

**Traffic  
Operations****MAY 2025****Project Title:**Traffic Management Center (TMC)  
Consortium – Pooled Fund**Task Number:** 4188**Start Date:** April 17, 2022**Completion Date:** March 31, 2027**Task Manager:**Melissa L. Clark  
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## TPF-5(487) – Transportation Management Centers (TMC) Pooled Fund Study – Phase II

Traffic Management Center (TMC) Consortium - Pooled Fund  
Study - TPF-5(487).

### WHAT IS THE NEED?

Traffic Management Centers (TMCs) rely on advanced technologies, which require dedicated management, staff with specialized skills and training, and operating and capital funding. They face complex institutional issues in coordinating with service providers in response to incidents, and functions within a time-critical environment which is a culture that is drastically different from what most agencies are accustomed. These demands and constraints present challenges that agencies face daily without the benefit of having the necessary resources, experience, skills, and training. These are challenges that agencies continually face, impacting their ability to manage and operate TMCs efficiently and effectively.

Meeting these challenges and customers' expectations requires pursuing a wide variety of both proven and innovative strategies to realize the full potential of the investment that has been and will continue to be made in TMCs. Investments that will allow agencies to proactively manage and control traffic in a manner that optimizes the performance and investment that has, and will continue to be made, in the surface transportation system. To deal with limited resources and the increasing complexity involved in managing and operating TMCs, it is essential that practitioners have access to the technical guidance, best practices, training, innovative techniques and technologies, and fact-based tools to assist them in improving the performance and their services.

### Pooled Fund Information:

- Federal Highway Administration (FHWA) – Lead State for Pooled Fund Study (PFS)



DRISI provides solutions and knowledge that improves California's transportation system.

- 23 Participating State Department of Transportations (DOTs) or Agencies
- Full Members: Alabama DOT, Arizona DOT, California DOT, Florida DOT, Georgia DOT, Illinois DOT, Iowa DOT, Kansas DOT, Maryland DOT, State Highway Administration (SHA), Michigan DOT, Minnesota DOT, Missouri DOT, Nevada DOT, New Jersey DOT, New York State DOT, Ohio DOT, Pennsylvania DOT, Tennessee DOT, Texas DOT, Utah DOT, Virginia DOT, Washington State DOT, Wisconsin DOT
- California Department of Transportation's (Caltrans) current commitment:
  - FY 2023/2024 \$50,000
  - FY 2024/2025 \$150,000

## WHAT ARE WE DOING?

This pooled fund study (PFS) is intended to provide a forum for participants to identify and address operational and human-centered issues that are common among agencies that manage and operate TMCs. TMCs are a key tool that is needed by public agencies to monitor and report on roadway and travel conditions, coordinate with local interests in response to changing conditions, and proactively manage and control traffic to mitigate the impacts of congestion and improve the reliability of travel.

## WHAT IS OUR GOAL?

The goal of this study is to assemble regional, state, and local transportation management agencies and the Federal Highway Administration to:

1. Identify human-centered and operational issues.
2. Suggest approaches to addressing identified issues.
3. Initiate and monitor projects intended to address identified issues.
4. Provide guidance and recommendations and disseminate results.

5. Provide leadership and coordinate with others with TMC interests.
6. Promote and facilitate technology transfer related to TMC issues nationally.

## WHAT IS THE BENEFIT?

Caltrans can potentially benefit from the research findings by having TMCs monitor and report on roadway and travel conditions, coordinate with local interests in response to changing conditions, and proactively manage and control traffic to mitigate the impacts of congestion and improve the reliability of travel.

The goal is to build upon and leverage investments that the pooled fund study has made in previously completed and initiated projects and to overcome the TMC challenges Caltrans is facing and improve the current state of practice.

## WHAT IS THE PROGRESS TO DATE?

The Traffic Management Center (TMC) Pooled Fund Study (PFS) selected the following projects to initiate in 2025:

- Plans, Methods and Resources to Maintain and Sustain TMS Assets.
- TMS Program Organization, Management, Performance, and Staffing.

### Research in Progress:

- Sharing Information on TMS Emerging Topics; <https://tmcpfs.ops.fhwa.dot.gov/projects/sharingtmsinfo.htm>
- Sharing and Using Different Types of Data in TMS; <https://tmcpfs.ops.fhwa.dot.gov/projects/usingnewdata.htm>
- Planning to Frame TMS' Strategic Direction and Future Investments; <https://tmcpfs.ops.fhwa.dot.gov/projects/multiyearplans.htm>
- Using Information from Social Media to Improve the Operation of TMS; <https://tmcpfs.ops.fhwa.dot.gov/projects/usingsocialmedia.htm>

- Methods to Identify Staffing Needs and Developing or Updating Staffing Plans for Traffic Management Systems (TMS); <https://tmcpsf.ops.fhwa.dot.gov/projects/staffingneeds.htm>
- Enabling the Sharing and Use of Open-Source or Agency Owned Software and Application Programming Interfaces (APIs); <https://tmcpsf.ops.fhwa.dot.gov/projects/enablingopensource.htm>
- Classifying, Measuring, Collecting, and Using Information on the Conditions of TMS Assets; <https://tmcpsf.ops.fhwa.dot.gov/projects/classifyingtmsassets.htm>
- Locating and Placing TMS Field Devices; <https://tmcpsf.ops.fhwa.dot.gov/projects/locatingtmsdevices.htm>

Completed research projects can be found here:  
<https://tmcpsf.ops.fhwa.dot.gov/completedproj.htm>

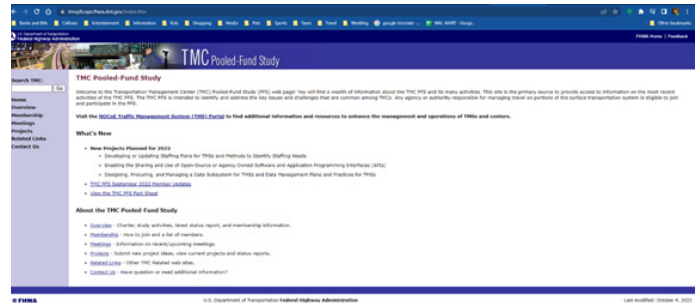
These websites provide more detail on the Pooled Fund Study:

- <https://www.pooledfund.org/Details/Study/716>
- <http://tmcpsf.ops.fhwa.dot.gov/>
- <https://transportationops.org/traffic-management-systems-and-centers/tmc-pooled-fund-study-and-projects>

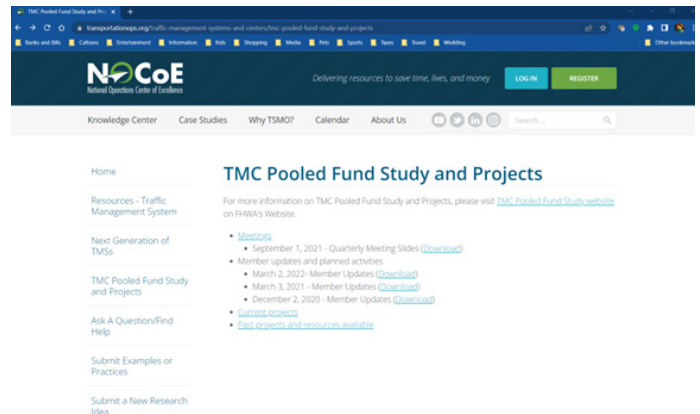
## Project Fact Sheet:

<https://www.fhwa.dot.gov/publications/research/operations/21061/21061.pdf>

## IMAGES



**Image 1:** Federal Highway Administration (FHWA) TMC Pooled Fund Study Website.



**Image 2:** National Operations Center of Excellence (NOCoe) TMC Pooled Fund Study Website.

## Use of Color Changeable Message Signs – Current Practices and Research

Publication No. FHWA-HOP-18-067

April 2022



U.S. Department of Transportation  
Federal Highway Administration

**Image 3:** Publication produced by Pooled Fund Study – Use of Color Changeable Message Signs – Current Practices and Research.

## Use of Color Changeable Message Signs – Human Factors Study

Publication No. FHWA-HOP-20-030

July 2021



U.S. Department of Transportation  
Federal Highway Administration

**Image 4:** Publication produced by Pooled Fund Study – Use of Color Changeable Message Signs – Human Factors Study.