# National Capital Region Transportation Planning Board

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**Meeting Notes**

## MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS (MOITS) POLICY TASK FORCE AND MOITS TECHNICAL SUBCOMMITTEE

**DATE**: Tuesday, December 2, 2008

**TIME**: 12:30 PM

**PLACE**: COG, First Floor, Meeting Room 1

**CHAIRS**: Hon. David Snyder, City of Falls Church, Chair, Policy Task Force

Amy Tang McElwain, Virginia Department of Transportation, Chair, Technical Subcommittee

**VICE CHAIRS:** Pete Buckley, Montgomery County Ride On
Yanlin Li, District of Columbia Department of Transportation
Mark Miller, Washington Metropolitan Area Transit Authority

## <u>Meeting Notes</u>

**Attendance:**
Jeff Adler, Open Roads
Tad Borkowski, Fairfax County DOT
Peter Buckley, Montgomery Ride On
Kirk Dand, Arlington DOT
Gary Euler, Telvent
Michael Harris, VDOT DRPT
Ivan Horodyskyj, VDOT
Egua Igbinosun, MD SHA
Yanlin Li, DDOT
Curt McCullough, City of Fairfax
Amy McElwain, VDOT
Frank Mirack, FHWA
Martin Parker, Consultant
Hadi Quaiyum, PG DPWT
JD Schneeberger, VDOT
John Ward, IBI
Robert M. Winick, Motion Maps LLC
James Witherspoon, VDOT

COG Staff Attendance:
Andrew Meese
Ryan Whytlaw
Jim Yin

**Actions:**

**1. Welcome and Review of Notes from the October 14, 2008 Meeting**

Participants introduced themselves. Notes from the October MOITS meeting were approved.

**2. Report of the Nominating Committee and Election of 2009 MOITS Technical Subcommittee Officers**

Yanlin Li of DDOT was nominated and elected as the new 2009 Chair of the MOITS Technical Subcommittee. Peter Buckley of Montgomery will continue as the Maryland Vice Chair. Vice Chairs from Virginia and WMATA were to be determined at a future meeting.

**3. Metropolitan Area Transportation Operations Coordination (MATOC) Program – Proof of Concept Activities – Inauguration Activities**

Gary Euler of Telvent reported. A proof of concept demonstration/test of live (initial phase) operations would be launched in December. This would be MATOC's "pre-season", in preparation for the anticipated fully operations in July 2009. During this period, standard operating procedures (SOPs) would be tested, refined and enhanced. Buddy Ey reported for duty as "MATOC" Facilitator on October 20 and has worked full time on these issues. Mr. Ey also will work to make sure that accurate and timely information of transportation incidents deemed to be of regional significance is shared among transportation operations agencies and with public. Mr. Ey already had met with a number of operations center staffs, including DDOT, MD SHA, VDOT and WMATA. He has learned that making phone calls is still the centers' preferred way to communicate and share information. An outstanding question was how proactive MATOC should be, as well as the relationship between MATOC and the public and media. How should these be coordinated?

Mr. Ey was not able to attend today's meeting, but Mr. Euler described Mr. Ey's background in public service in Montgomery County Fire and Rescue. Mr. Ey had also served as a member of FEMA's Urban Search and Rescue team, as a communications specialist and task leader.

In response to a question from Mr. Witherspoon regarding the role of MATOC during the expected congestion on Inauguration Day, Mr. Euler noted that Mr. Ey already has been participating in some of the transportation agencies' Inauguration planning meetings, and was planning to be on duty in one of the transportation operation centers that day. Mr. Euler also noted that much of the process for Inauguration planning was being driven by agencies beyond transportation, notably the U.S. Secret Service.

Dr. Li of DDOT suggested a joint meeting of DC, VA, MD, CapWIN and MATOC/RITIS for Inauguration. Mr. Meese suggested that DDOT take the lead on the joint meeting on operation coordination perspective, as may already have been taking place in the effort led by Jose Thommana of DDOT. There were many committees that were working on Inauguration, including ones under the U.S. Secret Service, the Presidential Inauguration Committee (PIC), and the District of Columbia Homeland Security and Emergency Management Agency. Each of these committees had a transportation subcommittee, with mostly overlapping membership. WMATA was also doing a lot of planning coordination. MATOC, technically speaking, was still a trial phase program in testing,

was not in a position to play a critical role in the Inauguration plan, and so would remain mainly in an observation role at this time. Given the diversity of stakeholders and roles, the best thing to do right now was to keep the communication line open to sharing information.

In response to a question from Mr. Meese, Mr. Whytlaw stated the RESF-1 had a brief discussion regarding Inauguration during its October meeting, and was planning to discuss it further on a December 3 conference call.

4.      **Update on the Regional Emergency Support Function (RESF) – 1 Committee and Urban Area Security Initiative (UASI) Activities**

Mr. Whytlaw reported. RESF-1 last met October 28.  DHS had announced the FY2009 award to the NCR, which will receive between $50 million and $60 million. The CAOs, Homeland Security and SPG had a joint meeting on November 21, 2008.  During the meeting, the CAOs decided to break down working groups based on the six-to-nine priorities available that time. So following the joint meeting, four working groups were established. They were an Evacuation and Shelter Working Group; Critical Infrastructure Protection (CIP) Working Group; Mass Casualty, Hospital Surge, and Personal Decontamination Working Group; and Information Sharing, Interoperability, and Messaging Working Group (a separate Regional Defense Network has been merged with Regional Information/Messaging to public). Regarding due dates for the UASI applications, maintenance and continuation projects were due on December 2, and new project applications were due on December 19.  The CAOs requested RESF-1 to participate on the Evacuation and Shelter Working Group, the CIP Working Group, and the Regional Defense Network Working Group. Mr. Whytlaw also noted that this may be a good year for transportation to submit applications since other functional areas, such as police, fire, and health, were planning to submit fewer competing project proposals than in past years.

Ms. McElwain noted that the only UASI FY08 project was the detection/evacuation modeling project. The project was focused on the concept of detection coverage and potential coverage in evacuation plan model in phase I, with a potential Phase II in FY09 and Phase III in the future.

5. Update on UASI (08) Funded Project- Regional Evacuation Traffic Monitoring Management Tool

Mr. Meese reported on behalf of Alvin Marquess of MD SHA who was not able to attend. They were working toward a meeting on December 5th, focus on MDOT, VDOT and DDOT to review each agencies' detection plans, and determine the best locations for the new UASI-funded detection project. At the meeting, the key stakeholders would provide an update and demonstrate the evacuation model itself. MD SHA would then try to set up another meeting the third week of December, to introduce the model to planners of each region. The second meeting would be open to any agency that wished to learn more about the model. Ms. McElwain clarified that the first meeting would be only for the stakeholders involved in the project, and the second meeting would welcome any one interested in the project.

## 6. Program Updates

### • Regional Integrated Transportation Information Systems (RITIS)

Mr. Meese reported on RITIS based on an email from Michael Pack. CATT was working hard to update the RITIS website to include DDOT operations data. With this change, CHART and VDOT would be able to see incident data from DDOT. The MATOC Regional Information Systems subcommittee was holding a meeting on December 3 focused on plan and structure, change configuration, and other system engineering items associated with RITIS.

In response to a question from Ms. McElwain, Mr. Meese stated the only information feed into RITIS from WMATA was the RSS feed that appears on WMATA's web site, which is alert information for rail; bus information was not yet in a form that could be used. Some other transit agencies were using RITIS website to get overall transportation information for their own operation purposes.

### • Transit Signal Priority (TSP) Activities

Mr. Meese reported for Sean Kennedy of WMATA on TSP. Mr. Kennedy had made presentations at both the October MOITS meeting and the November Regional Bus Subcommittee meeting. Since the presentation to MOITS in October, WMATA had revised the proposal. Now WMATA was planning to divide the process into two phases, with a stretched schedule. The first phase would be study and information gathering. Phase II would be implementation of testing and prototype(s). Phase I would analyze three main types of TSP technology. They were very interested in defining what kind of equipment was needed on WMATA buses. The goal from the WMATA perspective was that all buses should have same set of TSP equipment. WMATA was also forming a Regional Advisory Group and encouraged any interested MOITS participants, including traffic signal people, to attend this working group through Phase I. The second phase would take some corridors and apply what they found in Phase I at some point in the future. WMATA had a consultant team working with them to identify the segments in the region that experienced bus delay based on Automated Vehicle Location System data. WMATA would then analyze the data to see if and where the TSP would be a solution to the bus delay.

### • Traffic Signals Subcommittee

Mr. Yin reported. The Regional Traffic Signal Subcommittee met on November 14 and the next meeting was scheduled on December 18, 2008. Sean Kennedy would present on TSP at the December meeting. During the November meeting, Mr. Yin reported the status of regional traffic signal information GIS application as well as exporting the information to Google Earth. In response to Ms. McElwain's question, Mr. Yin noted any information regarding the signal intersection stored in the Synchro could be extracted and presented on GIS/Google Earth. Mr. Meese added that most agency used Synchro software to time the traffic signals. So it was the ability to collect the data and analysis on a regionwide basis that was of interest. However, each agency produced and collected data differently, so it was also a challenge for the subcommittee to determine what kind of data should be presented and how to present these data. So it could be

foremost a regional database identifying the locations of signalized intersections. Also, it should be considered to be a research project at its current stage.

### • Regional ITS Architecture

Mr. Yin reported. The Regional Architecture Subcommittee last met on November 13, and the next meeting would be on January 8, 2009. Representatives from WMATA made a presentation on new WMATA ITS related projects and COG/TPB would develop project architecture and present such architecture on January subcommittee meeting.

### • MOITS Strategic Plan

Mr. Meese reported that there were no major changes regarding the MOITS Strategic Plan since the last meeting. Ms. McElwain stated she was interesting in providing more help on MOITS Strategic Plan development.

## 7. Presentation on the VDOT ITS Master Plan

Mr. Witherspoon and Mr. Schneeberger spoke to a presentation. VDOT adopted ITS and considered life cycle management. So it was important to have a Master Plan. Prior to master planning, VDOT took an ad-hoc approach for device planning. The disadvantages of ad-hoc including limited planning documentation, no documented standards and/or requirements, deployments were focused on "quick fixes", and no mechanism for prioritizing ITS expansion corridors. VDOT went through reorganization and ended up with boundary changes for NOVA.

System engineering was required by Rule 940/FTA Policy. Benefits of following a systems engineering process included improving stakeholder participation, more adaptable, resilient systems, verified functionality and few defects, high level reuse from one project to the next, and better documentation. NOVA chose to use its ITS Device Master Plan as a tool that incorporated the system engineering process. As part of master planning, NOVA addressed needs, which was done by a concept of operation, identified functional requirements, and located the ITS devices. Currently, the NOVA Master Plan was developed regarding CCTV, detection, and DMS. Telecom was in progress. Ramp Metering, Lane Control System (LCS), Road Weather Information System (RWIS) and Active Traffic Management Strategies would be developed in the future. VDOT Master Plans included Concept of Operations (ConOps), High-Level Requirements, ITS Device Maps, Deployment Prioritization, and Validation Plan.

In response to Mr. Meese's question on why traffic signals equipment was not included in the Master Plan, Ms. McElwain stated there was a separate research project addressed the signal equipment issues, such as future generation, future functions, etc. Mr. Meese mentioned for the TSP and emergency vehicle preemption, you have legacy systems and potential new systems, how all these different systems worked together technically. Such issues were closely related to the traffic signals. Mr. Schneeberger noted that although NOVA did not have a master plan for the traffic signals, there was another plan for the next generation of signal controllers.

Mr. Schneeberger reported in detail on NOVA Mater Plan components: Concept of Operation, High-Level Requirements, Prioritization and Validation.

- The Concept of Operations (ConOps) defines:
  - Who – Who are the stakeholders involved with the system?
  - What – What are the elements and the high-level capabilities of the system?
  - Where – What is the geographic and physical extent of the system?
  - When – What is the sequence of activities that will be performed?
  - Why – What is the problem or opportunity addressed by the system?
  - How – How will the system be deployed, operated, and maintained?

- The ConOps shows agreement on:
  - Goals, Objectives, and expectations
  - Project scope
  - Stakeholder responsibilities
  - Operational needs
  - How the system will operate
  - Operational and maintenance environment

Once the concept operation was defined, the next would be requirements. High-level Requirements defined *what* the system would do but not *how* the system would do it. Requirements included a traceability matrix that would be maintained and populated throughout the project development process. The traceability matrix provided backwards and forwards traceability between stakeholder needs, system requirements, design, implementation, and verification. Next piece was to define the locations of the devices. NOVA also developed a formula to prioritize the corridor shown as follows:

*Prioritization Score = [(AADT / 10,000) \* (Weighted Bundle LOS)] + [Existing ITS Infrastructure] + [Crash Rate / 100]*

Validation was used to Used to verify expectations for the Concept of Operations
  - Was the right system built?
  - Confirm the user needs are met by the installed system

Validation could not be completed until was in its operational environment and was being used by the "real users".

In general, the NOVA ITS Master Plan helped VDOT NRO Staff to define projects, prioritize expansion and estimate project costs, reduce resources for similar projects, react to funding opportunities quickly, provide input for ITS inclusion in construction projects and ensure project success and compliance with FHWA Rule 940. The plan would be updated on a regularly scheduled basis.