2010-SPR-2(207)TS
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TRANSPORTATION POOLED FUND PROGRAM

TECHNICAL SUMMARY

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TOTAL AGENCY CONTRIBUTIONS TO DATE:

$4,862,267

Mn/DOT CONTRIBUTIONS THROUGH 2011:

$350,000

PARTICIPATING STATES:

AZ, CA, CT, DE, FL, GA, ID, IL, IN, KS, KY, MI, MN, MO, NE, NV, NJ, NY, NC, PA, RI, TN, TX, UT, VA, WA, WI, I-95 CORRIDOR COALITION, RTC OF SOUTHERN NEVADA (FAST) AND FHWA

This I-35W changeable message sign, controlled by Mn/DOT's Regional Transportation Management Center, updates drivers about current driving conditions.

RESEARCH SERVICES

OFFICE OF POLICY ANALYSIS, RESEARCH & INNOVATION

Pooling Our Research: Improving Transportation Management Center Performance

SPR-2(207): Transportation Management Center Pooled Fund Study. *This ongoing study provides technical guidance, best practices, training, innovative techniques and technologies, and fact-based tools to help transportation management centers improve services and performance.*

Why a Pooled Fund Study?

Transportation management centers are used by public agencies to monitor and report on roadway and travel conditions, coordinate with local agencies to respond to changing conditions, and proactively manage and control traffic to mitigate the impacts of congestion and improve the reliability of travel.

Led by the Federal Highway Administration, the Transportation Management Center pooled fund study was established in 2000 to deal with agencies' limited resources and the increasing complexity involved in managing and operating TMCs. The study serves as a forum for regional, state and local agencies to coordinate investments that will improve the safety, mobility and productivity of travel.

The 30 members of the TMC pooled fund study include 27 state DOTs, two regional agencies and FHWA. The level of commitment may vary based on agency size and type, with the desired annual contribution for each agency set at $50,000; the minimum commitment is $25,000.

What is the Pooled Fund Study's Goal?

This study identified six critical initiatives to direct the selection of projects that will develop the resources and tools needed to address challenges faced by TMCs:

- Improving day-to-day operations
- Enhancing business management
- Developing TMCs and managing their evolution
- Developing and delivering roadway and travel condition information
- Developing, training, hiring and contracting TMC staff and services
- Sharing knowledge and information

What Have We Learned?

Every year, TMC study members propose projects for funding consideration and select projects to fund. To date, 18 projects have been completed, and 12 projects are under way or scheduled to begin soon. Mn/DOT's Regional Transportation Management Center, which serves as the TMC for the Twin Cities Metropolitan Area freeways, uses TMC study research to help meet Mn/DOT's goal of providing motorists with faster, safer trips on metro area freeways.

Highlighted below are a few TMC pooled fund projects that are contributing to the development of current Mn/DOT initiatives:

- A TMC pooled fund study that reviewed state DOT best practices for operating changeable message signs on freeways is proving to be a valuable resource as Mn/DOT

continued

"Mn/DOT gets not only the benefits of specific research projects from the TMC pooled fund study, but also invaluable benefits from participating in a forum that helps us connect with peers operating similar centers across the country."

–Brian Kary,
Freeway Operations Engineer, Mn/DOT Regional Transportation Management Center

"The TMC pooled fund has led to valuable collaborations. Caltrans' use of Mn/DOT's open-source Intelligent Roadway Information System software is just one example where Mn/DOT and Caltrans are benefiting from collaborating with study partners."

–Jim Kranig,
Director, Mn/DOT Regional Transportation Management Center

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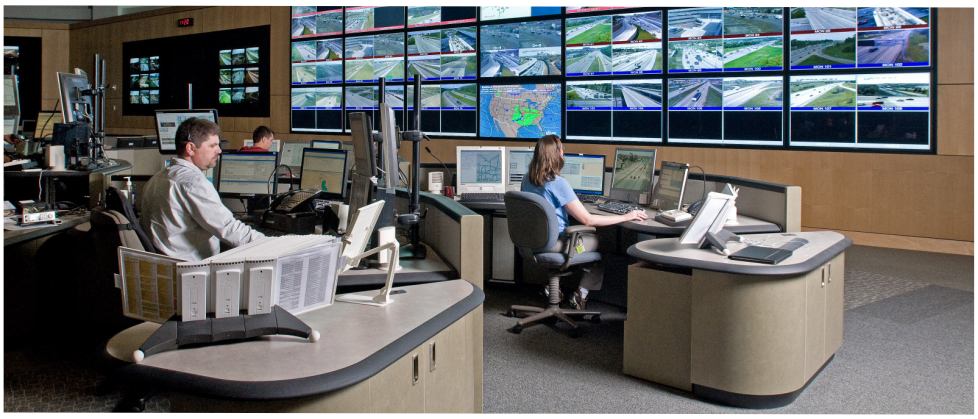

Mn/DOT's original Traffic Management Center, built in 1972, served as the first central control facility to manage the Twin Cities Metropolitan Area freeway system. Today, Mn/DOT's Regional Transportation Management Center is one of the most successful and comprehensive facilities of its kind in the country.

updates its current CMS guidelines. The national level TMC study documents the empirical evidence that relates CMS messaging to driver behavior, traffic, travel flow and safety. Mn/DOT can use this information to validate provisions in its own CMS manual.

Related studies that address driver use of real-time travel information and the impacts of dynamic CMS messaging will also prove helpful in updating Mn/DOT's CMS manual.

- In 2006, the U.S. DOT launched the Integrated Corridor Management Initiative to help curb congestion. This concept involves integrating freeways, arterial streets and transit systems to optimize performance of each system. Mn/DOT is deploying an integrated corridor on the west side of Minneapolis centered on I-394, a commuter path for travelers coming in and out of the Twin Cities. A handbook produced by a TMC study project that examined ways to integrate freeway and arterial traffic management systems provided input as Mn/DOT developed the corridor.

What's Going On Now?

The TMC study produces more than traditional research. Collaboration among study partners is another key benefit, with the California Department of Transportation's (Caltrans') experimental use of Mn/DOT's open-source advanced traffic management system software providing just one example. Operating costs are low with this free, full-featured software and its ancillary General Public License. More important, the open-source license provides Mn/DOT, Caltrans and any other state DOT access to all software enhancements made by users. Benefits will expand as more users implement this open-source software.

What's Next?

One of the projects approved at the TMC study's May 2010 annual meeting examines the design and operation of dynamic shoulder lanes in the United States and worldwide. This study is of particular interest to Mn/DOT, with its recent deployment of a priced dynamic shoulder lane on I-35W near downtown Minneapolis. The first of its kind in the United States, this project involves using the shoulder as a high-occupancy toll lane during peak periods, allowing transit, carpoolers and motorcycles to use the lane for free; single-occupancy vehicles can use the lane for a fee. The upcoming research project will help Mn/DOT assess the design of this lane configuration and assist in deploying similar lanes throughout the Twin Cities Metropolitan Area.

This Technical Summary pertains to the ongoing Pooled Fund SPR-2(207), Transportation Management Center Pooled Fund Study. Details of this effort can be found at http://www.pooledfund.org/projectdetails.asp?id=106&status=6 *and* http://tmcpfs.ops.fhwa.dot.gov/index.cfm.

For more than 25 years, FHWA's Transportation Pooled Fund Program has been providing state DOTs and other organizations the opportunity to collaborate in solving transportation-related problems. The TPF Program is focused on leveraging limited funds, avoiding duplication of effort, undertaking large-scale projects and achieving broader dissemination of results on issues of regional and national interest.