

*** EXCERPT ***

Technical Committee Item 5

**NATIONAL CAPITAL REGION
TRANSPORTATION PLANNING BOARD**

FY 2012

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

DRAFT

February 4, 2011

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.

2. COORDINATION AND PROGRAMS

A. CONGESTION MANAGEMENT PROCESS (CMP)

The regional Congestion Management Process (CMP) is a federally required component of the metropolitan transportation planning process. The CMP is to address the systematic management of traffic congestion and provision of information on transportation system performance. No single occupant vehicle (SOV) capacity expanding project can receive federal funds unless it is part of the regional CMP.

The CMP includes information from regional Travel Monitoring programs (see Section 5 of the UPWP) addressing recurring congestion, as well as information on non-recurring congestion as examined in the Management, Operations, and Intelligent Transportation Systems (MOITS) program (see also Task 2.B. below). Additionally, this task includes procurement and analysis of transportation systems condition data archives from private sector sources. A major source of this information is the speed data archive from the I-95 Corridor Coalition/INRIX, Inc. Vehicle Probe Project. As an affiliate member of the I-95 Corridor Coalition, TPB has gratis access to data archives on certain roadways in the region covered under the Coalition's Vehicle Probe Project. TPB also has gratis access to data from supplementary, expanded roadway coverage beyond the limited Coalition coverage, funded by the Maryland and Virginia Departments of Transportation. TPB will also undertake supplementary data purchases of private sector data for coverage (geographic and/or temporal) not otherwise available through the gratis sources.

The CMP also considers strategies that address congestion. Information from transportation strategy analysis from the Air Quality Conformity program (see also Task 3.A.) is examined. Demand management strategies considered and implemented through the regional Commuter Connections Program (see www.commuterconnections.org) are important CMP components. Systems management, operations, and engineering strategies are examined in conjunction with the MOITS program.

Under this work task, TPB will compile information and undertake analysis for development on four major aspects of the regional CMP:

- CMP Components of the Constrained Long-Range Plan (CLRP), portions of the CLRP that specifically address CMP and its subtopics, in the form of interlinked web pages of the on-line CLRP, to be updated in conjunction with major updates of the CLRP;
- 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 annual Call for Projects for the CLRP and Transportation Improvement Program (TIP) (see also Task 1.C), and incorporated into the regional CMP; and

- A CMP Technical Report, published on an as-needed basis, compiling and summarizing the results of monitoring and technical analysis undertaken in support of the regional CMP. An updated CMP Technical Report was published in FY2011; and a subsequent updated report will be published in FY 2012.
- A CMP Web page, updated on a periodic basis, will review recent information on congestion and incidents on the region's transportation system, with a "dashboard" of key performance indicators (subject to the availability of data).

Oversight: Management, Operations, and Intelligent Transportation Systems (MOITS) Technical Subcommittee

Cost Estimate: \$205,000

Products: Updated CMP portions of the CLRP; 2012 CMP Technical Report; CMP Web page; summaries, outreach materials, and white paper(s) on technical issues as needed; supporting data sets

Schedule: Monthly

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

Under this work task, TPB will provide opportunities for coordination and collaborative enhancement of transportation technology and operations in the region, advised by its Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee. A key focus of MOITS planning is the region's non-recurring congestion, due to incidents or other day-to-day factors. A MOITS Strategic Plan was completed in FY2010 and provided updated guidance and direction to the program. The MOITS program includes planning activities to support the following major topics:

- **ITS Data:** The collection/compilation, processing, warehousing, and sharing of transportation systems usage and condition data from Intelligent Transportation Systems (ITS) sources, particularly in conjunction with the University of Maryland's Regional Integrated Transportation Information System (RITIS)
- **Regional Transportation Management:** Regional traffic management planning and coordination activities, particularly in conjunction with the Metropolitan Area Transportation Operations Coordination (MATOC) Program (see also Task 2.I, which was established as a separate task from MOITS in FY2010); MATOC focuses on short-range planning issues for traffic management, and MOITS focuses on mid-to-long-range planning for traffic management

- **Multi-modal Coordination:** Examination of traffic and transit management interactions in daily operations, including a focus on improvements that could increase average bus speed and on-time performance
- **Emergency Preparedness:** Examination of technologies and operating procedures for daily operations that can provide a basis for emergency transportation operations, in conjunction with the COG Regional Emergency Support Function 1 – Emergency Transportation Committee (see also Task 2.C.)
- **Traveler Information:** Real-time traveler information made available to the public
- **Congestion Management Process:** Technology and operations strategies to address non-recurring congestion aspects of the regional Congestion Management Process (see also Task 2.A.)
- **Maintenance and Construction Coordination:** Regional sharing of available maintenance and construction information for coordination purposes
- **Intelligent Transportation Systems (ITS) Architecture:** Maintain the regional ITS architecture in accordance with federal law and regulations; help provide coordination of the use of the regional ITS architecture as guidance to the region's MOITS-related projects
- **Traffic Signals:** Assist member agencies in the exchange and coordination of inter-jurisdictional traffic signal operations information and activities
- **Member Agency Activities:** Work as needed with the MOITS activities of the state and D.C. departments of transportation, the Washington Metropolitan Area Transit Authority, and other member agencies
- **Coordinate with supra-regional management and operations activities of the Federal Highway Administration, the I-95 Corridor Coalition, and other relevant stakeholders; monitor national emerging MOITS activities for potential application in the region**
- **Provide staff support to the MOITS Policy Task Force, MOITS Technical Subcommittee, MOITS Regional ITS Architecture Subcommittee, and MOITS Traffic Signals Subcommittee, supporting these regional forums for coordination and information exchange among member agency staffs and other stakeholders.**

Oversight: TPB MOITS Policy Task Force; MOITS Technical Subcommittee; MOITS Regional ITS Architecture Subcommittee; MOITS Traffic Signals Subcommittee

Cost Estimate: \$340,300

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

Schedule: Monthly

C. TRANSPORTATION EMERGENCY PREPAREDNESS PLANNING

Under this work task, TPB will provide support and coordination for the transportation sector's role in overall regional emergency preparedness planning, in conjunction with the Metropolitan Washington Council of Governments (COG) Board of Directors, the National Capital Region Emergency Preparedness Council, and other COG public safety committees and efforts. This task is the transportation planning component of a much larger regional emergency preparedness planning program primarily funded outside the UPWP by U.S. Department of Homeland Security and COG local funding.

Here specialized needs for transportation sector involvement in Homeland Security-directed preparedness activities will be addressed. Efforts are advised by a Regional Emergency Support Function #1 - Transportation Committee in the COG public safety committee structure, with additional liaison and coordination with the TPB's Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee.

Major topics to be addressed include the following:

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

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

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

Cost Estimate: \$75,400

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

Schedule: Monthly

D. 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. These and other factors, along with heightened awareness of the safety problem, have demonstrated the need for the regional transportation safety planning program.

Under this work task, TPB will provide opportunities for consideration, coordination, and collaboration planning for safety aspects of the region's transportation systems. Safety planning will be in coordination with the State Strategic Highway Safety Plan efforts of the District of Columbia, Maryland, and Virginia, as well as other state, regional, and local efforts. The Transportation Safety Subcommittee, formed in FY2008, will provide a forum for safety stakeholders to exchange information, coordinate on safety programs around the region, and provide safety input to the overall regional transportation planning process. The safety element of the regional Constrained Long-Range Plan will be updated as needed.

The regional Street Smart pedestrian and bicycle safety outreach campaign, separately funded through federal, state, and local grants and contributions, addresses safety needs by increasing public awareness of the risk and consequences of pedestrian and bicycle-involved motor vehicle crashes.

Major topics to be addressed in the Transportation Safety Planning task include the following:

- o Undertake data compilation and analysis on freight movement and freight facilities in the region. Undertake freight stakeholder outreach with representatives of the freight community, including carriers, shippers, and other stakeholders, to gain their input on regional freight movement, safety and other issues and to gauge their interest in state and MPO planning and programming processes. Publish a periodic e-newsletter on regional freight planning issues.

Oversight: TPB Freight Subcommittee

Cost Estimate: \$150,000

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

Schedule: Bimonthly

I. METROPOLITAN AREA TRANSPORTATION OPERATIONS COORDINATION PROGRAM PLANNING

Under this work task, TPB will provide 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, primarily funded outside the UPWP.

Following experiences from the 9/11 attacks and other major incidents, transportation officials from Maryland, Virginia, the District of Columbia, and the Washington Metropolitan Area Transit Authority (WMATA), in partnership with the TPB, created the Metropolitan Area Transportation Operations Coordination (MATOC) Program. MATOC'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. Timely, accurate information enables operating agencies and the traveling public to make effective and timely decisions. By integrating systems' technologies, improving procedures and planning, and making accurate and timely transportation information available to the public, regional transportation agencies are able to make travel smoother and safer.

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.

In FY 2009, MATOC transitioned from pre-implementation system development activities to initial phase real-time operations activities, and a dedicated MATOC facilitator was hired. In FY 2010, MATOC further transitioned toward full operations with MATOC personnel facilitating improvement of standard operating procedures, participating in regional coordination during incidents, and assisting with exercises and after-action reviews.

Historically, MATOC operational activities have been paid for by a dedicated grant from the SAFETEA-LU federal transportation legislation, and are anticipated to be funded with other operations-eligible sources in the future. As a complement to the externally-funded operations activities noted above, this UPWP task is to provide ongoing TPB staff and consultant planning assistance to the MATOC Program, as a part of the TPB's metropolitan transportation planning activities. Planning activities under this task include:

- **Committee Support:** Provide administrative support of MATOC Steering Committee, Executive 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.
- **Coordinate as necessary with the Management, Operations, and Intelligent Transportation Systems (MOITS) Policy Task Force and MOITS Technical Subcommittee;** MATOC focuses on short-range planning issues for traffic management, and MOITS focuses on mid-to-long-range planning for traffic management.
- **Outreach:** Coordinate the work of MATOC with other organizations, for example, with public safety or emergency management groups and media representatives; prepare articles, presentations and brochures to convey MATOC concepts, plans, and accomplishments. Also coordinate with the COG Regional Emergency Support Function # 1 - Emergency Transportation Committee.
- **Implementation Planning:** Prepare implementation plans describing the work required to reach defined stages of MATOC operating capability, including expert input from MATOC subcommittees.
- **Financial and Legal Analysis:** Support discussion of the identification of funding sources, estimation of funding needs, as well as preparation of legal agreement materials that provide for the long term sustainability of MATOC.
- **Performance Measurement:** Support MATOC committee discussions of assessing progress against MATOC's defined goals and objectives.
- **Risk Management:** Identify and monitor major risks to progress and identify actions to be taken in order to avoid incurring risks or mitigating their consequences.

- **Supporting Materials:** Develop supporting or informational materials for the above activities as necessary.

Oversight: MATOC Steering Committee; MOITS Policy Task Force and Technical Subcommittee

Cost Estimate: \$120,000

Products: Agendas, minutes, summaries, and outreach materials as needed; white paper(s) on technical issues as needed; regular briefings and reports to the TPB, MATOC committees, and the MOITS Policy Task Force and Technical Subcommittee.

Schedule Monthly

Schedule: on-going activity

Multi-Modal Coordination for Bus Priority Hot Spots

In the spring of 2010, WMATA, MDOT, DDOT and VDOT completed a long range planning study that identifies a 20 year vision for surface transit enhancements entitled the *Priority Corridor Network (PCN) Running-way Evaluation Study*. Near term implementation of this vision is aimed at identifying opportunities for running-way improvements that could increase average bus speed and on-time performance at selected segments of the network. These "hot spots" are areas in which modest investments in bus priority improvements could significantly improve bus operations and reduce jurisdictional operating subsidies. Through this study, WMATA conducted an initial identification and prioritization of hot spots on the Metrobus network, utilizing an analytical method developed to correlate existing Metrobus frequencies and slow bus speeds to help inform the near term PCN implementation phase.

This follow-up study will build on the methodology from WMATA's previous study by examining both WMATA and local bus (e.g., ART, DASH, Ride On, etc.) service frequencies and speeds, to identify a truly "regional" hot spot prioritized top 10 list for each of the three states.

TPB staff, consultants, or a combination thereof, will work with WMATA and State DOT staff to 1) identify the causes of slow bus speeds at each hot spot, 2) recommend and scope bus priority measures that will improve average bus speeds on the identified segments, and 3) quantify the anticipated capital costs and operating cost savings the recommended bus priority measures would provide. For hot spots on the Metrobus network, the quantification of operating cost savings will include quantification of the WMATA subsidy reduction a local jurisdiction implementing the specific improvements could expect for each improved hot spot.

In addition to the involvement of WMATA and local bus staffs, involvement and assistance will be needed from state and local roadway agency staffs for identifying hot spots, providing input on opportunities for implementation of bus priority improvements, and scoping possible costs, savings, and impacts from the roadway management and traffic engineering perspective.

This \$90,000 WMATA FY 2012 Technical Assistance project will be undertaken in conjunction with concomitant efforts in the Technical Assistance tasks of DDOT, MDOT, and/or VDOT; WMATA has requested DDOT, MDOT, and VDOT provide a match of at least \$30,000 in each of their Technical Assistance programs as part of this overall effort.

Hot spot identification, prioritization, mitigation and operating subsidy savings calculations will be coordinated through the TPB's Management, Operations and Intelligent Transportation Systems (MOITS) Technical Subcommittee with assistance from the Regional Bus Subcommittee. While the budget proposed above will not be sufficient for identifying and analyzing bus priority measures for each of the Top 10 segments in all three

states, the budget will address as many of the hot spot locations as possible, in order of priority established under the guidance of the involved agencies through the MOITS Technical Subcommittee and the Regional Bus Subcommittee. In the event of a state providing additional funds beyond the recommended \$30,000, the additional contribution will be utilized in the state that provides it.

Cost Estimate: \$90,000 (in conjunction with concomitant tasks in the DDOT, MDOT, and/or VDOT Technical Assistance programs)

Product: Prepare detailed cost-benefit analysis reports on potential for bus priority improvements at selected bus operations "hot spots"

Schedule: Complete work by June 30, 2012

The program for FY 2012 remains to be specified.

TOTAL WMATA COST ESTIMATE: \$194,500