

# TMC Pooled Fund Study Quarterly Progress Report September 2009

## **Project Status**

Brief descriptions and status of the current and future projects are provided in the following paragraphs. Additional information can be found at the TMC Pooled Fund Study web page at <http://tmcdfs.ops.fhwa.dot.gov/>.

### **1. List of Completed Projects**

1. Configuration Management for Transportation Management Systems
2. Transportation Management Systems Maintenance Concept and Plans
3. Changeable Message Sign Operation and Messaging
4. TMC Operator Requirements and Position Descriptions, Phase 1
5. TMC Operator Requirements and Position Descriptions, Phase 2: Interactive Software
6. Managing Travel for Planned Special Events
7. Impacts of Dynamically Displaying Messages on Changeable Message Signs
8. TMC Operations Manual
9. Coordinated Freeway and Surface Street Operational Plans and Procedures
10. TMC Staffing and Scheduling for Day-to-Day Operations
11. TMC Clearinghouse Development and Initiation
12. TMC Business Planning and Plans Handbook
13. TMC Performance Monitoring, Evaluation and Reporting Handbook
14. Developing and Using Concept of Operations in Transportation Management Systems
15. Multi-State, Statewide and Regional TMC Concept of Operations and Requirements
16. Recovery and Mitigations for TMCs

### **2. Recently Completed and On-Going Projects**

**Driver Use of Real-Time En-Route Travel Time Information:** The objectives of this study were to: (1) assess impacts of en-route real-time travel time/delay/speed information on drivers; (2) define the most effective way to provide en-route real-time travel time information; and (3) develop preliminary guidance to practitioners for delivering en-route travel time information. The focus was on en route travel time (or speed, delay) information presented by means of changeable message sign (CMS) displays.

Project Champion: Gene Donaldson, Delaware DOT  
FHWA Work Order Manager: Tom Granda  
Contractor Lead: Neil Lerner, Westat  
Project Cost: \$300,000  
Period of Performance: 24 Months

#### *Milestones & Products:*

- This project has been completed.
- Available products: Project Research Report, White Paper, and Fact Sheet.

**TMC Human Factors Design Guidelines: Requirements Analysis:** This project performed a requirements analysis to identify and prioritize needs for human factors guidance in the design and operation of TMCs. This project included developing and conducting a workshop with 5 to 10 TMC subject matter experts to identify and prioritize the key areas where human factors guidance is most

needed. An approach was identified for the development of a guidelines document to best support the identified user requirements.

Project Champion: Jeff Galas, Illinois DOT  
FHWA Work Order Manager: Tom Granda  
Contractor Lead: John Campbell, Battelle  
Estimated Cost: \$50,000  
Period of Performance: 8 Months

*Milestones & Products:*

- This project has been completed.
- Products: A project report, including 3 sample guidelines.

**Procuring, Managing, and Evaluating the Performance of Contracted TMC Services:** The major focus of this project is a scan of current TMC owners to determine outsourcing activities and the methodologies being utilized. A technical document will be developed to provide guidance and recommended practice to TMC owners and managers to determine their outsourcing needs, activities and the methodologies being utilized to operate and maintain the transportation management systems.

Project Champion: John Bassett, New York State DOT  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: Christopher Poe, Texas Transportation Institute  
Estimated Cost: \$200,000  
Period of Performance: 16 Months

*Milestones & Products:*

- Draft technical document – October 2009.
- Outreach material (fact sheet, tri-fold brochure, and presentation) – November 2009.

### **3. Future Projects**

**Methodologies to Measure and Quantify TMC Benefits:** The purpose of this project is to gain a better understanding of and to quantify benefits in traffic operations due to the implementation of transportation management centers (TMCs) and the systems, infrastructure, and functions associated with their operations. This project will be performed through two phases: (1) Phase 1 – Produce a synthesis report and evaluate the feasibility of developing a software tool for quantifying the benefits of TMCs and (2) Phase 2 – Develop a software tool.

Project Champion: Jim McGee, Nebraska DOR  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$75,000 for Phase 1 and \$175,000 for Phase 2  
Period of Performance: 8 Months for Phase 1 and 16 Months for Phase 2

*Milestones & Products:*

- Anticipated project initiation – October 2009.
- Phase 1 Products: A Synthesis Report and Phase 2 Work Plan.

**Integration of TMCs and Law Enforcement – Needs Assessment:** The purpose of this project is to assess the current practices and identify institutional, operational and technical issues and challenges that all involving agencies are facing with integrating TMCs and law enforcement. The results of this effort

will lead to identification of a list of topics and issues to be addressed and a series of next steps to be considered in a further study that is intended to develop a product that will provide necessary guidance to address agencies' needs.

Project Champion: John Domina, Nevada DOT  
FHWA Work Order Manager: Tom Granda  
Contractor Lead: TBD  
Estimated Cost: \$50,000  
Period of Performance: 8 Months

*Milestones & Products:*

- Anticipated project initiation – Fall 2009.
- Product: Findings Report.

**Synthesis of Current Travel Time Information Practice:** The purpose of this project is to review and synthesize current practice, state of the practice, success stories, and lessons learned in providing travel time information around the country as well as to provide recommended practices on the concepts, methods, techniques, and procedures for transportation agencies to collect, calculate, and predict travel time information.

Project Champion: Jeff Galas, Illinois DOT  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$50,000  
Period of Performance: 8 Months

*Milestones & Products:*

- Anticipated project initiation – Fall 2009.
- Products: A synthesis report and outreach material (fact sheet and presentation).

**TMC Clearinghouse Support Services, Phase 2:** The purpose of this project is to provide continued and improved support services for the TMC Clearinghouse that will be created in the initial phase of the project. This phase 2 project will evaluate the feedback and recommend enhancement from the user and improve the functions of the clearinghouse as appropriate. In addition, this project will involve the support to facilitate outreach and awareness of TMC Clearinghouse to a broader audience base.

Project Champions: TMC PFS Co-Chairs  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$80,000  
Period of Performance: 12 Months

*Milestones & Products:*

- Anticipated project initiation – Fall 2009.
- Products: enhanced TMC Clearinghouse, evaluation report on user feedback, outreach and marketing material (fact sheet, brochure, and presentation).

**Travel Time Displays at Freeway Entrance Approaches:** This research will determine the effectiveness of travel time displays as used on the arterial approach to freeways. It will provide recommendations for the design and use of such displays, including information content, format, sign location, and warrants.

Project Champions: Jeff Galas, Illinois DOT  
FHWA Work Order Manager: Tom Granda  
Contractor Lead: TBD  
Estimated Cost: \$300,000  
Period of Performance: 18 Months

*Milestones & Products:*

- Anticipated project initiation – Winter 2009.
- Products: A research report.

**Human Factors Guidelines for TMCs:** This project will develop a handbook of TMC Human Factors (HF) Guidelines to provide TMC staff, supervisors, managers, and designers with a clear, relevant, and easy-to-use reference of human factors principles for TMC design and operation. This project will build upon the Requirements Analysis for Human Factors Guidelines for TMCs project.

Project Champion: Ed Sirgany, North Carolina DOT  
FHWA Work Order Manager: Tom Granda  
Contractor Lead: John Campbell, Battelle  
Estimated Cost: \$350,000  
Period of Performance: 18 Months

*Milestones & Products:*

- Anticipated project initiation – Fall 2009.
- Product: A guidelines document.

**Roles of TMCs in Emergency Operations:** This project will assess the roles of TMCs in emergency operations (including winter operations). The project includes identifying the roles of TMCs during emergency situations, discussing how TMCs should prepare for emergency situations and implement actions, conducting a needs assessment to identify needs and gaps, and investigating organizational structures and models that have been used by various agencies.

Project Champion: Cathy McGhee, Virginia Transportation Research Council  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$150,000  
Period of Performance: 12 Months

*Milestones & Products:*

- Anticipated project initiation – TBD.
- Product: A study report.

**10-Year Technology Impacts on TMC Operations:** This project will identify future development and revolutions in technology in the next 10 years as related to transportation management and will investigate the impacts of such technology on TMC operations.

Project Champion: Cathy McGhee, Virginia Transportation Research Council  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$100,000  
Period of Performance: 12 Months

*Milestones & Products:*

- Anticipated project initiation – TBD.
- Product: A study report.

**Effectiveness of Highway Advisory Radio:** This project will review, evaluate and synthesize the state of the practice and effectiveness of highway advisory radio (HAR). This will include a compilation of successful stories and lessons learned around the country and assessment of the opportunity of using HAR in conjunction with (or to supplement) other information providing devices for information dissemination.

Project Champion: Ali Farhangi, Tennessee DOT  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$100,000  
Period of Performance: 12 Months

*Milestones & Products:*

- Anticipated project initiation – TBD.
- Product: A synthesis report.

**TMC Data Capture for Performance and Mobility Measures:** This project will synthesize best practices and lessons learned related to collecting and archiving TMC operation data for monitoring, evaluating and reporting performance and mobility measures at system levels as well as for specific scenarios or locations.

Project Champion: John Bassett, New York State DOT  
FHWA Work Order Manager: Raj Ghaman  
Contractor Lead: TBD  
Estimated Cost: \$100,000  
Period of Performance: 12 Months

*Milestones & Products:*

- Anticipated project initiation – TBD.
- Products: A synthesis report, a project fact sheet, and a presentation.