National Capital Region Transportation Planning Board

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MEETING NOTES

WASHINGTON REGIONAL TRANSPORTATION SAFETY SUBCOMMITTEE

DATE: Friday, October 30, 2009

TIME: 1:00 p.m.

PLACE: COG, 777 North Capitol Street, NE
                    Washington, DC
                    COG Board Room

CHAIR: TBD

**VICE-
CHAIRS**: TBD

Attendance:

Yusuf Aden	DDOT-Traffic Safety
Monica Backmon (tel.)	Prince William County Planning
Leverson Boodlal	KLS Engineering
Kevin Brown	MDSHA
Dave Devang	Montgomery County DOT
Randy Dittberner (tel.)	VDOT – Northern Virginia
Patrick Foster	Prince George's County DPWT
Mike Goodno	DDOT – TPPA Bike Program
Kristin Haldeman	WMATA Office of Long-Range Planning
Jack Humphries	Montgomery County Police
Michael Lake	Fairfax County Department of Transportation
Michael Pack	University of Maryland CATT Lab
Stephen Read (tel)	VDOT Central Office/Highway Safety
Richard Retting	Sam Schwarz Engineering
Shiva Shrestha(tel.)	MDSHA Planning
John Thomas	Frederick County Division of Planning
Nicholas Thorpe	Serve DC – Mayor's Office on Voluntarism.
Jianwei Wang	Precision Systems, Inc.

COG Staff Attendance:

Michael Farrell
Andrew Meese
Wenjing Pu
Jim Yin

1. **General Introductions.**

Participants introduced themselves. Mr. Farrell chaired the meeting. An Adobe Connect link was provided for call-in participants.

2. **Review of February Meeting Notes**

The group reviewed the February 2009 meeting notes, which also featured a presentation by Mr. Pack.

3. **Maryland MAARS Web-based Data Mining and Visualization Tool**

Mr. Pack explained that the University of Maryland CATT lab had been approached by Montgomery County staff, who had been having difficulty accessing the Maryland police crash data. They hoped to get access to the data more quickly and easily, and get quick results from queries. The Baltimore Metropolitan Council provided some funds for the project, as did the Maryland State Highway Office of Traffic Safety. The goal was to complete the system statewide by October 2009. The system is very nearly complete at this point. The agencies which have reviewed the system so far are pleased with it.

Mr. Pack then demonstrated the system for the group. Call-in participants confirmed that their Adobe Connect connections showed what was on Mr. Pack's screen. The system is web-based, accessible to anyone with a log-in name and pass word. The system is tab and menu-based. Intersection, corridor, and area queries are available. Time and date-interval queries can be performed.

The resulting data tables can either be analyzed within the tool, or exported to an Excel file. Crash locations can be displayed on a map. Heat maps can also be created, to help visualize crash "hot spots". You can sort crash counts by intersection or road segment.

Mr. Read asked what defined whether a crash is at an intersection. Mr. Pack replied that intersection crashes are defined by a set radius from the intersection. That radius has a default

value, but that value can be changed. Mr Wetmore asked if links could be queried excluding intersections. Mr. Pack replied that that could be done fairly easily. There is currently no link to ADT; these are strictly crash numbers.

The system will produce a printable summary report for any query.

An intersection query will produce a diagram with color-coded lines indicating vehicle directions.

Virtually any piece of information found in a police crash report can be queried, so the queries can be very specific.

Ms. Haldeman asked if the data set included whether or not there is a bus stop in the environment. Mr. Pack replied that it did not. However, if a shape file with that information were provided it could be integrated into the data set.

Users can save queries, and your log-in information will show your past queries. Users can also specify their own settings, so that they will always have certain default values in your queries, such as a particular jurisdiction or time period.

Another possibility would be to add more States into this tool, such as the District of Columbia and Virginia. However, not all the States store their data in exactly the same way, or collects the same data, so those discrepancies would have to be accounted for somehow.

Mr. Wetmore asked if the database included parking lot crashes. It does include such crashes, but often they are coded for the adjacent roadway. Mr. Wetmore asked if crashes that don't involve a motor vehicle are included in this database. Mr. Brown replied that such crashes appear in the database only if they involve a motor vehicle and a police officer wrote a report.

Ms. Haldeman asked how data was being gathered, electronically or on paper. Most of the data is being gathered from paper reports. Mr. Pack has geospatial files for log miles, and the CATT lab can run a script on the crash reports to look for the log mile, which enables them to geocode the crash. Since only about 75% of the crashes can be geolocated in that way, the crash map will not be 100% accurate.

None of the County engineers have access to this data as of now.

Mr. Aden asked if DC crashes were included. Mr. Pack replied that they would not be, except perhaps for a borderline crash. DC data would need to be integrated into the system before it will show DC crashes.

Shape files from the database are not available for export. The data would have to be taken out

of the table and put into another GIS if an agency wants to do its own GIS analysis.

The system does not validate the data. However, the results can be used to help engineers validate the data. If the results of a query don't look right, you can go back to the original police report to see if the data was keyed in correctly. In the future the original crash report may be linked to each record to facilitate checking the data.

Mr. Brown noted that while this is a web-based product, it will be accessible to only a limited number of people, partly as a result of concerns over liability.

The State of Maryland is moving towards electronic reporting, which will eliminate errors which occur when the information from paper reports is keyed into the system.

So far there is no user manual for the tool, but there will be one. However, the system will be so self-explanatory it will scarcely need a manual.

Mr. Thorpe asked if the system would capture the role of volunteers in incidents. Mr. Pack replied that that would not be captured in the crash database, but there is also information from the Maryland traffic management center. These records contain different, complementary data compared to what is in the crash reports, and a long term goal is to link these two records. DDOT's traffic management center could include data on volunteer involvement in incidents.

Mr. Farrell asked if Mr. Pack could address further the issue of expanding this system to cover DC and Virginia. Mr. Pack asked the group if they thought such a tool would be useful outside of Maryland, and if so what features they would like. Ms. Haldeman said that as a regional operator WMATA would be interested in bus corridor and station area analysis, more than as a regional overview. Separate systems would work for station area and bus corridor analysis.

Mr. Shrestha said that from the Maryland State side, a regional tool would be valuable. It would help safety planning road corridors that cross state lines into DC. Mr. Farrell said that from the point of view of the National Capital Region Transportation Planning Board, there is a lot of demand for information on safety, including regional analysis of transportation safety. We can do a much more detailed and high quality analysis of traffic safety than has been done previously. We have a mandate to do Transportation Safety Planning, and this tool would enable us to do it better.

Mr. Meese said that we can compare this data with many other data sets, such as transit locations, activity centers, low-income areas, etc. However, there are some sensitivities regarding comparing safety data between jurisdictions, especially if such differences may be an artifact of data collection rather than a real ground truth.

Mr. Read said that the high-level things, such as jurisdiction locations, are usually correct.

However, specific locations may not be strictly accurate. VDOT is in the middle of updating its system with similar web-based search functions. VDOT would be happy to share data. It would be good to have this tool available to local planners, since it would reduce demands on VDOT staff, which is being "right-sized".

Mr. Meese suggested that there may also be definitional differences in the way data is defined. VDOT increased its reportable crash limit to $1500, and VDOT reports crashes only on public right of way. But from the point of view of high-level corridor planning this tool could be very useful.

Mr. Farrell asked if VDOT sees this system as complementary to or duplicative to VDOT's efforts. Mr. Read replied that VDOT was quite a way down the road developing its own system. He would need to follow up with the VDOT IT staff and Mr. Pack. However, this system does embody the goals VDOT has in terms of usability.

Mr. Pu expressed interest in the system.

Mr. Yin added that better access to crash and traffic management data could assist Congestion Management Systems. Electronic reporting will make the data more timely, and hence more useful for congestion management.

Mr. Wetmore noted that the majority of bike crashes do not involve a motor vehicle. If that data ever becomes available, it should be included. There should also be flexibility in the system to incorporate off-road crashes.

Mr. Pack said that he thought this group might be able assist in terms of getting additional data. The challenges to integrating new data are more political than technical.

As a region we should have some sort of common denominator of the type of data that is collected. Mr. Pack said that would be a good goal. Mr. Read said that there is a new national standard for crash reports, so there is likely to be more compatibility, at least as far as the crash data. Mr. Meese noted that there are legislative differences, which may make it difficult or impossible to eliminate all differences.

Mr. Wetmore suggested including a link to Google street view at each crash location.

Mr. Farrell suggested that it might be different to accommodate three different state systems, but there has been a desire expressed for a regional system. What is Mr. Pack's take on the relative difficulty of integrating these databases. Mr. Pack said that he did not, and since it was unfunded the CATT lab did not want to spend the time analyzing the data without knowing whether the group was interested.

Mr. Meese remarked that we have something of a chicken and egg problem, whereby our level of interest is partly dependent on the costs. Mr. Pack said that so far for Maryland alone, $175,000 has been spent. That will give an order of magnitude for what a regional system might cost.

Mr. Farrell expressed the hope that this might be a cost savings for some of our members such as DDOT that have not yet developed such a system for themselves. They won't have to re-invent the wheel, but can benefit from the work that has already been done. Mr. Read suggested that for VDOT the savings were likely to be more of a back-door type, insofar as it will allow partner agencies to do their own analysis, rather than relying on VDOT staff.

Mr. Meese suggested that if we assume that the Subcommittee is favorably disposed towards this project, then we may be able to find funds to perform the cost estimate.

This proposal has not yet been brought to the TPB or the TPB Technical Committee. We may do so at a later date, when the possible funding source becomes clearer.

Mr. Thomas asked if this system would be rolled out soon for the Maryland jurisdictions. Mr. Pack said that the goal for Maryland was to release the system to selected County traffic engineers for testing by the end of October. When the bugs are worked out there will be a full roll-out.

Mr. Pack confirmed that he had the input he needed for now.

Ms. Haldeman asked if there was a time frame on the scoping project. Mr. Farrell replied that we needed to explore that issue internally. Mr. Meese guessed it might take two months.

The group adjourned for a lunch break.

3. The Regional Transportation Safety Picture

Mr. Farrell spoke to a hand-out on regional transportation safety. The Constrained Long-Range Plan contains a safety element, which is a fairly brief on-line document. We would like to make a new, more extensive version of it available by the end of January.

The States has a number of traffic safety emphasis areas in common, and Mr. Farrell has compiled regional fatality, injury and crash data for most of those emphasis areas. Mr. Farrell showed a series of charts comparing total and problem area trends for each safety emphasis areas.

Overall fatalities have declined since 2001. There has been a significant decline in the number of fatalities in which the occupant was wearing a seatbelt. It is possible that technological improvements in occupant protection would account for the difference. Motorcyclist fatalities are not decreasing as overall fatalities. Truck fatalities are relatively few. The number of run off

the road fatalities is significant. All the fatality data comes from NHTSA, which has the advantage of being uniform across the region, and also current though 2008. Young driver fatalities were not shown in the NHTSA data.

Injuries peaked in the Washington region in 2001, and have fallen steadily, and significantly, ever since. We can be confident that this is a real decline.

Fatality rates differ by State – Maryland has the highest fatality rate. The data shown only incorporates the TPB members.

Traffic injuries also vary, but DC has a higher rate than Maryland. DC has a high daytime population, which is counted against the District's population, even though these are not DC residents.

DC is also first in terms of crashes/100,000 population.

Crash data shows that signalized intersections and drivers under the age of 21 account for a high proportion of crashes. Older drivers account for far fewer crashes, perhaps because this is not a very old region demographically.

There are some discrepancies between the NHTSA data and the DDOT data on fatalities. Other differences were not significant. Mr. Farrell used the higher number where there was a difference.

Difference in crash rates between intersections with red light cameras and those without is not shown, although that is certainly a good study idea.

Mr. Farrell suggested that the data could be summarized in different ways, and more rates per population could be added. The substance of this presentation will likely go into the Safety Element of the Constrained Long-Range Plan, though the on-line version will have to be short.

4. Street Smart Pedestrian and Bicycle Safety Campaign

Mr. Farrell briefly summarized the recent activities for the Fall Street Smart Pedestrian and Bicycle Safety campaign.

Mr. Wetmore asked what sort of roads the pedestrian fatalities were happening on. Mr. Farrell said that high-speed arterials in low-income areas with high immigrant populations had high fatalities. A road racing incident in Prince George's caused a spike in pedestrian fatalities. Prince George's has high fatality numbers across the board, not just for pedestrians. At this

level, the numbers are not broken down by road type.

A draft Safety element of the CLRP will be distributed later, and a copy of the Transportation Safety presentation will be posted after the meeting.

5. **Adjourned.**