

National Capital Region Transportation Planning Board

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Meeting Notes

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

DATE: Tuesday, September 11, 2012
TIME: 10:00 AM to 12:00 Noon
PLACE: COG, First Floor, Meeting Room 1
CHAIR: Ling Li, Virginia Department of Transportation

Attendees:

Shahid Abbas, Arlington County
Harvey Alexander, DDOT
Edwin Daniel, Montgomery County Police (called in)
Vincent Fulks, Prince George's County ATMS Section
Matthew Hansen, City of Falls Church (called in)
Taran Hutchinson, MATOC
Ling Li, VDOT
Curt McCullough, City of Fairfax (called in)
Ben Myrick, MD SHA
Bob Souza, VDOT

COG Staff:

Andrew Meese
Huijing Qiang
Eric Randall
Daivamani Sivasailam

Traffic Signals Subcommittee

Notes from the September 11, 2012 Meeting

Page 2 of 5

Actions:

1. Welcome & Introductions

a. Review of Notes from the July 10, 2012 Meeting

Ms. Li began introductions and welcomed participants. Meeting notes from the July 10, 2012 meeting were reviewed and approved.

2. Discussions of the Recent Surveys on Traffic Signals

a. Traffic Signal Power Backup Systems Survey

Mr. Qiang briefed the committee on the latest results of the Traffic Signal Power Backup Systems Survey as of June 30, 2012. He thanked the committee for providing COG/TPB staff with the latest data. The committee reviewed the detailed draft survey results and made some comments. Mr. Qiang noted that in general this region has been making progress in terms of percentages of traffic signals with some sort of power backup systems, either battery-based or generator-based. Based on the latest data, 22 percent of traffic signals in this region have battery-based power backup systems while 34 percent of traffic signals are generator ready.

Mr. Meese reviewed the draft response to IMR Oversight Committee in terms of traffic signal power backup systems with the committee. The committee agreed to report to the IMR Oversight Committee that the Traffic Signals Subcommittee and COG staff have examined lists of Traffic Control Point (TCP) intersections in Maryland and Virginia emergency transportation/evacuation plans to determine coverage at those intersections. This has raised awareness of status as a TCP as a major consideration in where agencies deploy future signals power back-up systems. The District of Columbia undertook a similar effort in 2008, and had previously installed power back-ups at identified locations. The District effort is anticipated to be repeated after the completion of the District's emergency transportation plan update in 2013. Regarding funding for expanding coverage, the subcommittee identified the issue of ongoing annual maintenance costs of power back-up systems as significant. Participants reported reluctance to install back-up systems unless funding for ongoing maintenance costs had also been identified and dedicated. Because of variations among types of signals equipment used in the region, differing previous levels of deployment, and differing mechanisms for ongoing maintenance funding, the subcommittee did not view it to be advantageous to pursue a single region-wide proposal for capital funding. However, the subcommittee has agreed to coordinate regionally among individual agency deployments to help ensure that those deployments support regional emergency plans as feasible.

Ms. Li noted that all new or refurbished traffic signals shall be equipped with battery backups according to VDOT's requirements. VDOT is currently utilizing State funds to install UPS units for their traffic signals. In response to a question from Mr. Meese as

Traffic Signals Subcommittee

Notes from the September 11, 2012 Meeting

Page 3 of 5

what the best practices are on signal backups nationally, Mr. Abbas responded that the policies on traffic signal backups in this region are more aggressive comparing to those of the other regions. In response to an inquiry at the May IMR Steering Committee meeting, the signals subcommittee discussed general engineering criteria used by agencies regarding prioritization of placement of signal backup systems. For access considerations, priorities are given to airport access/entrance roads, military base access/entrance roads, and signals at ramps to/from freeways. For design/traffic engineering considerations, priorities are given to locations with railroad preemption, locations with advance warning beacon, locations with unusual intersection geometrics, locations with multiple left-turn lanes, and traffic circles with signalization. For public safety considerations, priorities are given to locations with a history of power failures, identified evacuation routes, and locations identified by police as critical. For signal network considerations, priorities are given to locations with multiple signals controlled by a single controller, locations serving as communication hubs within a network of traffic signals, and locations within a coordinated (interconnected) signal system.

b. June 29 Derecho Storm Impacts Survey

Mr. Qiang reviewed the draft results of the June 29 Derecho Storm Impacts Survey. Generally speaking, the impacts of the derecho storm on traffic signals varied among different jurisdictions in the region. Some jurisdictions/agencies suffered prolonged power outages and large signal losses while others only suffered minor damages. It took almost 5 days for some jurisdictions/agencies to fully restore their normal traffic operations. Most jurisdictions/agencies used both battery-based and generator-based power backup systems on their traffic signals during the storm aftermath. Batteries usually lasted between 4 to 16 hours. A lot of jurisdictions/agencies had massive communications outages during and after the storm. VDOT representatives noted that in Fairfax County the County Police deployed generators to traffic signals during and after the storm. DDOT representatives noted that their TMC operators would treat it as a power outage if they see massive communications failures along any specific corridors during a specific time period.

3. Discussion of the 2013 Presidential Inauguration

Mr. Hutchinson, Metropolitan Area Transportation Operations Coordination (MATOC) Facilitator, discussed the 2013 Presidential Inauguration pre-planning process with the committee. Mr. Hutchinson noted that they had just started the planning process and were coordinating with other stakeholders in the NCR on this effort. Mr. Myrick stated that the lack of enough park spaces at Metro parking lots created a lot of issues in traffic operations during last inauguration and suggested disseminating Metro parking information to travelers before they get there. In response to a question from Ms. Li as if MATOC is the lead group for the inauguration planning in terms of traffic operations, Mr. Hutchinson responded that they are still coordinating with other groups at this time. Mr. Alexander noted that other non-transportation agencies such as Secret Service will also be heavily involved in this process. Ms. Li noted that Virginia Department of Emergency Management (VDEM) had already

Traffic Signals Subcommittee

Notes from the September 11, 2012 Meeting

Page 4 of 5

started coordinating with other groups in the region on various relevant aspects of the inauguration planning, one of which is transportation. Mr. Hutchinson noted that RITIS is becoming more and more popular in this region and stakeholders are interested in how RITIS can be used for the inauguration planning. As a result, MATOC staff had scheduled a lot of RITIS training sessions for different agencies. Mr. Meese suggested MATOC staff compile a list of entities that have been trained on RITIS and share that list with the committee so that the committee would know who has the right knowledge in applying RITIS for inauguration planning.

The committee also discussed INRIX coverage in DC. Mr. Hutchinson stated that he is seeing more INRIX data for DC in RITIS. In response, Mr. Meese noted that DDOT had made additional data purchases from INRIX and the vendor also turned on more data feeds in Maryland. Therefore, people are seeing more INRIX coverage in the National Capital Region in RITIS. The committee also explored how to integrate traffic signals data into RITIS in the future as currently there is no traffic signal information in RITIS. One of the proposed options is to have UMD CATT Lab staff develop a traffic signals layer displaying real-time traffic signal operations information similar to what they did for the evacuation-related data. In response, Mr. Alexander stated that DDOT is currently working on integrating traffic signals and CCTV camera data feeds and would be able to share that data with RITIS as well as the entire region in the future.

4. Discussion of the Structural Integrity of Traffic Signal Poles

The committee briefly talked about the structural integrity of traffic signal poles. This topic was initially brought up by stakeholders from the City of Alexandria. In response to Mr. Myrick's question as if each agency has a pole inspection program, Mr. Abbas responded that they address that under their routine work program in Arlington County. Mr. Myrick stated that MD SHA had issues in the past on span wires due to the lack of enough foundation.

5. Jurisdictional Roundtable

Mr. Alexander briefed on DDOT's update. They have completed about 85 percent of the city-wide system detector project. Through that project, they have deployed about 130 new count stations in the city in addition to the existing permanent count stations. New functionalities such as Weigh in Motion (WIM) have also been added into those count stations. They are going to install about 100 new UPS units to their traffic signals. He stated that UPS capability will become standard for all new or modified traffic signals in DC in the future.

Mr. Souza briefed on VDOT's update. They plan to install 50 to 60 UPS units every year and will follow the TCP list. They are still in the process of converting traffic controllers from 170 to 2070.

Traffic Signals Subcommittee

Notes from the September 11, 2012 Meeting

Page 5 of 5

Mr. Fulks briefed on Prince George's County's update. They have started looking for generators to back up their traffic signals for prolonged power outages in the future.

Mr. Myrick briefed on MD SHA's update. They have started looking for propane-based generators and 48-v systems. Solar powered traffic signals would be an option for SHA in the future.

Mr. McCullough briefed on the City of Fairfax's update. They are in the process of deploying new UPS units and changing their communications networks from copper-based to fiber optics-based. They are also collecting traffic data for signal timing optimization projects.

Mr. Daniel briefed on Montgomery County's update. They continue to add battery backups on county signals. Montgomery County Police is working with County DOT on categorizing signalized intersections in the county based on their criticality.

6. Other Business

Ms. Li mentioned this year's Regional Traffic Signal Forum which will be held on November 7, 2012 at Maritime Institute. This year's forum will be a joint meeting with ITSMD annual meeting. Ms. Li and Mr. Meese welcomed attendance from the signals subcommittee.

Next Meeting: TBD