Meeting Highlights

Traffic Signals & Operations
Working Group

Date: Friday, September 24, 2004

Time: 10 a.m.

Place: Metropolitan Washington Council of Governments
777 North Capitol Street
Room One
Washington, D.C. 20002

Chair: Woody Hood, Maryland State Highway Administration

Attendance:

James Burney, City of Fairfax
Patricia Bush, Arlington, VA
Kathy Falk, Kimley-Horn
Vincent Fulks, Prince George's County
Kamal Hamud, DDOT
Woody Hood, MD SHA
Eric Hu, WMATA
Mike Jollon, Fairfax County DOT
William Haynes, City of Alexandria
Ling Li, VDOT-STSS
Eric Lindstrom, Kittelson & Associates
Curt McCullough, City of Fairfax DPW
Wasim Raja, Arlington DPW
John Riehl, Montgomery County DPWT
Bob Souza, VDOT

COG Staff Attendance:

Andrew Meese
Michael Farrell
Jim Yin

Actions:

1.   **General Introductions**

Participants introduced themselves.

2.   **Traffic Signal Operational Self-Assessment**
        Katherine W. Falk, P.E., PTOE
        Kimley-Horn and Associates

        Katherine Falk discussed the Traffic Signal Operation Self-Assessment Tool,
        which has been developed by the National Transportation Operations
        Coalition and distributed by ITE. Copies of the self-assessment were
        distributed to the group. All the material is available at ite.org.

        The self-assessment will provide a national report card on the state of traffic
        signal operations. The cost-benefit ratio for improving signals is very
        favorable, and the operations side does not always get the funding it should.
        The public is aware of potholes, collapsing bridges, etc., but deterioration in
        signal operations is less evident. The public is aware of the benefits of proper
        signal timing in general, but deterioration in signal operations is less obvious
        than potholes, collapsing bridges, etc.

        The project started in April of 2004. Questions are split into six different
        sections, covering management, signal operations in coordinated systems,
        signal operations at individual intersections, specialized operations, detection
        systems, and maintenance.

        The hope was to get responses from at least 100 agencies, so as to get a good
        cross-section of agency sizes. 150 agencies were mailed hard copies, 600 e-
        mails were sent, and the material was posted on the web. The closing date for
        responses is the end of September.

        The individual agency responses and self-assessments will not be made
        public, just the aggregated results. The point of the self-assessment is to help
        agencies rate themselves, and gauge how well the country is doing with
        respect to signal operations, not to single out particular agencies as doing well
        or poorly.

        If you submit your responses on-line, remember to print a copy for yourself
        before you send it. If you have already sent your responses and forgot to print
        before sending, contact Katherine at 703-674-1300 or e-mail
        Kathy.falk@kimley-horn.com for a copy of your results.

        Woody Hood announced Ziad Sabra of Sabra, Wang & Associates was
        compiling the results of the self-assessment for the Baltimore region. The
        Baltimore Regional Transportation Board will be briefed on the results.
        Woody suggested that we do something similar in this region. Andrew Meese
        volunteered COG staff for the job.   The group agreed that completed self-
        assessment surveys should be sent to COG by October 15th. Those who forgot
        to print their results before submitting them to ITE on-line should e-mail

Katherine Falk at Kathy.falk@kimley-horn.com to get their self-assessment results.

The group agreed that quarterly meetings would be appropriate. However, there should be one more meeting in 2004, so the group will meet on November 19th.

FHWA may issue a study of agency results by signal system size. The FHWA will not compare metropolitan regions.

- COG staff will send a blanket e-mail to the group requesting that those agencies that have done the self-assessment send their results to COG for anonymous compilation, together with the number of signals for which the agency is responsible so that the results can be weighted properly
- The Traffic Signal Working group will meet on a quarterly basis in the future. However, the next meeting will take place at COG on November 19th.

3.   **Baltimore Regional Traffic Signal Operations Forum**
       Woody Hood, MDSHA

The Traffic Signal Subcommittee of the Baltimore Regional Transportation Board and the Washington, D.C. section of the Institute of Traffic Engineers will be sponsoring a Traffic Signal Operations forum on December 8th. The proposed audience is signal technicians and engineers. Woody Hood asked if there was interest amongst the members of this committee in participating in this forum, both in terms of sending staff and in participating in the panel discussions. It will probably be free. The Baltimore group hopes that this forum could become an annual event, so that we can get together and talk about technical issues that are of interest to all of us. Several committee members responded positively.
Federal Highway had originally planned for a northeastern regional forum, but that is not forthcoming, so the Baltimore group decided to do something on its own. Since the speakers and the space will be free, the costs will be quite low. Howard County Community College is the probable location for this year, but in the future the location could rotate closer to the Washington region.
The agenda for this workshop will be forwarded to everyone. The room can only hold 100 people, so enrollment will have to be limited to 100. No vendors will participate this year.

- COG staff will forward the agenda for the Traffic Signal Operations Forum to the group.

4.   **Traffic Signal TERM Reporting**
       Michael Farrell, MWCOG

Michael Farrell distributed a copy of a memo which went to the Transportation Planning Board in November of 2003, describing the progress the region had made in optimizing its signals. As a baseline, in June of 2002 we asked the agencies how many of their signals they had optimized within the previous three years. The three DOT's then committed to optimize an additional 856 traffic signals, over and above the baseline. Since signal optimization is a moving goal, the agencies must optimize additional signals and maintain the ones that were already optimized. The compliance date for this TERM is July of 2005, so in May of 2005 we will be asking agencies to report, again, how many signals they have optimized within the last three years. We expect to report to the TPB in July that the region has fulfilled its traffic signal TERM commitment. As of last fall we were making good progress, and we expected to meet or exceed the target.

There is no legal or political requirement for a progress report between now and then, and there is some labor cost involved in tracking the number of signals optimized, so Michael Farrell suggested that we not make any further progress reports before May of 2005.

Andrew Meese suggested if we want the self-assessment results and the TERM results at the same time, then perhaps we want the information earlier than June of 2005, especially if we can show that we have complied with the TERM early. Woody Hood noted that Maryland was planning to finish its optimization by June 1st, 2005, but could not do it by January 1st. The District of Columbia has already overfulfilled its commitment by a number large enough to fulfill the region's entire TERM commitment, so we can probably show that we have already fulfilled the TERM as a region. But we might want to hold off on reporting until every jurisdiction has met its individual goal.

Alex Versoza asked what kind of data we need, specifically if we need air quality savings. Michael Farrell replied that COG uses its own, fairly conservative, assumptions, which are different from the results the signals modeling software produces. All we really need are the number of optimized signals. We could, however, compile information from Synchro and Symtraffic, if we wish. COG staff can and will calculate air quality benefits from the numbers of intersections optimized. Another angle might be to use the modeling information to argue for additional air quality benefits. We might work with one jurisdiction first to see what their modeling produces. Actual travel runs can produce different emissions values than the modeling. And the different commuter models predict different benefits, which are also different from the results that COG would produce using its TERM analysis. Woody Hood suggested that we just report numbers of signals optimized and the travel times, and leave estimation of emissions benefits to COG. Michael Farrell added that from the point of view of the TERM, COG has a simple, conservative model for estimating benefits. If we have the different agencies do their own air quality modeling, we are going to end up with inconsistencies. To comply with the TERM, all we need from the

jurisdictions is the number of signalized intersections optimized. We are not required to report travel time savings, but the TPB will probably want to know, so we welcome any information on travel time savings that the agencies can provide. Air quality benefits from the travel runs are useful information, but we will not try to use those numbers to show compliance with the TERM, because we have an established model for doing that.

One member asked if the number of signals optimized in July of 2005 becomes a new baseline for purposes of calculating air quality benefits. The answer is that it does. Michael Farrell told the group that more TERMs will probably not be needed.

Alex Versoza noted that signal optimization helps traffic operations, and we should focus on getting more funding for optimization. Virginia got CMAQ funding to do optimization, but that after 2005 funding is uncertain. The marginal benefit of optimizing additional signals, or optimizing more frequently, declines the more are done. John Riehl noted that many congested corridors will still be congested after optimization.

- Agencies will be asked provide the number of signals optimized within the last three years, and the number of signals for which they are responsible, in May 2005.
- Additional information from travel runs or computer models, such as air quality benefits, travel time savings, etc. is welcome, but is not essential to meet the conditions of the TERM.

5. **Discussion – Candidates for a New Chair.**

Woody Hood has held the Chairmanship for well over a year. The Chairmanship should rotate among the jurisdictions. The Chairmanship of this committee, as with other committees, has rotated between Virginia, Maryland, and the District of Columbia. The District of Columbia is short-staffed and has not been able to attend these meetings, so Woody Hood has stayed on as Chair. One way of looking at this problem is that on January 1st Virginia's turn will come up again. It does not need to be a VDOT representative; any agency that maintains signals is eligible. It would be helpful if one of the Virginia agencies would volunteer a person to be chair. The normal term is one year. If more than one person volunteers, we can put it to a vote.

- A new Chair is needed, preferably from a Virginia jurisdiction, to serve for one year starting on January 1st, 2004.

6. **Jurisdictional Updates**

The City of Fairfax has linked its signals and its cameras with fiber. The city will have eight cameras installed by October.   The cameras have been reliable. Lighting can be an issue with cameras.

Prince George's County is putting up traffic cameras around Redskins stadium.

Andrew Meese suggested that pre-emption and prioritization be discussed at the next meeting. As part of the Regional Mobility Initiative, WMATA has expressed interest in signal pre-emption or priority for the buses. Virginia is looking at Route 1.

VDOT is studying "rest in walk" and flashing signals at night. VDOT does not currently set signals to flash at night, so the will study six intersections. D.C. used to flash signals late at night, but had crashes and lawsuits. They are looking at it again, but will probably not do it where a lot of pedestrians are present, as in the CBD. About 25 intersections will have signal pre-emption and priority.

- Signal Pre-emption and Prioritization should be discussed at the next meeting.

6.   **Other business**

Andrew Meese asked if people would pencil in Tuesday, November 30th, which is the date of the next regional ITS architecture meeting. With our new employee, Jim Yin, on board, we will be able to refresh our existing architecture, which was published in 2002. The probable time is 9:30 a.m. to 3:30 p.m.

The next meeting of the Traffic Signals working group will be on Friday, November 19th, here at COG.

7.   **Adjourn for Lunch.**