MEETING SUMMARY

Traffic Safety Engineering Workgroup
August 25, 2005
9:00 am — 12:00 pm
Wisconsin Department of Transportation
4802 Sheboygan Avenue
Madison, Wisconsin

ATTENDANCE ROSTER

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MEETING DISCUSSION

1. Meeting Opening

Dr. Qin welcomed everyone to the 3rd Traffic Safety Engineering Workgroup meeting. The workgroup meeting continues to receive internal and external attention. First-time meeting attendees included Tom Heydel from the WisDOT SE Region and MPO representative Joni Graves from the Southwest Wisconsin Regional Planning Commission (SWWRPC).

2. Cross-over Median Crash (CMC) Analysis

Dr. Noyce of UW TOPS laboratory provided a detailed summary of recently completed research finding related to CMS. The presentation covered a variety of issues centered around cross-over median crashes on freeways and expressways in Wisconsin. In the comprehensive study, TOPS researchers conducted a national literature scan, depicted the magnitude of the CMC safety problem in Wisconsin State Trunk Highway system,
analyzed the crash causes and the demographic features of the drivers involved, identified the clusters of the CMC locations and, recommended possible changes to median barrier warrants. The research shows CMCs are independent of ADT and indicates the current warrant will likely need to be revisited. After the presentation, Xiao Qin mentioned an on-going high tension median barrier project on I-43 and suggested data collection be conducted to provide information for a follow-up cost-benefit analysis. Bill Bremer of FHWA and Jill Fehrman of the SW Region added that there is another on-going median barrier project on I-39/94. Pat Fleming of BPD pointed out that the current median barrier warrant is applied to new construction projects and there is no retrofit type program has been established for median barrier installation. As a response, John Corbin, manager of the traffic section in BHO, initiated two immediate actions regarding this issue. 1) Send a note to relevant executive level managers and urge them to consider revised warrants for retrofit median cross-over crash protection, including installation of various median barrier systems and to identify the lead role of BPD on design standard issues and the support role of the BHO on traffic and maintenance issues. 2) Arrange a near-term meeting for the five freeway locations that are particularly susceptible to median crossover crashes and require the corresponding Regions to work with Dick Lange and Dr. Noyce to obtain more detailed research results to continue the development of location-specific safety improvement strategies.

2. NCHRP 17(18) Phase 4—Head-on Crashes

NCHRP 17(18) is a national cooperative highway research project dedicated to developing a series of specific guidelines in correspondence to the safety emphasis areas identified in the AASHTO Strategic Highway Safety Plan. Phase I and II of the project published 13 guidelines titled with NCHRP 500. Five more volumes of Phase III will be available next Spring and four volumes of Phase IV are under development. Dr. Qin represented Wisconsin at a workshop for phase IV in Washington D.C on July 17 and 18, where four safety topics were discussed and the initial draft guidelines were reviewed. The four topics include Bicyclists, Younger Drivers, Speed Guide and, Head-on Crashes on Freeways. Wisconsin was invited to the workshop for head-on crashes on freeways. The tentative guideline of the Head-on Crashes on Freeways includes five objectives:
1. Keep Vehicle from Departing the Traveled Way
2. Minimize the Likelihood of Crashing with an Oncoming Vehicle
3. Reduce the Severity of Median Crash
4. Enhance Enforcement and Awareness of Traffic Regulations
5. Improve Coordination of Agency Safety Initiatives.
Wisconsin will continue to participate in the effort of lead state of the AASHTO SHSP and other safety initiatives.

3. The Development of the Regional Intersection Safety Countermeasure Plan

Graham Heitz of BHO led the discussion regarding development of a regional intersection safety countermeasures plan. The idea stems from the request of the installation of Advance Warning Flashers (AWF) at signalized intersections by Pierce Co. Traffic Safety Commission. The current procedure for developing intersection safety improvement projects is not very efficient and data-driven, i.e. requests are made externally or sometimes, internally based on complains and observations. On the other hand, projects are typically driven based pavement condition instead of safety, as indicated by Jill and Scott. Therefore, conflicts always exist between the planning and
programming procedures and the traffic safety analysis in terms of the scope of the project. Sometimes, safety improvement projects have to be dropped or revised due to late entry into the planning process. Therefore, traffic safety engineers should be more proactive in identifying “sites of promise” for safety improvement, institutionalizing the safety research results and streamlining the process of getting safety improvement projects into the early planning stage. Graham Heitz and John Corbin proposed the following framework for the countermeasures plan:

- An understandable summary of the regional intersection crash report
- A methodology for prioritizing “sites of promise”
- A list of intersection safety opportunity locations
- Location-specific analysis of crash, traffic, and roadway information
- Location-specific evaluation of alternative countermeasures
- Location-specific recommendations and cost estimates for a safety improvement strategies
- A sketch plan, schedule, and budget estimate for region wide intersection safety improvements

The Workgroup suggested that the NW Region might be able to serve as a test bed to develop a Regional Intersection Safety Countermeasures Plan. But it will be subject to the further dialogue and clarification of roles and needed resources from the region. The Workgroup also agreed the necessity of refining and publishing the annual intersection book and acknowledged the UW TOPS Laboratory as an important resource to support these activities. Graham summarized that three things needed to be discussed regarding this issue before the next TSEWG: 1) the plan format 2) the safety filters applied to identify the promising sites for safety improvement 3) the publication of the annual regional intersection report. Dr. Qin and Dr. Knapp of UW TOPS agreed to look into the following issues:

1) Update a statewide intersection crash characteristics listing annually,
2) Provide a tool to automatically generate an intersection report using the SE Region annual intersection book as the prototype,
3) Produce the regional intersection yearbook and,
4) Prototype outline of regional intersection safety countermeasure plans [Bill Bremer asked for a process and prototype of this regional intersection program to be determined by July 2006].

4. Discussion of Local Speed Zones

Dr. Qin led the discussing by asking the following questions.
1. How many districts (regions) use the similar documentation as D7 (North Central Region) to assist local units of government on speed zones decisions? The documentation includes the following information:
   - Sections of MUTCD
   - WisDOT Statutory Authority and Approval Process
   - WisDOT Highway and Transportation Laws and Rules
   - State/Municipal Agreement
   - Appendix: examples of information and submittals.
2. Is current engineering and traffic investigation in Wisconsin sufficient to support the modification of speed limits?
   - Who conducts the study?
   - Data collection
   - Methodology
3. How does the TSEWG make the final recommendation for moving forward? Is it a blend of engineering & traffic investigation, neighborhood characteristics, local official, law enforcement opinions and other factors?
4. Do we need a formal Local Speed Zone engineering and traffic study manual or guideline to instruct traffic professionals who conduct the related studies?
5. Is the Florida DOT “Speed Zoning for Highways, Roads, and Streets in Florida” a good model to adopt? Should a Wisconsin version be developed?
5. Who will take the lead to modify the FDOT manual for use in Wisconsin, or prepare a new one?

The traffic engineers replied there is no consistent information provided to local units of government regarding local speed zoning issues and each Region/District operates differently, but it would be ideal to share the package of D7 with other regions/districts. Traffic engineers also reported that current practices of speed limit decisions on local roads based on engineering and traffic study results and occasionally, are subject to the local official’s opinion. Meeting attendees confirmed the necessity of developing WisDOT standards on establishing local speed zones. The TOPS Lab was directed to collect and synthesize related information such as the Florida Speed Zoning Guides and other policies, standards and studies. The TSEWG decided that a Wisconsin Speed Zone & Speed Management Guide be developed under BHO-Traffic leadership with possible federal funding support and technical assistance through the TOPS Lab in conjunction with the UW Transportation Information Center (TIC). The guide will be incorporated by reference into the Traffic Guideline Manual (TGM) and Wisconsin Manual on Uniform Traffic Control Devices (WMUTCD) coverage of speed limits and speed zone analysis.

5. Group Member Reports

Dennis Hughes and Bill Bremer updated workgroup members of the Highway Safety Improvement Program (HSIP) under the new transportation bill, SAFETEA-LU. The program authorizes a new federal funding program beginning in FY 2006. The detail is posted on the TOPS website. Dennis also announced that WisDOT is opposing the raising of interstate speed limits to 75mph based on legislation introduced by Senator Reynolds. Bill Bremer informed the workgroup of the upcoming NHI safety course sponsored by FHWA and the Integrated Safety Management System leadership meeting to be held at Phoenix in November. Xiao Qin briefed the workgroup members of the finalization of the TSEWG Year-one Action Plan. John Corbin suggested an intermediate teleconference between two TSEWG meeting to touch base the hot topics or actions. The meeting was adjourned at 12:20pm.

6. Next Meeting

The next TSEWG meeting is tentatively scheduled for Thursday, December 8, 9am-12 noon at WisDOT SW Region Office. The TOPS Lab is responsible for posting all the meeting agenda, minutes and relevant resources.

The TSEWG website is located at: http://www.topslab.wisc.edu/resources/trafficsafety.htm