

MnDOT Statewide Work Zone Safety Committee Meeting Minutes

*October 17, 2013 - - - MnDOT Training & Conference Center, Rm 4, 1900 W Co Rd I, Shoreview, MN
- Meeting: 9:00 am to 3:00 pm -*

Attendees

The attendance roster is listed at the end of these minutes. The list includes members, people substituting for members, and guests.

Welcome and Introductions

Peter Buchen (MnDOT Office of Traffic, Safety & Technology) welcomed the group and thanked everyone for attending.

Each participant introduced themselves.

Committee Reports

Statewide Work Zone Executive Committee – Sue Groth

Sue Groth reviewed the intent of the overall Statewide Work Zone Safety Committee to let any new members understand the focus of the group.

Sue then let the group know that both OTST (Sue Groth) and OM (Steve Lund) authored research statements to bring through the necessary AASHTO channels for a synthesis study of a variety of Work Zone issues - Automated Speed Enforcement, Detour (open to local traffic), & flagger operations.

Tom Dumont was unable to make it, but the group was notified about a pilot project in St. Cloud called Enhanced Red Light Enforcement. The system uses cameras connected to a Digital Video Recorder, a laser recorder, and a trooper on-site. The camera captures the video (including the red light and the driver violating it) which the trooper can watch and store and then the trooper can pull over the violating driver without going through the red light. If the driver contests, the trooper can immediately pull up the video to show the driver. URS is involved in developing a report on the effectiveness. Both the State Patrol and St. Cloud Police would be able to use the system.

- The project has had a few setbacks. The first design that used Wi-Fi to broadcast the video failed due to distance limitations. The trooper was usually out of the Wi-Fi range. They are also experiencing significant issues with the DVR recorder with delays.
- A new proposal being considered is to eliminate the DVR and replace with a microprocessor and to replace the Wi-Fi with cellular communications. The system will be tested this winter and installed next spring with an anticipated project completion of June 2014.

Sue reiterated that if anyone has suggestions to improve work zone safety, to please make sure that the Executive Committee (and the Committee Coordinator - Ken Johnson of OTST) is aware.

Work Zone Safety and Mobility Process Feedback Discussion Team – Ted Ulven

MnDOT's Work Zone Safety and Mobility Process requires feedback meetings with each of the districts on a timely basis. The goal of these meetings is to conduct Process Feedback Discussions with the functional units involved with temporary traffic control in each of the districts. These discussions allow the Team to:

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- assess the effectiveness of our policies, standards and guidelines
- identify best practices
- discover issues to make temporary traffic control work better on a statewide basis

A feedback discussion team has met with 3 districts in the fall of 2013. Ted Ulven gave a presentation on what was found in the latest feedback discussions. The presentation can be found at the web address of <http://www.dot.state.mn.us/trafficeng/workzone/wzcommittees.html> with the title of ***2013 WZ Process Feedback Discussions.pdf***. Some of the key points follow:

- Been receiving noise complaints from rumble strip installations
 - need better construction inspection
 - some have been cut too deep
 - D2 is testing a variety of types of sinusoidal rumbles
- Suggestions for and concerns about Temporary Traffic Control guidelines and manuals
 - work beyond the shoulder - CAPX2020 powerline project
 - sign placement blocking sidewalk
 - work within roundabouts
 - short duration layout for maintenance work
 - bridge snooper manual from CO Bridge requiring Work Zone Speed Limits (WZSL) provided by the districts - concern raised about setting up for WZSL
- Continuing problem with roads closed to thru traffic
 - proposed better communication thru Changeable Message Signs or a more accurate message - perhaps bridge out when that is the case
 - closing up tight at night and use enforcement
- Maintenance uses flagging layouts with good results, interested in Automated Flagging Assistance Devices where possible
- State Patrol
 - fans of Gang Plowing that slows traffic and reduces traffic
 - like opportunity to give input before a project gets underway
 - have used ID checks to enforce local traffic only in detours
 - fines double seems to help
 - higher fines may deter ticketing, reasonable fines are better enforced
 - distracted and drowsy driving is a serious problem, but difficult to define and tag
 - high tension cable barrier makes it difficult to turn and chase speeders, but still like them as it reduces the severity of crashes
- Portable rumbles beneficial for flaggers and stop approaches. Should be used with a sign or the public thinks they are debris.
 - Steve Lund mentioned that the Office of Maintenance is conducting an informal survey of use of portable rumble strips by Maintenance on the State Highway system
- Bridge maintenance reports good results with their use of temporary signals
 - also want short duration layout for bridge flushing
 - concern with locals disregarding "stop/take turns" layout on some bridge projects.
- Public Affairs
 - sees more need for education as public becomes oblivious to signs & devices
 - Speakers Bureau, Drivers Ed, plows to school, but there is a need for more to connect to public

The feedback report of the 2012 discussions can be found at the following website:

<http://www.dot.state.mn.us/trafficeng/workzone/wzreports.html>

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Traffic Engineering Organization Temporary Traffic Control (TEO TTC) Committee

- Chair: Ted Ulven

Report on Activities

Ted Ulven (OTST) let the group know that the TEO TTC meets quarterly and discusses issues topical to temporary traffic control. The minutes to these meetings are on the same page as the minutes to this committee:

<http://www.dot.state.mn.us/trafficeng/workzone/wzcommittees.html>

Some highlights from the most recent meetings follow:

- Record retention for Temporary Traffic Control Reviews
 - Reviews done for Construction should go to ProjectWise (an internal to MnDOT software program used with our CADD system)
 - Maintenance needs to be investigated and discussed more
- Reducing pay items for “throwaway” items - devices that are used and discarded such as Temporary Raised Pavement Markers
- Discussion of the threshold speed for the “Stopped Traffic Ahead” message in the IWZ application
- Zipper Merge Layout changes
- “Do Not Follow Into Work Zone” sign - will be added to the Standard Sign Manual
- Discussion of the use of the sign “Look Both Ways” in Layout 6J-11 - this layout shows the traffic control at an intersection with a divided 4-lane road modified so that one direction is closed and the other direction is converted to 2-lane, 2-way operation. This letter does not specifically mention the use in Temporary Traffic Control.
 - This was further discussed at this meeting. Many feel that the Look message is important with this layout - that familiar drivers may not realize that they need to look both ways at the temporary 2-lane, 2-way section. Other messages are not felt to have the same impact to the driver.
 - The MN MUTCD currently shows this message being used in the layout and the MN MUTCD was found to be in substantial compliance by the FHWA - so no changes will be made in the near future.

Field Manual Update

Ted reported that the Field Manual has been approved by the MN MUTCD Committee. It will be published in January 2014 and distributed thereafter. Ted then gave a presentation of the major changes. The presentation can be found at the web address of <http://www.dot.state.mn.us/trafficeng/workzone/wzcommittees.html> with the title of *Field Manual Update.pdf*.

Training sponsored by OTST

Ted informed the group that OTST is looking at bringing in an ATSSA course on Traffic Control Impacts in the spring.

Training sponsored by Speakers Bureau

Leigh Kriewall of OCIC and Kathy Schaefer reported that MnDOT has produced a new video called *Anatomy of a Winter Storm*. It is available on YouTube and the Speakers Bureau website. It will go out with the 55 Alive, be shown at the Fall Expo, and will be part of the Speakers Bureau. This video was shown to the group.

Training - Work Zone Safety Awareness Program

It was also reported that this was presented to 43 different organizations by 28 presenters.

Training for Traffic Control Courses

Leigh Kriewall reported that the Traffic Control Supervisor Course had 95 students in 2013 and the Recertification Class had over 40. In 2014, there are 3 Traffic Control Supervisor Courses, 1 Traffic Control Supervisor Recert Course, and 1 pilot online e-learning class scheduled.

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Work Zone Resident Engineer Safety Advisory Committee & Traffic Control Special Provisions Annual Update Committee: Trudy Kordosky & Craig Mittelstadt

Craig Mittelstadt provided a handout of the agenda of the latest Traffic Control Special Provisions Annual Update Committee Meeting. He specifically pointed out the following:

- The committee discussed and made some changes to the 1404 special provisions
- Sign sheeting type and quality was discussed to make sure construction projects are using the appropriate type.
- More IWZ stopped traffic ahead systems are being advocated for
- Craig has been seeing less compliance than desired with detours - sign being used is "Road Closed Open to Local Traffic Only":
 - How to keep only local traffic in our work zones - what is the language that will work
 - A suggestion was made - No Outlet, Residents Only (or Business Access)
 - Some construction projects with detours have successfully used enforcement

Trudy Kordosky mentioned that the Resident Engineers are meeting November 13th and 14th. She and Craig will bring issues learned from this meeting to them.

Statewide Maintenance Work Zone Safety Committee – Co-Chairs: Sue Lorentz & Randy Reznicek

- Sue Lorentz brought up the recent issues discussed with this group (this group has 2 face to face meetings and 2 videoconferences per year):
- Planning work zone daily sheets
 - some districts have them, some don't - discussions are being held on how are they being tracked
 - OM would like to have consistency and the districts will go back and find out what they're specifically doing.
- Work Zone Field Reviews - Sue has been doing some with participation from the districts
- There has been discussion of performing Peer Reviews by going into other districts - but hasn't been done yet
- The committee was brought up to date about the 4 focus areas of the WZSM Policy

PERCOM – Chair: Rod Clark

Rod Clark was unable to make this meeting. No update for PERCOM.

Update: Work Zone Related Research Efforts

There was discussion about the following work zone related research efforts (notes from the meeting included):

- Using Smartphone App to Help the Visually Impaired Navigate Work Zones Safely
 - Ken Johnson is the technical lead for this research and updated the group with its intent and status.
 - MnDOT OTST is working with Chen-Fu Liao from the University of Minnesota regarding the development of a smartphone app that would allow pedestrians with visual disabilities better navigate work zones. The idea is to include low-power Bluetooth devices in select locations of the work zone that would provide a unique id to a smartphone that would then access a database that includes a message created for the specific device's location.
 - The research is progressing and a final report is expected late 2013.

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- District 3 AFAD Research
 - Tom is training his personnel in the use in static locations and will work towards using them in moving work zones
 - Kathy Schaefer let the group know that Alan Rindels set up a training for later in October to learn how to use the AFADs at MnROAD.

- Flagger Conspicuity Research
 - Bob Vasek is the technical lead for this research and updated the group with its progress.
 - This project will look at the human factors impacts of a variety of treatments intended to improve the safety of flagging operations. The treatments include portable transverse rumble strips, a directed horn, signing conspicuity lights and the use of additional channelizing devices.
 - The simulator at the University of MN will be used for part of the assessment.
 - Also to be evaluated is the Intelligent Drum Line System - it has been proven to work for drivers aware of its existence, but need to determine the effect on an unaware driver.
 - A field evaluation will be done based on the results from the simulator.
 - Part of the research is to get the moral decision making.
 - The research is expected to be wrapped up by August 2015.
 - Doug Swenson asked that worker notification be included in some of the systems. A question was raised about whether or not there are systems that can warn a worker?

- Work Zone Diversion Rates and Capacity Reduction
 - Tiffany Dagon is the technical lead for this research and updated the group.
 - As part of MnDOT's Work Zone Safety and Mobility policy, MnDOT needs to be able to assess the traffic operations impact of temporary traffic control. This includes the need to estimate the delay and queue of specific types of projects. To do this, diversion rates and capacity reduction numbers are needed.
 - This project will develop guidelines to MnDOT can know what capacity can be expected and what diversion will occur depending on the temporary traffic control and the surrounding road system.
 - The research is just getting started. One location found that a 2 reduced to 1 had a capacity of 1400 vph.
 - Hard to get accurate data for volumes. Our detectors do a good job on speed, but not necessarily volumes.
 - Also going to look at diversion rates for specific corridors.

- Research for the impact of Automated Speed Enforcement on the attention of a driver
 - Ken Johnson let the group know that this is research that MnDOT is working on getting a contract for. It will be a human factors study to investigate the effect of ASE on driver attention. What will he/she look at after going past an ASE van?

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External Partners

Law Enforcement – Captain Bruce Brywell for Major Jeff Huettl (State Patrol)

Bruce Brywell reported for Jeff Huettl:

- Been a lot of use of extraordinary enforcement throughout the state
- He'd like to encourage workers to never turn your back on traffic - knows that it's hard to do.
- He had a question for the group. Who is responsible for telling the patrol one where they should be? There have been times that the person they are supposed to be contacting aren't there. Craig will go through the resident engineers to make sure that MnDOT needs to do a better job of giving direction. A contact name really needs to be understood.
 - **Action: Craig will follow up.**
- Steve Lund asked if there have been situations that maintenance has used extra enforcement. Sheila Johnson said that it was used in one situation in Metro - TH 100 full closure. Craig said that he's heard that it's been used rarely.

Engineering Consultants – John Crawford and/or Gary Thompson (URS)

John Crawford reported:

- URS has finished study of Design-Build projects as related to Work Zone Safety & Mobility Rule. It is in hands of Feds, but they haven't released it yet.
- He attended legislative committee and Tim Worke was bringing up possible legislation. Look at inattentiveness as well as speeding. John Crawford feels that photocop has an impact. He suggested that it start in Work Zones and in HOT Lanes.

Northland Chapter ATSSA – Rick Shomion (President), Jay Blanchard (Past President), Ken Russell (Treasurer), Lynn Berg (SignCAD)

Rick Shomion reported:

- The Northland Chapter conducted the How-To planning meeting in July
 - A golf tourney raised \$3500 for ATSS Foundation
 - The Chapter plans to have a half-day pavement marking workshop the day prior to the formal How-To
 - It will have a good balance of sessions
 - The Chapter is offering up to 10 scholarships for cities and counties that haven't attended
- Kathy Schaefer wonders how the word is getting out to local agencies.
 - It was suggested that the LTAP exchange be used or Mark Vizecky of State Aid can send an email notification.
- Ken Russell thanks everyone for the support. Email ideas for sessions to Rick and Ken
- The Chapter has funds for initiatives to promote safety. Contact them with ideas.

Contractors – Doug Swenson (AGC), Woody Bear (Shafer), Larry Hanson (Egan)

Doug Swenson reported:

- AGC has started a new initiative with MnDOT to meet quarterly with the MnDOT folks throughout the state
- AGC has initiated a Work Zone Working Group to look at safety for workers

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- This group includes staff from FHWA, State Patrol, MnDOT, General Contractors, Temporary Traffic Control Providers, St. Paul, and other interested parties. The Group is getting to know each other.
- Short term group - 4 meetings
- Created because AGC has made a commitment to the families of the EGAN workers to make a difference in MN for worker safety.
- Gold nugget - speeds in work zones. Lots of info is collected that doesn't go anywhere. IWZ data.
- Would like to work to change the culture of the driving public through work zones - campaigns, language changes for the legislation.
 - But a mechanism is needed to fund it
- Will be discussing a possible change for actual fine for speeding and pursuing a method to get dedicated funding from fines for campaigns.
- Doug cited as an example a public campaign used in Pennsylvania - cones, no phones campaign
- A question was raised about how this group fits into the SWWZSC?
 - **Action: the Executive Committee will discuss this.**

Temporary Traffic Control Providers – Mike Granger (Street Smart Rental), Tim Lewis (Warning Lights) & Eric Johnson (uGOvia)

Tim Lewis and Eric Johnson mentioned that signs seem to be less effective. Speeding is an issue, but less so than distracted driving.

Sue Groth mentioned that we have a no-texting law, but no hands-free law. A hands-free law may help Patrol enforce the no texting law. A comment was made that Commercial drivers are all hands-free - nationwide.

Todd Haglin mentioned that OSHA came to a MnDOT project and started to critique but were notified that we were doing it correctly. He has met with MN OSHA and let them know that the federal directive is in conflict with MN standards and laws.

Federal - Will Stein (FHWA)

Will Stein reported that the division likes that Metro is looking at the traffic impacts at the scoping timeframe in TMP. As part of this effort, Metro Traffic is quantifying road user costs and setting aside funds for mitigation.

Education – Kathy Schaefer (LTAP)

Kathy had nothing more to report.

Utilities – Dale Anderson (CenterPoint Energy) & David Haedtke (CenturyLink)

Nothing to report.

Presentation: I-94 Work Zone Travel Information Survey

Donna Koren and Rashmi Brewer presented the preliminary results of an I-94 Work Zone Travel Information Survey. The presentation can be found at the web address of

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<http://www.dot.state.mn.us/trafficeng/workzone/wzcommittees.html> with the title of *194 Construction WZ Travel Info Survey_Presentation.pdf*.

Presentation: *Upper Midwest Transportation Operations Summit – What Other States Are Doing...*

Ken Johnson presented a summary of issues discussed regarding work zones at a multi-state meeting. The presentation can be found at the web address of

<http://www.dot.state.mn.us/trafficeng/workzone/wzcommittees.html> with the title of *UMTOPS - What other states are doing in WZ.pdf*.

MnDOT Internal Partners

Management Teams

- PCMG Mark Waisanen
- CMG Mark Panek
 - Not able to make this meeting but will ask their respective groups about issues to be brought to this committee.
- OMG Sue Lodahl

Maintenance

- OM Steve Lund, Bob Vasek
 - Money was provided to the districts for TMA (Truck or Trailer Mounted Attenuator) purchases. Quite a few were purchased. Concerns have been raised by the districts on the tails for the TMAs - each needs to be attached to a vehicle and additional items are needed.
 - The update of the Maintenance Manual is in full swing. It will reflect changes in practices, the Field Manual, and other Maintenance methods. The manual will include hyperlinks.
- Training (Maint/Locals) Sue Lorentz and/or Kathy Schaefer
 - Mentioned earlier in the meeting. See TEO TTC update.
- Districts Sheila Johnson, Randy Reznicek
 - Sheila Johnson mentioned the following to the group:
 - Doing more full closures and mass maintenance. Viewed as an overall win.
 - Metro Maintenance is working with Metro Traffic and CO Traffic (Tort Claims) to determine minimum documentation for traffic control setups. Will look to create PDF and/or iPad app to make this easier.

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Traffic Engineering

- OTST Sue Groth, Peter Buchen, Ken Johnson
 - Nothing additional at this time.
- Districts Dave Mavec, Jeff Rieder, Jerilyn Swenson, Tiffany Dagon, Mike Engh
 - Jeff Rieder reported that D6 is working with CO Traffic in a study of the use of an Electronic WZ Speed Limit Sign system on I35 bituminous overlay.
 - Tiffany Dagon reported:
 - Metro District is including a Transportation Management Plan (TMP) traffic impact analysis at the Scoping phase and adding appropriate dollars to mitigation of the traffic impacts.
 - Greater than 10 minute delay - up to 5% of the project cost for mitigation - on top of the normal cost. Examples - travel time signs and movable barrier.
 - Metro used travel time on a few projects. Good feedback. The temporary detection was done as a separate contract to be used for individual projects has been working well.
 - TH 52 Lafayette project truck detour - vehicles or combinations greater than 35 feet are prohibited due to a very tight pinch point; unfortunately but still seeing semis.
 - Been using extraordinary enforcement every day - 900 tickets
 - Mike Engh mentioned that he's been seeing consultant plan sheets coming through with the incorrect detour designs; is advocating for more training.

Construction

- OCIC Tom Ravn, Craig Mittelstadt
- Training/Speaker Bur. Leigh Kriewall
- Resident Engineers Trudy Kordosky
 - Nothing additional to be reported.

Communications

- Statewide Kevin Gutknecht
 - Kevin Gutknecht reported that there have been some moves and different directions in the Communications office.
 - Snow and ice communication plan. When it snows the entire road is a work zone. Safety is MnDOT's highest priority. Pushing communication especially for the first few snowfalls and storms.
 - Communications is multiple channels, MnDOT is actively using all of the following:
 - News release
 - TV
 - Radio
 - Twitter
 - Facebook

