

National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202 TDD: (202) 962-3213

Meeting Notes

TRAFFIC SIGNALS SUBCOMMITTEE OF THE MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS (MOITS) TECHNICAL SUBCOMMITTEE

DATE: Thursday, February 9, 2012

TIME: 10:00 AM to 12:00 Noon

PLACE: Arlington County Government Offices
Conference Room 913, 9th Floor
2100 Clarendon Blvd
Arlington, VA 22201

CHAIR: Ling Li, Virginia Department of Transportation

Attendees:

Shahid Abbas, Arlington County
Harvey Alexander, DDOT
Chad Charles, Town of Vienna
Maha Gilini, City of Alexandria
Ed Jones, PG County ATMS Section (called in)
Sean Kennedy, WMATA
Ling Li, VDOT
Curt McCullough, City of Fairfax (called in)
Ben Myrick, MD SHA
Cyrus Salehi, City of Falls Church
Amit Sidhaye, Arlington County
Mark Skinger, City of Alexandria
Bob Souza, VDOT
Robbie Wilson, Town of Herndon

COG Staff:

Andrew Meese
Daivamani Sivasailam
Huijing Qiang

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Actions:

1. Welcome & Introductions

Ms. Li began introductions and welcomed participants. Meeting notes from the December 20, 2011 meeting were reviewed and approved.

2. Review of the Traffic Signal Power Backup System Survey

Mr. Qiang distributed the printout of the survey results. Participants reviewed the results. Mr. Meese thanked committee members for their timely response to the survey and briefly introduced the background of this survey. COG formed Incident Management and Response (IMR) Steering Committee in the wake of the January 26, 2011 storm. The IMR Steering Committee met 6 times over 8 months and a successor IMR Steering Committee will start holding quarterly follow-up meetings, starting from February 22, 2012. The IMR Report, which is available on COG's website, contains findings and recommendations on several areas including transportation. One of the recommendations related to transportation was to conduct an assessment of and expeditiously install backup power for major traffic signals. As a result, COG TPB Staff has been tasked to conduct such a survey to gather relevant information.

Mr. Meese distributed the presentation which he made to the TPB Technical Committee on February 3, 2012. That presentation included number of traffic signals as well as percentage of traffic signals equipped with battery backup systems in each jurisdiction. Summaries of the survey results are also included in the presentation. COG Staff would follow up with each jurisdiction to make sure that the results are right as well as how to make recommendations to improve the status quo. Some participants noted that it is better to include a cut-off date in the survey result since the numbers are always changing. With regard to the list of jurisdictions to which the survey was sent, COG Staff will continue to work with this committee to make sure all agencies/jurisdictions maintaining traffic signals in this region will be covered. During the meeting, some meeting participants provided updates to the survey results.

Mr. Meese also asked the committee if it is appropriate to focus only on battery-based backup systems. Mr. Abbas responded that the choice between battery-based backups and generator-based backups depends on the duration of a power outage. Battery-based power backup systems would usually last only a couple of hours during a power outage. During a prolonged power outage, they need generators to power the signals on major corridors, especially those on evacuation routes. Mr. Abbas also stated that one of the rules in Arlington County is to have at least 10% of the signals on major corridors backed up by generators. Representatives from Town of Vienna added that both batteries and generators are used and all of their signals are generator ready. Mr. Wilson from Town of Herndon also added that all of their signals are generator ready while they do not have any battery backups at this time.

Generally, comparing to small municipalities, state agencies usually do not have enough resource to deploy generators due to the large number of signals as well as the size of the geographic area maintained by them.

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Representatives from City of Alexandria added that they've been looking into dry cell based battery backups. Mr. Alexander responded that DDOT is currently conducting evaluations for the dry cell battery technology.

The committee also discussed how to define major traffic signals. Mr. Abbas noted that the criticality of a signal should be left to localities to determine; otherwise it would be too much information for the localities to provide as well as for COG Staff to compile. In Arlington County, all the traffic signals are programmed into their TMC so that they know which corridor and signal to monitor under different emergency scenarios. Representatives from DDOT added that pedestrian and bicyclist traffic needs to be considered in identifying critical signalized intersections within the District of Columbia. Other participants stated that they have to work with law enforcement agencies in placing battery backups. Mr. Meese and Ms. Li proposed identifying a subset of traffic signals in this region as critical traffic signals based on the Traffic Control Points (TCPs) listed in Emergency Transportation Operations Plan and the committee agreed to do so.

Mr. Abbas noted that the traffic signals subcommittee, as a group, should focus on making recommendations to each jurisdiction as opposed to forcing individual jurisdictions to follow a regional policy.

The committee also discussed cost information. COG Staff will follow up with each individual agency to refine jurisdiction-specific cost estimates for installing, maintenance and operations. COG Staff will also follow up with the subcommittee to develop options and budget estimates for strengthening regional capabilities.

Mr. Meese will revise his presentation based on today's discussion. The ultimate goal is to prepare a white paper based on the findings and recommendations from this survey through the signals subcommittee.

After reviewing the presentation, Ms. Li suggested adding two more points. The first is that the signals agencies have long been aware of the importance of back-up power. Second, the ongoing maintenance responsibilities and costs for back-up systems are of concern to signal agencies, given limited operations budgets.

3. Jurisdictional Roundtable

Mr. Myrick briefed on MDSHA's update. They started upgrading ASC controllers and should have that done by the end of this fiscal year. They also have a new type of cabinet for their traffic signals, which is more convenient to be equipped with battery backups.

Mr. Charles briefed on Town of Vienna's update. They are utilizing the CMAQ funding to upgrade their traffic signal controllers to improve communications to their signals.

Mr. Kennedy briefed on WMATA's update. Metro currently has Transit Signal Priority (TSP) projects on several different corridors, including one in VA, two in MD and four in DC. They went

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through a RFP for TSP on Route 7 in Virginia several weeks ago and hopefully will have vendors selected between March and April.

Mr. Alexander briefed on DDOT's update. DDOT is about to finish the first deployment of UPS. A 5-year optimization program has just been kicked off. The committee will discuss this project at future meetings.

Mr. Wilson briefed on Town of Herndon's update. They are working on budgets for moving towards UPS backup systems.

Ms. Gilini and Mr. Skinger briefed on City of Alexandria's update. They are currently focusing on the Base Realignment and Closure (BRAC) project for the Mark Center. They will also be implementing Traffic Responsive System on Duke Street.

Mr. Souza briefed on VDOT's update. They are working on switching some type 170 controllers to type 2070.

Mr. Jones briefed on Prince George's County's update. They are currently working on construction specifications of traffic signals to make sure those are ready once the construction season begins. They are also working on fiber and LED related ITS projects.

Mr. McCullough briefed on City of Fairfax's update. They are working on switching some of their signal heads into LED-based. They are also conducting some signal timing optimizations as well as getting ready to convert from copper communications network to a fiber network.

4. Tour of Arlington County's Traffic Management Center

Participants had a tour of Arlington County's Traffic Management Center. Mr. Abbas introduced different functionalities and capabilities of their TMC. He also demonstrated Intelligent Street Light System in Arlington County.

Next Meeting: March 14, 2012