



Caltrans Division of Research,  
Innovation and System Information

# Research Results

Maintenance

**JUNE 2013**

**Project Title:**  
Transportation Asset Management  
Research Program, TPF-5(O36)

**Task Number:** 0738  
**Completion Date:** June 30, 2012

This project, which was part of a pooled fund study among transit agencies from several states, was a collaborative effort to identify, prioritize, and pursue a coordinated program of transportation asset management.

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## Transportation Asset Management Research Program

*Improving decision-making of resource allocation and use*

### WHAT WAS THE NEED?

Transportation asset management is a systematic process of maintaining, upgrading, and operating physical transportation assets through their lifecycle to maximize their social benefits. Comprehensive transportation asset management covers multiple disciplines to solve the transportation problems of the twenty-first century. It combines engineering principles with sound business practices, as well as public policy, risk management, and customer service considerations, to promote better decision-making based on quality information and well-defined objectives and ensure efficient resource allocation.

Asset management carries rising importance because of changes in the transportation environment, technology advances, and limited resources. Transportation budgets are strained by an aging infrastructure, the increasing demand for transportation services, and the need to address environmental impacts.

In the 1950–60s, new construction dominated the landscape, and highway agencies sought out engineering specialists. Yesterday’s highway agencies are today’s multi-modal departments of transportation with broader challenges that require managers to obtain additional expertise in economics, sociology, environmental and land use policy as well as conflict resolution. Every state possesses transportation assets and generates a huge amount of valuable research, yet the transportation sector lacks a systematic approach to effectively manage this information. Defining common management strategies, systems, and tools requires research, training, and technology transfer.



*San Diego-Coronado Bridge*



Caltrans improves mobility across California by performing applied research, developing innovations, and implementing solutions.

## WHAT WAS OUR GOAL?

The goal was to enable participating states to learn and implement transportation asset management and provide state agencies a means to share resources, technology, and ideas in a coordinated environment.

## WHAT DID WE DO?

To better educate transportation practitioners and advance the practice of asset management, the Midwest Regional University Transportation Center, the states of Wisconsin and Michigan, and the Federal Highway Administration agency met in 2001 to set up the Transportation Asset Management Pooled Fund (TAMPF). Caltrans, in addition to 21 other state transportation agencies, participated over the 10-year program.

Participants met in 2002 to begin the initial project selection based on submissions from participating agencies. The first project to launch the TAMPF Research Program in 2002 focused on capital preventive maintenance. The project documented budgeting and programming processes and strategies, contractual processes and relationships with the private sector, use and structure of lifecycle analysis, and outreach and educational activities.

Subsequent years addressed various maintenance concerns and strategies by reviewing the implementation of actual projects, including the tools and methods that can be employed to incorporate maintenance issues into the design and construction phases of a project, the coordination of maintenance and group purchasing, and the integration of training programs.



## WHAT WAS THE OUTCOME?

The project summary report, *TAMPF Research Program 2002-2011*, describes each project by year of operation and provides links to more detailed information. A step-by-step guide for implementing the methodology and a training module were also developed.

## WHAT IS THE BENEFIT?

Today's transportation needs cover a broad array of assets and technologies. Asset management offers transportation professionals the tools, processes, and information to make sound investment decisions. Developing strategies and effectively managing these assets requires financial and personnel resources. By states participating in a pooled fund program, they can share resources, technology, and ideas in a coordinated environment and prevent the duplication of efforts.

## LEARN MORE

To view the *TAMPF Research Program 2002-2011*:  
[www.wistrans.org/mrutc/files/TAMPF\\_Final\\_Report.pdf](http://www.wistrans.org/mrutc/files/TAMPF_Final_Report.pdf)

To view the best practices for transportation asset management:  
[www.wistrans.org/mrutc/research/completed-research/03-02](http://www.wistrans.org/mrutc/research/completed-research/03-02)

To view the report on the benefits derived from asset management:  
[www.wistrans.org/mrutc/files/AM\\_BENEFITS\\_110623.pdf](http://www.wistrans.org/mrutc/files/AM_BENEFITS_110623.pdf)

