



Chicago Metropolitan Agency for Planning

Agenda Item No. 3.0

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Regional Transportation Operations Coalition / Advanced Technology

Task Force

DRAFT Minutes

October 29, 2015

DuPage County Conference Room

233 S. Wacker Drive, Suite 800

Chicago, Illinois

Present: ATTF Chair - Jon Nelson – Lake County DOT, RTOC Chair – Claire Bozic – CMAP, Chuck Sikaras – IDOT ITS Program Office, Christina Kupkowski – Will County DOT, Kevin Price – IDOT, Yadollah Montazery – CDOT, Stephen Zulkowski – Kane DOT, Rich Jezierny – Cook County DOTH, Mike Tuman – DuPage County, Daryle Drew – IDOT, Tom Magolan – IDOT D3, Noel Basquin – Cook County DOTH, Mark Pitstick – RTA, Kevin Staniel – RTA, Taqhi Mohammed – Pace, Andy Hynes – City of Naperville, Mike Klemens – Will County Gov. League, Sagar Sonar – Stanley Consultants, Mitch Bright – Traffic Control Corp., Elaine Bottomley – Will County Gov. League, Emily Moser – Kimley-Horn, Thomas Szabo – CBBEL, Karen George – TranSmart, Jessie Carroll - Parsons Brinkerhoff

Phone: John Dillenburg - UIC

Staff Present: Jesse Elam, Parry Frank, Tom Murtha, Todd Schmidt, Alex Beata

1.0 Call to Order

Mr. Nelson, ATTF Chair called the meeting to order at 9:30 a.m.

2.0 Agenda Changes and Announcements

3.0 Agency Updates

Mr. Nelson shared with the group that Lake County is very happy with the Adaptive Signal Control Technology (ASCT) running on Aptakisic Road and expects another ASCT to be up and running on Gilmer Ave very soon. Lake County is also installing permanent count stations and continues to expand its fiber and surveillance network. Mr. Jezierny added that Cook County signals located along Lake-Cook Road are being shared with the Lake County TMC. Mr. Tuman said that DuPage County is working on a central signal system and plans to have it operational in July of 2015. Mr. Hynes told the group that Naperville is installing a central traffic signal management system along the Washington Street corridor and it will be operational in late summer 2016.

Ms. Kupkowski informed the group that Will County is in the process of updating the county's long range transportation plan and that it will have more focus on ITS than previous plans because of possible future budget constraints.

Mr. Zulkowski told the group about the installation of flashing yellow turn arrows along Randall Road in Kane County as part of a Highway Safety Improvement Project (HISP). Kane County is currently building an operations center which should be complete by next February. Kane County is also working on system engineering for an ASCT on Randall Road and a signal interconnect along Stearns Road.

Mr. Montazery reported that CDOT is working with CTA and RTA to install transit signal priority (TSP) on Ashland Avenue between Cermak and 95th. Pace is optimizing traffic signals along Milwaukee Avenue and has started displaying real-time information on 20 bus shelters. Mr. Mohammed also shared that Pace is working on TSP projects along 10 corridors in the suburbs.

Mr. Sikaras reported that the Gateway has expanded to include travel information for the Great Lakes Regional Transportation Operations Coalition (GLRTOC) service area with an emphasis on the I-94 corridor. It also includes all interstates in Illinois. Future enhancements include adding travel information for all regional routes of significance which will be designated by November 2016. The Illinois ITS architecture is also being updated. IDOT district 1 and 3 are providing speed data along I-55 and I-80 along with 3 new Dynamic Messaging Signs (DMS).

Ms. Bozic shared that CMAP and its consultants are making good progress on the Regional Transportation Data Archive Project and that the enhancements made to the database have greatly increased its importing performance. The database will be up-to-date later this month.

4.0 Highway System Management and Operations Strategy Paper

Ms. Bozic gave a presentation on the Management and Operations strategy paper. The regional vision developed in 2008 describes a future transportation system that reduces delay and improves reliability and safety. GO TO 2040 recommends prioritizing investments that enhance and modernize the transportation system, but stops short of identifying specific operations strategies to achieve the regional vision. For this strategy paper staff will research how other MPOs and FHWA recommends integrating M&O strategies into long range transportation plans and work with partner agencies to identify operations strategies that should be covered in the paper. Staff will then prioritize strategies, locations, and implementation activities to generate recommendations for the 2018 regional comprehensive plan.

CMAP staff plan to meet with transportation implementers around the region and discuss partner agency M&O plans along with what role CMAP can play in advancing M&O strategies. CMAP staff also will compile an M&O strategy inventory and prioritize

locations that will benefit the most from select M&O strategies. A draft paper will be presented to RTOC in March 2016.

CMAA proposes to focus on three big ideas for the paper. The three ideas include modern expressway management, modern arterial management, and integrated corridor management. Modern management is the active management of facility along with setting performance goals and monitoring the progress towards achieving the performance goals. Modern highway operations strategies such as monitoring the facility, incident and construction management, automated enforcement, freight improvements, and weather management can be applied to both expressways and arterials. Integrated corridor management requires a high degree of interagency coordination along with rules to balance traffic throughout the corridor and traffic controls capable to accommodate changing conditions.

Communication is the backbone to active traffic management and operations of the transportation system. Integrated traffic management centers play an important role in real-time traffic management. Understanding the current state, gaps, and anticipated needs of the communication infrastructure which is key to advancing real-time traffic management. ITS also plays a major supporting role in the management and operations of roadways through real-time data systems, cooperative vehicles and roadside technologies.

Ms. Bozic posed the following three questions to the group:

- Do you agree with the three big ideas? Modern Expressway Operations, Modern Arterial Operations, and Integrated Corridor Management?
- How should we address communications infrastructure?
- How do you feel about an incident management forum?

Mr. Pitstick agrees that the communications infrastructure should be addressed and one of the region's biggest needs is fixing gaps in the communication infrastructure. Mr. Tuman would like the paper to address the need for a single integrated traffic management center for the region. Mr. Zulkowski added that a good starting place would be to have a universal/convertible or regionally agreed upon scheme to communicate with all field devices. Mr. Mohammed agrees and is in the process of developing a scheme for TSP to communicate with devices operated by different agencies and is running into security concerns. Ms. Bozic suggested that an inventory be created to identify gaps in the system.

Ms. Bozic asked the group if a forum on the status of incident management in region would be useful to agencies and first responders. Mr. Nelson responded that IDOT has classes that are well attended around the region. He also mentioned that tow operators have to take a class on incident management to be licensed to operate in the state. The Tollway has a very good working relationship with the state police and have an excellent incident response program. He also said that Lake County is slowly making progress

with actively engaging fire and police officials. Per the group's direction, CMAP will not try to host an incident management forum.

5.0 New York City Transit Signal Priority (TSP) Experience

Mr. Yedlin, Director of Simulation Modeling Services for Greenman-Pedersen, Inc., gave a presentation on the New York City TSP experience. The public transit system in New York is operated by MTA NYC Transit and provides 5.6 million subway and 2.5 million bus trips daily with 5,700 buses operating on 2,800 route miles. The streets and roughly 13 thousand traffic signals in NYC are operated and maintained by NYCDOT. Because of continually decreasing bus speeds in the city, MTA decided to implement Select Bus Service (SBS), more commonly known as bus rapid transit, using transit signal priority (TSP) to increase bus speed.

TSP automatically adjusts signal timing in real-time to expedite buses by extending green time or shortening red time or advancing green time for bus queue jumping. The NYC TSP pilot was a 2.3 mile segment with 14 signalized intersections along Victory Boulevard. The TSP pilot resulted in 10% decrease in travel time in the AM peak period and 7.8% decrease in the PM peak period, which was very similar to the modeled decreasing travel time for the AM and PM peak periods of 10.2% and 9.8% respectively.

The NYC TSP system uses a communication system called NYCWin. This communication system uses wireless technology which allows the bus to communicate with the traffic controller through the NYCDOT TMC and MTA Traffic Center which applies rules for extending or shortening green time for the bus. Along with the benefit of applying rules, the benefit of using NYCWin is that it eliminates the need for infrastructure changes to traffic controllers and requires only in-vehicle systems both of which make city wide TSP implementation very cost effective.

Because the pilot project was a success, SBS is in the process of being expanded to a number of routes in the city. The SBS expansion calls for collaboration between three agencies NYCDOT which is responsible for the roadways and traffic signals, MTA which is responsible for the busses and onboard systems, and NYC DoITT which is responsible for the communication system. When developing a TSP system it is important to answer all implementation questions and realistically acknowledge the constraints in the system. Through the pilot program they learned that simulation is essential because it allows agencies to answer important implementation questions and provide justification for funding, of course the agency has to make sure that the data going into the simulation is good.

The NYC TSP experience has been very positive with four additional corridors coming on line in fall 2015 and more corridors being selected for future expansion. New simulation displays are being developed to confirm input specifications and visualize impacts on signal operations. Along with the simulation displays, new TMC displays are being developed to verify field operations, assess impacts and confirm input specifications.

Mr. Zulkowski asked if the TSP preserves coordination between signals. Mr. Yedlin responded that it is a requirement that the signal cannot lose coordination. A participant asked if the GPS worked in the downtown area. Mr. Yedlin said that it was a problem at first, but they were able to overcome the problem with experience using the system. Mr. Montazery asked how the signals stay coordinated. Mr. Yedlin responded that the signals increased green time comes at the expense of the side street.

6.0 Highway Traffic Signal Inventory

Ms. Murtha reviewed the proposed updated structure to the Highway Traffic Signal Inventory (HTSI) along with its intended use and table structure. The HTSI will include highway traffic signal information for the CMAP region including Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will Counties in Northeastern Illinois, plus Somonauk and Sandwich Townships in DeKalb County and Aux Sable Township in Grundy County. Agencies expected to participate include IDOT and county highway departments. In addition, the City of Chicago and larger municipalities and townships with signal information is encouraged to participate.

The HTSI will be stored in a file geodatabase with a master signal inventory with a location based on Illinois Highway Information System data. The geodatabase will contain original input data tables or shapefiles provided by participating agencies and will be maintained in the geodatabase for reference purposes. The HTSI geodatabase will be publicly available on the CMAP data hub to support work of our partner agencies and their contractors. The HTSI will be used by CMAP staff to inform policy decisions and help guide future regional transit and operations studies.

Mr. Tuman asked what does the CMAP signal interconnect number represent and how is it used. Mr. Murtha responded that the CMAP signal interconnect number is used for the regional travel demand model. Mr. Tuman followed up with if CMAP has a map of all signal interconnects that it would not be hard to find the gaps in the regions communication network. Mr. Murtha responded that the signal information is not up to date and has not been updated since 2011. Ms. Bozic responded that it would not show all the gaps in communication only gaps in signal interconnect communications.

The group agreed to remove police department, street light quantity, phase extension, conflict monitor make, and conflict monitor model fields and add the following fields as yes/no fields: u-turn signal, presignal for railroad coordination, and queue jump signal. The group asked how CMAP intended to get the information from the agencies. Mr. Murtha responded that CMAP would send a formal request and a template of the table. The agency can import or enter the data anyway they choose and not worry if some fields were blank. CMAP staff understands that not all agencies have the same data and staff would like to make the process as easy as possible for everyone involved.

7.0 Grade Crossing Capacity Report

This item was tabled due to time constraints. It will be on the agenda for the next meeting.

8.0 Other Business

CMAP staff requested if agencies had any information or keeps records that could be shared of streets that flood during rain events.

9.0 Next Meeting

The next meeting is scheduled for December 17th, 2015.

10.0 Adjournment

The meeting was adjourned at 11:45 a.m.

Respectfully submitted

Todd Schmidt

Todd Schmidt, Committee Liaison