



# Toledo Freeway Management System Detailed Project Plan

## Advisory Committee Meeting Minutes

Wednesday, March 5, 2008



**HNTB**

### Introductions

- Diane Reamer-Evans of TMACOG welcomed the meeting attendants to the Advisory Committee meeting for the Toledo Freeway Management System (FMS). She asked that everyone introduce themselves. Tom Bruff from SEMCOG joined in on the phone.

### Background

- Katie Ott, the HNTB project manager, started the presentation off by providing a quick background of ITS in the Toledo region. She stated that planning started in 1998 with the Toledo ITS Early Deployment Plan. In 1999 the Toledo ITS Strategic Deployment Study was complete. Best ITS Management Practices and Best Technology for Ohio was established in 2001 when ODOT implemented ARTIMIS and phase 1 of Columbus FMS. The Toledo Regional ITS Architecture Documentation was complete in 2004.
- Katie displayed a slide including the members of the Advisory Committee. She pointed out a few stakeholders who were being represented at the meeting as well as a few that were not. She stated that the Ohio Turnpike Commission (OTC) is a stakeholder because the Ohio Turnpike runs east-west through Toledo. Unfortunately, Kerry Ferrier was unable to attend but they are in contact with ODOT. She also explained that the role of the Advisory Committee is to offer observation, react to proposals, and refine the device locations.
- Katie stated that three goals were developed during the Toledo ITS Strategic Deployment Plan; greater mobility and safety, improve air quality and preserve existing infrastructure, and optimize transportation expenditures. The cost to implement ITS is much less than the cost of adding lanes or changing the design of the roadway system.

### Existing ITS

- Katie discussed the existing reference markers in the Toledo area and how they are very effective for obtaining actual incident locations. A map was displayed of the locations in which the reference markers have been deployed. Mike Stormer, ODOT District 2, stated that the reference markers will be implemented along I-280 near the Maumee River in the Spring of 2008. A representative from the Bowling Green Highway Patrol asked if ODOT plans to extend the reference markers south down I-75. ODOT responded that they will not be extending the reference markers.
- Katie discussed the existing Highway Advisory Radio (HAR). There are three existing HAR with numerous flashing beacon signs and static signs in the area. During daytime hours HAR typically covers a six mile radius. During nighttime hours HAR typically covers a four mile radius. A meeting attendant asked who decides what incidents get broadcasted and how the messages get updated. David Dysard, ODOT D-2 Deputy Director, replied that the ODOT county manager should be contacted and ODOT will evaluate the incident and respond accordingly. Hiram Crabtree of District 2 states that a press release should be sent out soon listing instructions and contact information for reporting incidents. One of the signs was recently hit so the press release was postponed until the sign gets fixed.
- Katie stated that Toledo currently has some existing traffic signal systems that District 2 has expressed that they would like to tie into the FMS project and control at the Traffic Management Center (TMC).
- A map including the existing ITS infrastructure is displayed. The map shows the locations of existing traffic signal systems, CCTV, HAR, flashing beacon HAR signs, automatic traffic recorders (ATR), and road weather information systems (RWIS).
- Another valuable tool for the Toledo area as well as the state of Ohio is [www.buckeyetraffic.org](http://www.buckeyetraffic.org). Katie described some of the functions of the website. George Saylor added that there will be more updates to the website in the future.
- District 2 has almost completed a Freeway Incident Management Playbook for Lucas and Wood Counties. The section of I-280 at the Maumee River Bridge will be added to complete the document. The Playbook lists diversionary routes and contact information for numerous locations along the highway system. It also includes suggestions of what message to display on the portable changeable message signs (PCMS).

- Lieutenant Laubacher from Bowling Green OSHP asked if permanent signs can be placed at crucial areas along the roadway to avoid the time of driving a PCMS to the incident location. David Dysard stated that was the reason for this meeting and the ITS project. HNTB is here to present the proposed design and locations of different devices including permanent dynamic message signs (DMS). Lieutenant Laubacher provided a perfect introduction for the next agenda item.

### **ITS Needs**

- Katie expressed the need of a FMS by discussing congestion and crash data within the Toledo region. 2006 ODOT traffic and crash data was used to refine device locations. Study data was gathered from crashes in 2004, 2005, and 2006. Maps were created to depict 2006 congestion locations, 2006 HSP non-freeway and freeway locations, and 2006 hot spot locations.

### **Concept of Operations**

- Katie described that the core functions of FMS is incident verification, traffic monitoring and surveillance, and notification or traveler information.

### **Project Architecture**

- Katie described the market packages included with Toledo FMS. They include archived data management, traffic management, emergency management, and maintenance and construction management. She then displayed some market package diagrams and described the data flowing within system between different agencies.

### **Proposed System**

- The proposed system will include 1 new HAR, 60 CCTV, 34 flow detectors, and 10 DMS.
- The HAR will be located at I-280 and SR 795. A map showing the coverage of all four devices show HAR provides almost complete coverage of the region.
- A map showing the proposed device locations was displayed. Diane Reamer-Evans asked what type of flow detectors are proposed. George Saylor stated that doppler radar will be used. They emulate the function of loops but will be mounted on a pole rather than in the pavement. The ODOT District office would retrieve traffic data. Some sample sites are being tested in Dayton. Pending the results, ODOT would like to deploy this similar system in Toledo and throughout other regions in Ohio.
- Some committee members were getting HAR and DMS confused. HAR broadcasts information on a radio frequency. DMS are signs along the highway that display messages to travelers. A committee member asked if detour information is given on either the HAR or DMS. George Saylor stated that they cannot give travelers a diversionary route; they can only provide a warning. ODOT does not necessarily know the condition or capacity of local roads to direct people different ways. People that know another route will do so, while others will continue on their original planned route. An OSHP officer stated that ODOT should be able to control US and state routes (SR). George Saylor stated that even though US and SR are just that, they are the City's jurisdiction.
- Barb Jones from the City of Toledo added that zones that traffic is rerouted to may cause more issues on local streets. Sometimes the diversionary route can take longer if that system is not good. Diane Reamer-Evans states that a diversionary route plan for the City of Toledo is a high priority. Barb Jones and David Dysard agree that communication between different agencies will be key to get the freeway working efficiently.
- Diane Reamer-Evans pointed out that the proposed device map shows two DMS in Michigan. She asked how coordination will take place. George Saylor stated that ODOT will contact Michigan Department of Transportation (MDOT) and set up an agreement to allow work done between the two states. MDOT representative, Stephanie Palmer, stated that Michigan is also in the planning stages of a Southeast Corridor Initiative and that there should not be any legal impediments. Construction of the Southeast Corridor Initiative is planned for 2012.

- David Dysard stated that MDOT should have a protocol in place to contact ODOT with any issues. ODOT should also have a protocol with MDOT.
- Tom Bruff stated that he has had numerous discussions on coordination and agrees that these conversations are necessary. Both architectures need to have the other included, they need to intertwine.
- Katie described systems engineering and states that all recommendations and/or changes that occur during both the planning and design stages will be documented. A spreadsheet will be update regularly to track all decisions.
- Katie stated that HNTB developed an ITS Strategic Plan for the OTC in 2007. An OTC representative is not in attendance but Katie stated that ODOT and the OTC have discussed ITS and agreements in the past during the design stages of Cleveland and Akron-Canton FMS. The OTC has expressed that they would prefer to only have their own DMS on their facilities. The OTC is currently focused on Electronic Toll Collection (ETC) system and will place their ITS plans on hold. David Dysard asked how ODOT would coordinate the HAR and DMS on the OTC and if there will be any agreements with them. He stated that there should be communication between the OTC and ODOT in the event that an incident occurs and vehicles need to be re-routed onto or off of the Ohio Turnpike.
- Katie stated that ODOT and the OTC have talked in the past and will continue to discuss these issues to come to a resolution.
- David Dysard asked if the OTC needs to follow ITS Architecture regulations. Hilda Valesco from Federal Highway Administration (FHWA) replied that because the OTC does not get money from the Ohio Trust funds they do not need to follow any federal guidelines.
- George Saylor stated that one of the project requirements is to develop a concept of operation which lays out high level functional requirement for all people.
- Katie Ott discussed the preliminary costs of the proposed system. Some costs are still unknown at this time.
- George Saylor stated that previous designs were based on fiber. Recent cost constraints have caused ODOT to look at other options. The solution was to lease T-1 lines instead of purchasing and installing fiber. There will be a monthly cost associated with this design but up front costs will be much less expensive. ODOT is currently negotiating with AT&T for monthly costs per site. The approximate cost will be \$400 per month per site.
- Diane Reamer-Evans asked about the traffic management center (TMC) location. Katie asked that this topic be discussed once the slide show is complete.
- Katie discussed the schedule of the project. This project will be on ODOT's August programmatic. Design is anticipated for 2009 and will take approximately 18 months. Construction will take another 18 months and integration and testing should be complete by mid year 2012.
- George Saylor described the concept of the TMC location. Because a fiber connection is no longer an issue with the new design of FMS in Ohio, the TMC location is not as crucial. ODOT policy is that the TMC must be located at one of their facilities. Everything is now Ethernet based and information can be accessible for agencies that have broadband Ohio. District 2 has expressed that they would like the TMC to be located in their office building in Bowling Green. This location is feasible. Other agencies could lease a T-1 line to get information from the TMC location. Barb Jones stated that if the City of Toledo develops a connection to the TMC, they can *see* what ODOT *sees*.
- If the TMC were located in the Lucas County 911 Center it could be manned 24 hours a day, every day, all year long. If the TMC is at an ODOT Facility (whether it be the proposed Lucas County Garage or District 2 Building) it would not be manned all day long.
- George Saylor stated that ODOT is also considering a remote TMC at ARTIMIS. TMC design now includes 3 workstations with only a few monitors and panels. ARTIMIS only has 11 people operating the TMC. ODOT is scaling back and only announcing major incidents. The TMC is geared to collect information and disperse it out.

- Diane Reamer-Evans asked how she would get information. George Saylor stated that she would contact ODOT to receive instruction on how to retrieve data.
- Control of FMS will be in an ODOT Facility. Technology can be used to have information go to different locations during different times of the day.
- Diane Reamer-Evans asked who decides what message appears on the DMS. George Saylor responded that ODOT is establishing policy on types of messages that should be posted and who should post them.
- Lieutenant Laubacher asked who he would call to report on an incident. George Saylor stated that he will have one number to call and it will be forwarded to the necessary person or location. The OSHP stated that would make their job easier.
- Lieutenant Laubacher suggested that the proposed system include more DMS and less CCTV. George replied that DMS are very expensive, about \$140,000 on average, and that ODOT does not have the funds to include more DMS. They would have better usage if they were less expensive.
- Hilda Valesco from FHWA stated that she has previously expressed her thoughts on DMS locations to ODOT. Current designs show DMS locations only for inbound traffic and not outbound traffic. Hilda asked that ODOT include a second phase of the plan to include more DMS placed strategically for outbound traffic. George replied that ITS funding stops with this project. There are no more funds secured for ITS in the Toledo region after this project is complete.
- David Dysard reiterated that the device locations need to be placed in the most efficient locations.
- George Saylor stated that the number one reason that people tune into the news is to hear traffic updates. ODOT has agreements with many media locations to get the information for free so that they can broadcast information to travelers.

### **Next Steps**

- Katie described the Next Steps of the project. She encouraged the committee to comment on the concept of operation and proposed devices and their locations. James Shea from HNTB posted Sarah Brown's email address ([sebrown@hntb.com](mailto:sebrown@hntb.com)) on a white board in the meeting room. Comments can be sent to her. All comments will be discussed with ODOT. All comments and resolutions will be summarized and distributed to the committee. Katie asked that all comments be received by Wednesday, March 19, 2008. Diane Reamer-Evans asked if a follow up meeting was necessary. Katie and George agreed that one would not be necessary.
- HNTB will provide TMACOG with a pdf of the presentation, maps, minutes, and other meeting materials to post on their website for the committee to view.

## Meeting Attendants

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