

**TRAFFIC SIGNAL COMMITTEE**  
**Meeting Minutes**  
**September 6, 2006**

**ATTENDEES**

Kristi Sebastian	Dakota County	Eric Drager	Hennepin County
Ted Schoenecker	Washington County	Suzanne Danen	Dakota County
Jon Krieg	SRF	Steve Misgen	MnDOT
Jerry Kotzenmacher	MnDOT	Pete Sorenson	Bolton & Menk
Roger Plum	SEH	Steve Manhart	Edwards & Kelcey
Kevin Schwartz	MnDOT	Brandon Langerud	Bonestroo
Nick Erpelding	RLK	Vern Swing	RLK
Brian Vitek	St Paul	Sonja Piper	Bonestroo

**LOCATION: Edwards & Kelcey**

**Topic I – Emerging Technology**

**Solar Power/Battery Backup Powered Traffic Signals**

MnDOT has developed a service cabinet that can accommodate a battery backup setup. Some of the key items/features include:

- The service cabinet is designed to accommodate the batteries. It will be each agencies choice to use batteries or not.
- New service cabinet with batteries will fit old bolt pattern
- Municipal agreement typically determines who will pay for and maintains batteries
- Installation includes 4 batteries at approximately \$100 each; approximate 5 year warranty; batteries do not need to be cycled; can buy a monitor to test batteries; replace every 6-7 years
- Batteries can run signal in full operation for approximately 2 hours or run in flash mode for approximately 4 hours
- Need one extra conduit that is critical within the cabinet
- Currently there is not a detail of the service cabinet with the battery option. However, MnDOT has created a spec for the cabinet
- MnDOT is looking at installing a confirmation light outside of cabinet that turns on when batteries are operating and also to create an event in the event log.
- MnDOT will furnish service cabinets on all signal projects until Summer 2007
- One of the main issues with the use of the batteries is that they are considered hazardous waste
- All signals connected with railroad must have battery backup

Service cabinets with battery availability have been installed at the I-494 / Valley Creek Rd interchange in Woodbury (no batteries were installed).

### Detector Card Options

Scott County purchased Reno A & E and Oracle to test in cabinets where they have loop detector issues.

MnDOT uses EDI card for trouble shooting. Their standard detector card is EDI LM02.

Higher performance cards have LED display and have more features to trouble shoot problems.

In Railroad “Quiet Zones,” there is a loop between the tracks with a “check” loop installed on top of it. Need a specific loop and detector card for the “check” loop.

MnDOT is starting to use loops to count mainline volumes (download through master controller).

## **Topic II – Interagency Coordination with Signal Operations and Maintenance**

### Dakota County

- County maintains 36 city signals.
- Hired new signal technician to meet these needs
- County works with City to set up new signals.
- Established annual fee to perform maintenance for cities – includes labor; materials are extra. Perform Spring and Fall preventative maintenance.
- County is looking at taking over Gopher State One Call (GSOC) responsibilities for signals.
- Signal timing is not part of agreement.
- Looking to do a two-year agreement with the Cities.
- If a new signal is brought on-line, existing agreement would most likely be amended to include the additional signal.

### Hennepin County

- Have agreements with all cities, MnDOT and other counties.
- Dark signals – do not put out stop signs; send letters to law enforcement agencies letting them know of their policy

### MnDOT

- Starting to take over minor maintenance responsibilities at city’s request.
- Only take over maintenance responsibilities if they are also operating the signal. If they operate a local signal, they will also assume the maintenance responsibilities.
- Currently, they only charge for maintenance. They do not charge for response to complaints; however, they may start charging at the beginning of 2007.

### **Round Robin**

Kevin Schwartz

- Looking at preparing signal timing plans with local agencies
- Looking to establish a group within the Metro to focus on signal timings/coordination – discuss new technology, discuss recent projects, identify corridors where updates are needed, look to get money.
- Kansas did something similar that was called “Operation Green Light”
- Examine written documentation in regards to signal timings and operations
- Knowledge sharing
- Looking to solve congestion problems – focus on political arena
- Kevin will set up initial meeting to establish needs

Suzanne Danen

- Looking for engineer’s estimate for traffic signal construction. MnDOT is no longer providing unit prices for signal components.
- Issue with pedestrian crossings at split phase with double right turn lanes. Peds are having a difficult time crossing. A recommendation from the group was to look at possibly advancing pedestrian crossing before start of green.

Steve Misgen

Attended the ITE National Conference – ITE has new certification exams: Traffic Operations Practitioner Specialist (TOPS) and Traffic Signal Operations Specialist (TSOS).

Sue Zarling

- MnDOT has installed the flashing left turn yellow arrow at TH 149/TH 110.
- Pamphlet is on line (OTSO – news and hot topics)
- Vern Swing - Washington DOT uses lagging phasing with this operation
- Left turn will operate as protective/permissive
- MnDOT will be examining before vs after conditions for crashes and operations/delays. They will use video tape to assist in this.
- Phasing sequence is online – It will be slightly different than other states
- Everything is in a Request for Experimentation because of the different ways of operating and setting up signal indications with 3 or 4 indications throughout nation

Jerry Kotzenmacher

- Gave an update on the TEO signal meeting minutes (they can be found on MnDOT’s website)
- Looking at using aluminum signal pedestals for replacements only
- Looking at using poly heads
- Looking at using a new base connector to replace terminal blocks in the signal pole bases
- Metro Traffic is going to be publishing an RFP for railroad crossings that are interconnected with traffic signals. On MnDOT’s web site there is a letter of understanding stating use of new “Texas” form. The plan is to send this to local agencies eventually turn it into Tech Bulletin.

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- MnDOT is working with Millerbend for getting longer mast arm
- Plastic handholes have been approved
  - Looking at also approving plastic covers
- New controller cabinet – TS2 Type 1 (on State Contract – yes)
  - ACT will not supply
- APS – standardize message
  - MUTCD – verbal message
  - MnDOT to include street name; example, St. Paul @ Univ/Dale; programmer to include after purchase
  - Establish priority for use of APS's

Jon Krieg

- A stronger push is coming for the application of road safety audits on both existing roads and on new designs.
- For roundabout modeling, Sidra and Rodrel have a tendency to over state capacity by 10 – 30%.

**NEXT MEETING**

The next meeting will be on **October 4, 2006 at MnDOT – Oakdale Office, Conference Room 1**

Meeting Agenda – SYNCHRO Analysis vs. MMUTCD Warrants  
Intersection Control Evaluation (ICE) Update