National Capital Region Transportation Planning Board
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Meeting Notes

MANAGEMENT, OPERATIONS, AND INTELLIGENT TRANSPORTATION SYSTEMS (MOITS) TECHNICAL SUBCOMMITTEE MEETING

DATE:	Tuesday, April 8, 2014
TIME:	1:00 PM
PLACE:	**By Conference Call/WebEx Only – No In-Person Meeting**
CHAIR:	Jean Yves Point-du-Jour, Maryland State Highway Administration

Participants:

Shahid Abbas – Arlington County
Ed Daniel – Montgomery County Police Department
Warren Henry – Jacobs Engineering/MDSHA
Debbie Leigh – COG/TPB
Amy Tang McElwain – VDOT
Peter Meenehan - WMATA
Andrew Meese – COG/TPB
Erin Morrow – COG/TPB
Jean-Yves Point-du-Jour – MDSHA
Wenjing Pu – COG/TPB
Tom Scherer – Arlington County
Jon Schermann – COG/TPB
Daivamani Sivasailam – COG/TPB
Marco Trigueros – COG/TPB
Will Truong – MATOC
Ramkumar Venkatanarayana – Virginia Smart Travel Lab

1. Welcome and Introductions

The participants on the phone and in the meeting room introduced themselves.

2. **Regional Emergency Support Function #1 (RESF-1) Emergency Transportation Committee Update**

Mr. Sivasailam stated that the RESF-1 has been pretty busy reviewing the UASI applications. There are six projects that we already talked about last month but the RESF-1 committee has had a chance to go over all of those applications and have been sent over to the parent body. There are two or three layers of review and approval. So it has gone up, but one notable change that is of interest to this committee is with the traffic signals power back up application. Originally we had Alexandria, Arlington, Town of Herndon and Prince George's County and now the District Department of Transportation has joined the application – the total application is for $800,000. So five jurisdictions have joined, and this Friday there is a meeting of the RESF chairs as well as RPWG chairs to consider all of the UASI applications that are up before them.

The PMP will be reviewing the project management forms and they will be sent up to the policy group where they will give the final call on which project gets funded. The PMP is a new office, the Project Management Office that has been created to basically manage all of the UASI projects that are funded within COG. Right now all of the projects are managed by DC's Homeland Security, DC's FEMA Homeland Security and Incident Management Office. So the function will be transferred over to this PMO office that will be under COG. COG has hired a new Managing Director who will be in charge of this office. Her name is Mary Anne McKown who is coming in from the private sector and will be starting sometime this month. Lastly, an RFQ/RFP was issued for consultant support for this tabletop training and exercise to deal with emergency evacuation. It is supposed to happen in May so proposals should already be in.

Mr. Meese added that the May timeframe for that exercise is slipping. Additionally, there is interest holding a joint RESF-1 MOITS meeting particularly from the idea of strategizing about potential future UASI projects that are of mutual RESF-1 MOITS interests. After the exercise is over, we might start thinking about having a joint session like that.

Mr. Sivasailam noted that, at the last RESF-1 meeting, WMATA made a presentation on their Metrorail station evacuation planning that's going on.

Mr. Meese added that it builds upon the one that was done in Northern Virginia several years ago but is different in the sense that it seems to be focused on the WMATA physical facility itself – what are they doing in terms of people on trains or in tunnels – whereas the old one had a focus more on how to reroute buses utilizing a station that now had to be closed for some reason and where do people find their buses.

Mr. Point-du-Jour asked if DDOT just joined the RFP for power back up. Mr. Meese answered that DDOT joined it and became the lead agency based on their experience with handling these grants. We did a lot of background discussion with other agencies and to be eligible for the grant, you have to have a need and you have to have the ability to participate in this grant under its rules at this time. So both agencies that had an identified need that was reasonably consistent with one another in this grant as well as could undertake this activity in this cycle with its deadline and its grant requirements and so forth were DDOT, Alexandria, Prince George's

County, Arlington, and the Town of Herndon, Virginia. Others either felt that they already had the funding that was needed right now or could not meet the parameters of this particular grant. The critical thing is that in order to honestly apply or receive this grant you also have to pledge that your agency can cover the ongoing maintenance costs for years to come. So agencies are being careful about not purchasing any equipment for which they don't have the proven resources to provide the ongoing maintenance. They have found other funding sources for this.

Mr. Point-du-Jour asked if any one of them have considered gas as a means of providing electricity. Mr. Sivasailam answered no. There are three elements: one is secured power back up (i.e. battery backup), the second is putting a switch on and bringing a portable generator, and the third is portable generators, but nobody has talked about putting in permanent gas power generators on site under this grant.

Mr. Point-du-Jour stated that MD SHA is getting ready to test two sites using permanent gas generators for power backup, but they were not in the Washington Metropolitan Area. Mr. Sivasailam noted that Frederick County was not in the NCR under DHS UASI designation even though it is in the TPB area.

3. Presentation of the Draft National Capital Region Congestion Report, 4th Quarter 2013

Mr. Meese stated that they are starting to put together these quarterly reports again. This is a desire to take what was a biennial congestion management report and make it more frequently, more topical, and more relevant and hopefully it is a fair warm up to our upcoming federal requirements for performance reporting. This is something that a number of MPOs and the I-95 Corridor Coalition are now doing with the tools that are made available to us.

Mr. Pu stated that the second draft of this report is on the MOITS website and guided the group through the document focusing on changes since the first draft. Major updates from last month's presentation include the first section which is on page 1. Page 1 contains the congestion travel time index. We added more categories (i.e. highway groups). The first one is interstate systems. The second one is non-interstate National Highway System as required by MAP-21. As an MPO we are also interested in non-NHS arterials and less traveled roads. The last category is all roads. All roads, as explained in the last section of this report, are all roads covered by the newest data in the TPB planning area and include more than 5,000 directional miles.

Next was the travel time index TTI for the first quarter of 2013 as well as the entire year of 2012. The table on top of the charts just shows the travel time index value comparisons to those time arterials. Under the table we have four charts to show you the month speed variations of travel time index. Here we have three lines. The first line is the average of 2010 – 2011. There was some discussion whether to have two separate lines for two separate years. In that case we would have four lines for the four years of 2010 – 2013. That chart seems a little busy. We want to reduce the moving average on historical years. We only have data from 2010. So we have the first two year average and then we have separate 2012 and a separate 2013 data. We do

not know how the national performance rulemaking will regulate. We want to have separate years reporting our moving average because from the safety NPRM we do have a five year average which is the requirement. So we guess in August or September we will see some moving average for congestion as well. At the bottom of this page we will explain the travel time index to give readers a direct explanation as to what is a performance measure used here.

Mr. Abbas asked why the travel time index is going down. What factors are contributing to the decrease in travel time? Mr. Pu answered that the reason for the congestion decrease may be the economic slowdown. Washington, DC is a heavily government driven economic zone so we usually see a one or two year lag behind the economy in general. In 2009 that was the worst in terms of the entire country for the economy leading to federal government shrinkage in 2011 or 2012. So that is when we saw a dramatic decrease in congestion in our region.

Mr. Meese asked about the federal government shutdown in October. Mr. Pu answered that the federal government shutdown did cause a little bit of a decrease. The actual decrease was starting from early 2010 to late 2011. In a two year period the whole region's congestion almost took a straight decline.

Mr. Abbas stated that in 2013 they are going back up. Mr. Pu stated that this is based on INRIX data. 2014 is higher than last year. Travel congestion is coming back.

Mr. Meese stated that when INRIX did publish its annual report last year it showed Washington in the top ten and Washington was the only one of the ten worst that went down and it went down 1%. They attributed it significantly to the federal shutdown. There was an impact there. We had kind of a time delay recession here. We are getting the worst of what people have gotten two years ago and will probably follow the trend. There is a debate that people are saying that it is just the economy and it will turn around in a minute whereas others claim it is a permanent societal change. Only time will be able to answer that question. Mr. Pu stated that by any means the economy has a major impact on transportation and on traffic congestion.

Mr. Meese stated that he would like the committee to look at alternatives; when we had the four lines it was a bit busy for the eye. Getting it down to the three lines is the suggestion. We parallel what we see in weather reports: the high temperature this year, the high temperature last year, and the overall historical average is a typical comparison. The trick here is one where our historical average is only two additional years. You combine those years or not. The second thing as Wenjing said those are two very interesting years in the data. We have these balances in dilemma. Do we make this the first step in what might be an ongoing process to compare with this year to last year and the historical average which is a typical way to approach these things.

Mr. Pu asked if anyone would prefer to see separate years or combined years. Mr. Sivasailam answered that he would like to see separate years, but Mr. Meese brought up a point: five years from now, for example, we would not be able to show eight years' worth of data individually. It would be too much. At some time you have to average.

Mr. Pu noted that page 2 was a similar format but different content. It is a planning time index. We saw a decrease in planning time index indicating better travel time and reliability from 2010 to 2013. At the bottom of the page it explains what the planning time index is. From page 3 to page 7 are exactly the same compared to last month's report. No changes on that section. If you look at page 3 the most congested bottleneck within our region is I-66 westbound with an average duration 2 hours 40 minutes, average length of about 11 miles, and it occurred 122 times during the three month period. The impact factor is a product of multiplying duration in minutes less in miles and the number of occurrences. There is no physical meaning of the value but it does indicate the severity of the bottleneck because it is a combined measure for three different dimensions. The map on the left shows the location. The chart on the right shows the time of day it took place. The purple and red shows longer queues and the green lines shows you shorter queues. From the center is the first day of the three months period which is October 1, 2013 and on the edge of this chart is a last day which is the last day of 2013. The same format applies to all of the 10 bottlenecks.

Mr. Abbas asked whether that 2 hours and 14 minutes means that each occurrence had an average duration of 2 hours and 14 minutes. Mr. Pu answered that is true and mentioned that all of the calculations and charts are provided by the Vehicle Probe Project Suite developed by CATT Lab at the University of Maryland. This is purely the information grabbed from this web based tool.

Mr. Meese stated that these are tools that other MPO's are using. We are now using the same set of tools and using the same interface and so forth so there is consistency there.

Ms. McElwain wanted a clarification on whether duration means that it takes an average of 2 hours and 14 minutes to go through 11 miles of bottleneck almost every day. Mr. Pu stated that the duration is the duration of congestion. It is similar to that measure. On page #8 is the congestion map. The first one is the travel time index during the AM peak hour. Compared to last month's report we added major routes in the region. VPP Suite has a limit of 2,000 segments. We added the freeways and major arterials – river Road in Maryland and Virginia 7 in Virginia among others. We have the same information for the pm peak hour from 5 – 6 pm on page #9. Again this is provided by the trend map in the VPP Suite.

Mr. Meese stated that there has been an ongoing conversation regarding the different measures these visualizations can produce. The tabs on the web based tool can redefine what your break points are. A problem with congestion reporting in the past is that people tend to remember the worst conditions so average conditions seem too optimistic to the general public. We have defined our break points in a certain way to highlight sections that are operating below free flow speed.

Mr. Sivasailam asked if you have a travel time index of 2, it is like you are traveling at an average of 30 mph after free flow speed. Mr. Pu answered that it is not the case because some of the studied roads are arterials – which have lower free flow speeds. In the last report we used the speed but this month, we are including a number of arterials so we are not showing the speed anymore. We are using travel time index because it is a relative measure. We are using fewer

performance measures to avoid confusing readers. Mr. Sivasailam clarified that if you are traveling and your travel time index is 2, you are traveling half the speed of what free flow should be.

Mr. Abbas asked if you are in the free flow speed and then that is green why do we term it as congestion. Why is the track green? That is the free flow speed. Mr. Meese clarified the color coding given the probable variations across different screens. We have a medium green for 1 and below. Frederick County has a pretty long green stretch and there is a light green in certain areas between 1 and 1.3. 1.3 is essentially when the traffic really starts to slow down at the point where you are really going to get below speed limit. Then that goes from the light green to the yellow. Then you have some orange and some dark orange and red. Those are kind of intuitive/natural break points that we try to choose for this.

Mr. Pu continued to pages 10 – 13, the quarterly spotlight section. For the last quarter of 2013, we had the federal government shut down. We did analysis with help from another member of COG, Patrick Zilliacus. We have this travel time index comparison region-wide as well as facility-specific congestion reduction maps later on. If you look at Figure 5 on page 10 we show the traffic changes on the Interstate system as well as the non-Interstate National Highway System. We show you before the shut down and after the shutdown: the October 2013 average as well as the October 2012 average. All of the five time periods are explained. On the top of the charts you see the impact of the federal government shut down. The travel time index went down about 2%. If you look at Interstate and non-Interstate specifically, Interstate is about a 3.3% drop while non-Interstate is about a 1.7% drop. Given that the year variation from 2012 – 2013 was only about 3% drop in the interstate system and only a 4% drop on the non-interstate system. We think the federal government shut down had a significant impact on the traffic congestion on the entire National Highway System in the region. So that is our conclusion region-wide.

Mr. Meese stated that MOITS is the first committee to see this draft, and staff was interested in feedback. The other thing is this is only a snapshot to be included in this report in fact; we are putting together a more robust standalone report in order to talk about the impact of the federal shutdown. This is the kind of thing that we like to do with these quarterly reports, to have a spotlight on something that was unique or special about that particular quarter. It makes for some interesting conversation. The more detailed report will expand on the specific impacts. October was average for the year in 2013, but the average October usually experiences higher than average levels of congestion.

Mr. Pu stated that a more detailed report will be available later and will include transit ridership changes. If you look at page 11 you will see the facility specific findings. This section refers to the maps on page 12 & 13. Page 12 is the AM peak, 4 hours from 6 to 10 AM on weekdays, illustrates the most significant decrease in congestion during the government shut down. You saw almost all of the inbound traffic on I-270, Virginia 267, I-66, I-95 in Virginia Northbound as well as US 50 Westbound, Baltimore-Washington Parkway, I-95 Southbound in Maryland, almost all of them had some sort of decrease – as well as I-66 inside the beltway, I-395, Baltimore-Washington Parkway, DC 295, I-295, a lot of decreases there. If you look at the PM

peak, we saw less of a decrease. The decrease of congestion only focused on northeast of the beltway and northwest of the beltway as well as the George Washington Parkway.

Mr. Sivasailam added that one of the explanations may be that AM peak is always commuter traffic whereas PM is other mixed traffic. That is why there is less impact.

Mr. Pu stated that in our region PM is more congested than AM. So the notion that if you are more congested you have to decrease more is false because I-66 area is more congested compared to the region you should have more decrease. This proves that notion is false. The last section on page 11 is to mention that the longer full report to be available in the future. Page 14 is the methodology of how to calculate the TTI/PTI in particular, the coverage of the INRIX data regarding the all roads category, and how the bottlenecks are defined and tracked by the VPP. One significant point here is that when you calculate the travel time index you have to have the travel time index equal or above 1 because if you don't do that your interstates will be less congested than non-interstate arterials which is not intuitive to me and not intuitive to many people because on freeways people can travel 80 – 75 but the speed is capped at 65. On the interstates congestion was cancelled by those high speeds. So please make sure you make the TTI about or equal to 1.

Mr. Pu asked the group to e-mail him for any comments.

4. Update on Development of the 2014 Congestion Management Process (CMP) Technical Report

Ms. Morrow noted the draft report is not ready for review. It will be ready a week before the May meeting so that it can be discussed at the meeting. There is still time if you have anything to be included in the report.

Mr. Pu stated that in Chapter 2 we have finished the major part of the analysis. All of the analysis from the VPP Suite has been done. Right now we are just drafting Chapter 2, making some charts and graphs and texts to explain the results. Travel time index from 2010 – 2013 the annual decrease is about 2.5%. That is a congested intensity drop. In terms of the spatial coverage of congestion we use the percent of congested miles. The annual percent was 20%. That is very dramatic. Next month you will see a first draft.

5. Update on the Aerial Freeway Congestion Monitoring Project

Mr. Sivasailam noted that in this year's UPWP we have funds to do over the triennial aerial survey of the freeway system in the region. The RFP was issued, and we received two proposals. The selection committee was made up of SHA, VDOT and Fairfax County. Out of the two proposals that were received, we picked SKYCOMP as a selected vendor, and a recommendation was made to COG's Executive Director. He went with the recommendation, and contracts were drawn up and sent to SKYCOMP. We are waiting for the signature, but I believe they started

collecting the data. The proposal that we received from SKYCOMP had what we called the traditional data collection (i.e. using planes to collect pictures over multiple days to determine levels of service) and a pilot study to do 1-second time laps photography with a helicopter hovering over congested areas. Alternatively, they can complete the 1-second time lapse photography with a slow flying plane instead of a helicopter. Data collection will be done by June of this year. By early fall we will have this report and will present it to this committee.

It is an independent data source that helps cross-check other sources, and the visual aids are appreciated by the elected officials. We can cut down on the number of runs that we have to do. We are not dependent on them; it is more geared towards additional documentation. We are in a transition. It will be kind of interesting what we will see from the pilot study – to compare the 1-second time lapse to the traditional 15 minute photography. We will keep this committee informed.

6. Brief Updates

a. Federal Notice of Proposed Rules Pursuant to MAP-21

Mr. Meese stated that there are 11 different rules that may impact the MPO work at some point. The one that has come out recently, that we have been digesting, is the safety rule that uses five year running averages of fatalities and serious injuries setting up processes by which states and MPOs will set targets and be judged later on in terms of the success and failure of meeting or getting close to those targets. This is perhaps indicative of what is to come in the summertime Notice of Proposed Rulemaking that we will see about congestion measurement; what MPOs are required to do for performance reporting. That's where we are right now and we can keep this committee briefed on the safety rule particularly as well as anything else that comes up. The Transportation Safety Subcommittee is currently scheduled for April 28th which is a Monday at noon – subject to change depending on if we can get a special federal speaker on this topic area. Anyone interested in attending was asked to let Mr. Meese or Mr. Trigueros know that you would like to be involved in the Transportation Safety Subcommittee.

b. Traffic Signals Subcommittee Activities

Mr. Trigueros noted that the TPB was briefed on the results of the optimization survey in February. The subcommittee was looking to meet next in the first week of May.

Mr. Point-du-Jour asked how the presentation was received. Mr. Meese answered we were glad that Chairman Ling Lee was there and she could speak from a practitioner's standpoint because they had specific questions. There were also requests that we are following up on that we work with the Greater Washington Board of Trade on some issues that they have identified.

Mr. Sivasailam added that DDOT is undertaking a big optimization project and they are going to do an update at the May subcommittee meeting.

c. Regional ITS Architecture

Mr. Sivasailam stated that staff is still working on the regional ITS architecture. As part of last month's meeting they asked us to look at the MOITS Strategy Plan, so staff has been looking into that. As all of you know the Strategic Plan informs ideas of architecture and there are links between the two so staff has been looking at the MOITS Strategic Plan. At the next month's meeting we will provide an update on where we are in terms of meeting the goals that are laid out in the Strategy Plan.

Mr. Abbas asked why a small team from MDOT who have visited Arlington have a big interest in the locality that belongs to Virginia and not going through VDOT and try to work it out with them. Has anyone else been approached about localities and what was there response to them? Mr. Meese noted there have been a number of conversations in recent years about sharing camera images, and some of these have been beyond transportation agencies. There might be plans for a lot of video sharing that are taking a lot of time and effort to execute. In the meantime there is maybe a sense of trying to get short term connections to get it done sooner.

Ms. McElwain asked Mr. Abbas to specify who they had talked to and if it was related to the regional UASI grant for NCRNet. She noted that they had approached VDOT as well, but it is not a Maryland project, rather a regional project with players from across the region. Mr. Abbas clarified that it was a different project, and the request was specifically from Maryland DOT. He did not understand why they were bypassing VDOT. Ms. McElwain added that VDOT feeds have already been uploaded to the NCRNet and have developed an MOU that agencies can sign to access their video.

Ms. McElwain suggested that the ITS architecture needs to be updated to include data flows that were not captured in the last update a couple of years ago.

d. Traffic Incident Management (TIM) Activities

DDOT has rescheduled its training session for April 23 & 24.

Ms. McElwain asked for an update on MATOC. Mr. Meese noted that RITIS staff has been focusing on setting up a new resiliency center. MATOC staff continues holding a monthly RITIS training webinar, usually the fourth Friday of every month.

7. Other Business

Mr. Meese gave a reminder of the scheduled full MOITS meeting on May 13 including a major focus on the CMP Technical Report.

8. Adjourn