

Pavement

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Project Title:
DRISI Support for the Long-Term
Pavement Performance (LTPP)
Program - TPF-5(332)

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DRISI Support for the Long-Term Pavement Performance (LTPP) Program - TPF-5(332)

Performing forensic evaluations of LTPP remaining sections
before they leave service.

WHAT IS THE NEED?

The Long-Term Pavement Performance (LTPP) program is an ongoing effort to collect and understand information about pavements behavior. The program consists of 18 experiments designed to answer specific questions about how certain variables -pavement design, construction, and materials; traffic loading; and climate- affect pavement performance over time.

Pavement test sections are established throughout the United States and Canada with the cooperation and support of the state and provincial highway agencies, some in pre-existing highways and others constructed to the program's specifications. The program has monitored the condition of these sections, their traffic loads, and climatic conditions. The data collected has been made available to the highway community.

The program is the largest and longest pavement monitoring program in the world, and it has assembled the most comprehensive pavement performance database in the world. Specific to California, 45 projects consisting of 126 test sections (out of over 2500 test sections across the United States and Canada) were included in the LTPP program. Some of these projects have gone out-of-study over the years, but others are still actively monitored to achieve the project objectives. These sections are located throughout the State.

The Wisconsin Department of Transportation serves as the lead for the execution of this project.



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California's transportation system

WHAT ARE WE DOING?

The research team is investigating LTPP test sections as they prepare to go out of service, capturing data on exactly why the section failed and had to be removed from service.

This may entail trenching and coring, measuring lift deflection, and potential lab testing of field samples for materials characteristics. The study will include performing the forensic evaluation in the field and limited lab testing from field samples.

Additional work will involve building tracking lists of remaining sites, contacting states for site status updates, and planning action for sites that are about to go out of service.

WHAT IS OUR GOAL?

The purpose of this research is to rapidly complete forensic evaluations of LTPP sections before they go out of service. Approximately 750 sections remain in service.

WHAT IS THE BENEFIT?

Caltrans benefits from the comprehensive LTPP database, the advances in pavement performance measurement, improved design methodologies and strategies for the rehabilitation of existing pavements; and improved design equations for new, more durable pavements.

WHAT IS THE PROGRESS TO DATE?

The research team provided information on field testing and lane closures as well as planned expenditures through June 2022.