Committee, in conjunction with the Technology, Operations, and Performance Subcommittee

Products: MATOC 2016 Annual Report

PLANNING PROGRAMS ACTIVITY

TOTAL COST ESTIMATE: \$1,714,200

5. TRAVEL FORECASTING

This activity will encompass the following work tasks in FY 2017:

NETWORK DEVELOPMENT

This task includes preparing transportation network files, which are primary inputs to the regional travel demand model that is used for forecasting travel in the CLRP, project planning studies, special scenario studies, and in support of the travel model development activities.

This task includes:

- Prepare base- and forecast-year highway and transit networks, in accordance with the latest CLRP and TIP elements received from state and local agencies, in support of long range planning and any special regional studies.
- Update the TPB's base-year (2016) transit network to reflect the most current service in the Metropolitan Washington Region.
- Maintain and refine the TPB's existing GIS-based information system used to facilitate network coding and multi-year network file management.
- Support the application of the current regional travel demand model (Version 2.3.57a or its successor) for air quality planning work and other TPB planning studies, which could also include updates in the transportation networks due to the strategic plan for models development (described below).
- Respond to network-related technical data requests, including requests for transit line files, station files, and shapefiles associated with features of the regional highway or transit network.

MODELS DEVELOPMENT AND SUPPORT

This task involves maintaining and improving the travel forecasting model which supports the regional transportation planning process. During FY 2016, a seven-year strategic models development plan and a short-term implementation plan for improving the TPB trip-based travel forecasting capabilities were formulated. The short term improvements, which were started during FY 2016, are planned to be completed in FY 2017.

This task includes:

- Continue the consultant-assisted effort to improve the current TPB trip-based travel model and begin development of an activity-based travel demand forecasting model (ABM) with existing data.
- Support the application of the current regional travel demand model (Version 2.3.57a or its successor) for air quality planning work and other TPB planning studies. This will include the update of travel modeling inputs as necessary (external trips and other exogenous trip tables), investigating technical problems that might arise during the course of application, and documenting refinements to the model.
- Work with local transportation agencies in formulating ways in which the regional travel model

might be used to provide performance-based measures as called for in the new surface transportation authorization legislation (FAST Act).

- Assess model performance and reasonableness through comparison of travel model results with 2010 Census data and the TPB geographically focused household travel survey data.
- Provide staff support for the TPB Travel Forecasting Subcommittee, which is charged with overseeing technical practices and improvements to the TPB travel forecasting process.
- Keep abreast of new developments in travel demand forecasting, via participation with relevant groups, such as the Transportation Research Board (TRB) and the Travel Modeling Improvement Program (TMIP).
- Respond to model-related data requests from local partner agencies and their consultants.
- Provide continued support for software used to run the TPB travel demand model (Citilabs Cube Base, Cube Voyager, and Cube Cluster).
- Provide continued technical support for software used to estimate mobile emissions, such as the EPA MOVES model, including any supporting software applications.
- Provide training to DTP staff in various versions of Citilabs Cube Base, Cube Voyager, Cube Cluster, and MOVES, such as MOVES2014.
- Coordinate with the COG Office of Information, Technology and Facilities Management (ITFM) to help maintain the computers used to run the regional travel demand model, including the maintenance of data storage systems for the back-up, archiving, and retrieval of model-related files.

TRAVEL FORECASTING ACTIVITY

Oversight:	Travel Forecasting Subcommittee
Major Products:	A series of highway and transit networks reflecting the latest CLRP and TIP for input to the regional travel demand model together with technical documentation. Updated travel models; documentation of models development activities; and recommendations for continued updating of the travel demand modeling process.
TOTAL COST ESTIMATE:	\$2,266,800

6. TRAVEL MONITORING AND DATA PROGRAMS

This activity will encompass the following work tasks in FY 2017:

Household Travel Survey

A new large scale region-wide household travel data is needed to obtain updated information on the travel patterns of persons residing in the TPB modeled area and the key factors influencing their current travel choices and travel behavior. The last large scale region-wide household travel survey was conducted in 2007/2008. The data collected in this new regional household travel survey will also be used to develop and calibrate the next generation TPB regional travel demand forecasting model that will be used to forecast future travel demands based on projected household and employment growth and planned improvements to the regional transportation system. In FY 2017, a professional survey firm, selected in FY 2016, will begin the full scale data collection for this new household travel survey. This survey will be designed to obtain the participation of approximately 12,000 households in TPB modeled area jurisdictions. It is expected that the full data collection for this survey will be completed in FY 2018.

This task includes:

- Data collections for a large sample methodologically enhanced activity-based region-wide household travel survey designed to collect detailed information on the characteristics and daily travel of approximately 12,000 households in the TPB modeled area.
- Staff supervision of the survey contractor to ensure that all survey procedures and protocols are being correctly carried out and that survey quality control procedures are being maintained. Staff will also coordinate the conduct of survey activities with state and local government staff as appropriate.
- Continued provision of data, documentation, and technical support to users of 2007/2008 Regional Household Travel Survey and 2011-2015 Geographically-Focused Household Travel Surveys. Update user documentation as required.

Oversight: Travel Forecasting Subcommittee

Major Products: Collected Survey Data; Maintenance of Survey Quality Control Procedures; Technical Support

Travel Monitoring Counts/Studies

This task involves the conduct of special traffic counts, travel time runs and other special travel monitoring studies to support regional travel demand model validation and refinement activities and other activities such as regional high-occupancy vehicle (HOV) facility performance analysis and the identification of high volume truck travel routes in the region. In FY 2017, a travel monitoring study of intercity bus operations and facilities in the region will be conducted.

This task includes:

- Development of a database of intercity bus operations including detailed information on intercity bus operators serving the in the region, the destination cities served by these operators, the routing of this intercity bus service through the region, and the number of daily operations by

time of day.

- Development of a complete inventory and GIS web map of intercity bus facilities, include including terminal facilities and curbside pick-up and drop-off locations in the region.
- Collection of intercity bus passenger ridership data and/or sample bus passenger counts

Oversight: Travel Forecasting Subcommittee

Major Products: Intercity Bus Database and GIS Web Map

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. Under this work item staff will continue to work with local, state, WMATA and other regional agencies to transfer data to and from the Clearinghouse and to update the it with updated highway and transit performance data as these data become available.

This task includes:

- Update Clearinghouse traffic volume data with AADT and AAWDT volume estimates, hourly directional traffic volume counts and vehicle classification counts received from state DOTs and participating local jurisdiction agencies.
- Update Clearinghouse transit ridership data with data received from WMATA, PRTC, VRE, MTA and local transit agencies including the Ride-On, The Bus, ART, DASH and the Fairfax Connector.
- Add freeway and arterial road speed and level of service (LOS) data.
- Update Clearinghouse highway network bridge and pavement condition data from most current National Bridge Inventory and Highway Performance Management System (HPMS) databases.
- Distribute Regional Transportation Clearinghouse Data to TPB participating agencies via a GIS web-based application.

Oversight: Technical Committee

Major Products: Updated Clearinghouse Database and Documentation; Web Interface to Access Clearinghouse Data

GIS Data

This activity provides Geographic Information System (GIS) data and technical support to users of the TPB GIS for many important planning activities, including the CLRP, the TIP, the LRP, Congestion Monitoring and Analysis, Cooperative Forecasting, Regional Transportation Data Clearinghouse, Network and Models Development, and Bicycle Planning.

This task includes:

- Maintain and update GIS-related hardware and software used by staff for regional transportation planning activities.
- Provide data and technical support to staff using GIS for development and distribution of data and information developed for TPB planning activities, including the CLRP and Unconstrained LRP, the TIP, Congestion Monitoring and Analysis, Cooperative Forecasting, Regional Transportation Data Clearinghouse, Network and Models Development, and Freight, Bike and Pedestrian Planning activities.
- Respond to request for TPB GIS metadata, databases, and applications.
- Continue to coordinate the regional GIS activities with state DOTs, WMATA, and the local governments through COG's GIS Committee and subcommittees.

Oversight:

Technical Committee

Major Products:

Updated GIS software, databases, On-line web map applications, User documentation, Support and coordination of COG/TPB GIS activities.

TRAVEL MONITORING AND DATA PROGRAMS ACTIVITY

TOTAL COST ESTIMATE: \$1,987,200

7. COOPERATIVE FORECASTING AND TRANSPORTATION PLANNING COORDINATION

This activity coordinates local, state and federal planning activities, develops population, household, and employment forecasts that are used as input into TPB travel demand-forecasting model, and facilitates the integration of land use and transportation planning in the region.

This activity will encompass the following work tasks in FY 2017:

- Support 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.
- Analyze changes in regional economic, demographic and housing trends drawing on the results from the Census American Communities Survey (ACS) and from other available federal, state, local data sources.
- Work with members of the Cooperative Forecasting Subcommittee to enhance and improve the quality of small area (TAZ-level) employment data.
- Work with the Cooperative Forecasting Subcommittee and the region's Planning Directors to assess the effects of significant transportation system changes on the Cooperative Forecasting land activity forecasts.
- Document key land use and transportation assumptions used in making updates to the Cooperative Forecasting land activity forecasts.
- Update and maintain Cooperative Forecasting land activity databases of TAZ-level population, household, and employment forecasts that are used as input into TPB travel demand-forecasting model.
- Map and analyze Cooperative Forecasting growth forecasts in relation to COG Activity Centers and premium transit locations.
- Respond to public comments on the Round 9.0 forecasts and the Cooperative Forecasting process.
- Develop and publish useful economic, demographic and housing-related information products including the Regional Economic Monitoring Reports (REMS) reports, the annual "Commercial Development Indicators" and economic and demographic data tables to be included in the Region Forward work program.

COOPERATIVE FORECASTING AND TRANSPORTATION PLANNING COORDINATION ACTIVITY

Oversight:	Technical Committee
Major Products:	Documentation of key land use and transportation assumptions for updates to the Cooperative Forecasting land activity forecasts. Update of Regional Planning Databases, Analysis of Activity Center Growth Forecasts, Development

and Distribution of technical reports and information products.

TOTAL COST ESTIMATE: \$860,000

8. PUBLIC PARTICIPATION AND HUMAN SERVICE TRANSPORTATION COORDINATION

This activity will encompass the following work tasks in FY 2017:

PUBLIC PARTICIPATION

The Update of the Participation Plan as approved by the TPB in September 2014 will guide all public involvement activities to support the development of the CLRP, TIP, and all other TPB planning activities. The TPB's Public Participation plan emphasizes involving traditionally-disadvantaged populations in the planning process, as part of the TPB's commitment to ensuring nondiscrimination in all its programs and activities as required under Title VI and the Environmental Justice Executive Order.

This task includes:

- Conduct regular public involvement as described in the TPB Participation Plan, including public comment sessions as the beginning of TPB meetings and official public comment periods prior to the adoption of TPB plans and programs as key TPB policies and documents.
- Provide staff support for the TPB Citizens Advisory Committee (CAC), including organizing monthly meetings and outreach sessions, and drafting written materials for the committee.
- Provide staff support for the TPB Access for All Advisory (AFA) Committee that includes leaders and representatives of low-income communities, minority communities, persons with disabilities and those with limited English skills as the TPB's primary strategy for engaging traditionally-disadvantaged population groups in the planning process. Staff will transmit AFA Committee comments to the TPB on transportation plans, projects, programs, services and issues that are important to AFA community groups.
- Develop and conduct workshops or events, as needed, to engage the public and community leaders on key regional transportation issues, including challenges reflected in the development of the CLRP, the TIP, and the forthcoming Plan of Unfunded Regional Priority Projects.
- Conduct at least one session of the Community Leadership Institute, a two-day workshop designed to help community activists learn how to get more actively involved in transportation decision making in the Washington region.
- Support implementation of the TPB Participation Plan and conduct evaluation activities of the public involvement process.
- Conduct continuing evaluation activities of the public involvement process using the process for evaluation established in FY 2016.

COMMUNICATIONS

This task includes:

- Develop new written materials, tools and visualization techniques to better explain to the public how the planning process works at the local, regional and state levels.

9. TRANSPORTATION ALTERNATIVES AND LAND USE CONNECTION (TLC) PROGRAMS

This work activity strengthens the coordination between local land use and transportation planning. Begun as a pilot in November 2006, the TLC program offers short-term technical assistance through consultant teams to local jurisdictions to advance their planning activities.

This activity will encompass the following work tasks in FY 2017:

- Offer short-term consultant team technical assistance to local jurisdictions to advance their land use and transportation planning activities.
- Fund at least six technical assistance planning projects at a level between \$20,000 and \$60,000 each.
- Fund at least one project for between \$80,000 and \$100,000 to perform project design to achieve 30% completion.
- Maintain and update the TLC Regional Clearinghouse and website
- Develop tools and activities to facilitate regional learning about TLC issues among TPB member jurisdictions through the Regional Peer Exchange Network. Organize at least one regional meeting to facilitate an exchange of information about lessons learned from past TLC projects.
- Identify recommended implementation action steps in each planning project report, such as further study needs, more stakeholder collaboration, suggested land use or local policy changes, and transportation investment opportunities and priorities.
- Provide staff support for TLC Technical Assistance Projects to be conducted as part of the MDOT Technical Assistance Program and for other projects where additional funding is provided by state or local agencies.
- Conduct the selection process for small capital improvement projects using funding sub-allocated to the Washington metropolitan region through the state DOTs from the MAP-21 Transportation Alternatives Program (TAP).

TRANSPORTATION AND LAND USE CONNECTION (TLC) PROGRAM ACTIVITY

Oversight: TPB Technical Committee

Major Products: Technical assistance, including final reports, provided by consultant teams to localities; updated website; peer exchange activities; TAP coordination.

TOTAL COST ESTIMATE: \$422,700

10. TPB SUPPORT AND MANAGEMENT

This activity includes support for the Transportation Planning Board (TPB), management activities not attributable to specific tasks in the work program, and development of the Unified Planning Work Program (UPWP).

This activity will encompass the following work tasks in FY 2017:

Transportation Planning Board (TPB) Support And Management

- Make all administrative arrangements and provide staff support for TPB, the TPB Steering Committee, the State Technical Working Group, the TPB Technical Committee and special TPB work groups meetings.
- Maintain TPB Committee membership rosters and distribution lists and prepare meeting materials for TPB Committee meetings.
- Prepare monthly Director's Report.
- Respond to periodic requests from TPB members, federal agencies, Congressional offices, media and others for information or data of a general transportation nature.
- Meet with TPB Board members and participating agency staff to discuss current and emerging regional transportation planning issues.
- Respond to TPB correspondence and draft correspondence requested by the Board.
- Participate in meetings of other agencies whose programs and activities relate to and impact the TPB work program.
- Draft Memoranda of Understanding with other agencies for the TPB's review and approval.
- Participation in the Association of Metropolitan Planning Organizations (AMPO) and AMPO meetings.
- Coordination of TPB Planning Activities with Program Directors.
- Day-to-day management of and allocation of staff and financial resources
- Monitoring of all work program activities and expenditures

The Unified Planning Work Program (UPWP)

The 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.

This task includes:

- Develop the FY 2018 UPWP that complies with anticipated metropolitan planning requirements in the Fixing America's Surface Transportation (FAST) Act.
- Supervise the preparation, negotiation, and approval of the annual work program and budget involving the State Transportation Agencies, the TPB Technical Committee, the TPB Technical Committee, the Steering Committee and the TPB.
- Preparation of monthly UPWP progress reports for each of the state agencies administering planning funding and prepare all necessary federal grant applications submissions.
- Review all monthly UPWP invoices going to each of the state agencies administering planning funding.

TPB SUPPORT AND MANAGEMENT ACTIVITY

Oversight: Transportation Planning Board

Major 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

UPWP for FY 2018, amendments to FY 2017 UPWP, monthly progress reports and state invoice information, federal grant materials

TOTAL COST ESTIMATE: \$825,785

11. 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 2015 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.

A. DISTRICT OF COLUMBIA

1. Program Development, Data Requests and Miscellaneous Services

This project accounts for staff time spent in developing scopes of work for requested projects and in administering the 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 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:	\$10,000
Product:	specific scopes of work
Schedule:	on-going activity

The program for FY 2017 remains to be specified.

TOTAL DISTRICT OF COLUMBIA COST ESTIMATE: \$230,752

B. MARYLAND

1. Program Development Management

This work task will account for DTP staff time associated with the administration of this Technical Assistance work program throughout the year. Work activities would involve meetings with participating agencies to discuss proposed/new projects, development of monthly progress reports, budgetary reporting and technical quality control. This work task also includes staff time needed for the development of the annual planning work program.

Cost Estimate:	\$15,000
Product:	specific scopes of work
Schedule:	on-going activity

The program for FY 2017 remains to be specified.

TOTAL MARYLAND COST ESTIMATE: \$413,829

C. VIRGINIA

1. Program Development and Data/Documentation Processing

This work element accounts for DTP staff time associated with the administration of this Technical Assistance work program throughout the year. Work activities would involve meetings with participating agencies to discuss proposed/new projects, development of monthly progress reports, budgetary reporting and technical quality control. This work task also includes staff time to process requests for data/documents from Northern Virginia as advised by VDOT throughout the year.

Cost Estimate:	\$15,000
Product:	specific scopes of work
Schedule:	on-going activity

The program for FY 2017 remains to be specified.

TOTAL VIRGINIA COST ESTIMATE: \$331,547

D. WMATA

1. 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:	\$15,000
Product:	specific scopes of work
Schedule:	on-going activity

2. 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:	\$15,000
Product:	specific scopes of work

Schedule: on-going activity

The program for FY 2017 remains to be specified.

TOTAL WMATA COST ESTIMATE: \$146,490

12. CONTINUOUS AIRPORT SYSTEM PLANNING PROGRAM

The purpose of the CASP program is to provide a regional process that supports the planning, development and operation of airport and airport-serving facilities in a systematic framework for the Washington-Baltimore Air Systems Planning Region, which includes the region's three major commercial airports: Baltimore-Washington International Thurgood Marshall Airport (BWI), Ronald Reagan Washington National Airport (DCA), and Washington Dulles International Airport (IAD). Oversight of the program is the responsibility of the TPB Aviation Technical Subcommittee. Previous UPWP documents have highlighted three projects in the CASP program, but due to reductions in available FAA funding some elements of the program have been consolidated and the program now focuses on two elements per cycle: the regional Air Passenger Survey and subsequent analysis, and either the combined Ground Access Forecast and Ground Access Element Update or the Ground Access Travel Time Update. The survey is conducted in the fall of odd-numbered calendar years, followed by the analysis and reporting and then the Ground Access Forecast and Ground Access Element. The Ground Access Travel Time update is conducted during non-survey (even-numbered) calendar years. The Air Cargo Element Update will be completed in FY2016 and is typically updated every 8-10 years. The elements of the multi-year CASP work program for FY 2016 are as follows:

Process 2015 Air Passenger Survey - Phase 2

Phase 2 of this project provides for the continued processing of data collected in the 2015 Regional Air Passenger Survey. In Phase 1, data collected as part of the survey was corrected and the 2015 Air Passenger Survey database was finalized in preparation for data analysis. The General Findings Report was issued as part of Phase 1.

Specific tasks to be completed in Phase 2 are: geocoding, data expansion, data tabulation, and data analysis. During this process detailed statistical analysis of the survey is conducted, which ultimately results in summarization of the survey findings. Findings are summarized by the various characteristics of the air passengers, characteristics of their ground access trips (work vs. non-work, resident vs. non-resident, mode of access, airport preference, etc.) as well as the geographic characteristics of ground access trips. As part of the geocoding process, staff will check for updates to the air system's regional TAZ boundaries.

Analysis concludes with the production of summary tables and charts, and GIS-based maps that are incorporated in the final survey report. The products for this phase will be the preparation of the Geographic Findings Report and two final geocoded survey files: a complete file for use by MWAA and MAA only, and a public use file where confidential and sensitive data are suppressed.

Cost Estimate: \$125,000

Ground Access Forecast and Ground Access Element Update

The update of forecasts of ground access trips to the region's three commercial airports is an important step in the airport systems planning process. This project will use the results of the most recent regional air passenger survey together with the latest available airport terminal area forecasts and land activity forecasts of future growth in the Washington-Baltimore region to update forecasts of ground access trips from local area Aviation Analysis Zones (AAZ) to each of the region's three commercial airports. The deliverables will be updated ground access trip generation rates by aviation analysis zone and updated base year and horizon year 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, as well as a technical memorandum documenting the

trip generation rate and forecast update methodology.

The results of the Ground Access Forecast Update will be used to update the Ground Access Element of the Regional Airport System Plan. This update will provide an analysis of current and forecast ground access constraints at Ronald Reagan Washington National (DCA), Washington Dulles International (IAD), and Baltimore-Washington International Thurgood Marshall (BWI) 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.

The update requires completion of both a supply analysis and demand analysis and production of a final report. Work performed for the supply analysis update will entail an extensive review and evaluation of existing planning studies, ground access data, and transportation plans and programs to identify problem areas in ground access systems and propose recommendations to address these constraints. All steps in this update will be extensively coordinated with airport sponsors through the Aviation Technical Subcommittee.

Cost Estimate: \$125,000

TOTAL CONTINUOUS AIRPORT SYSTEM PLAN UPDATE: \$250,000

IV STATE TRANSPORTATION AGENCY - STATE PLANNING AND RESEARCH PROGRAM (SPR)

UNDER DEVELOPMENT