



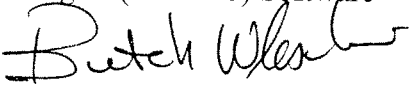
U.S. Department
of Transportation
**Federal Highway
Administration**

Memorandum

Subject: **INFORMATION:** Construction Analysis for Pavement
Rehabilitation Strategies (CA4PRS) Software

Date:

DEC 19 2008

From: Butch Wlaschin 
Director, Office of Asset Management

To: Federal Lands Highway Division Engineers
Acting Resource Center Director
Division Administrators

Greatly increasing traffic volumes coupled with aging infrastructure are compelling highway agencies to consider new options for planning construction activities to manage and minimize construction related congestion. Increasingly, transportation departments are focusing on construction analysis software tools to assist them in accelerating construction and reducing traffic impacts, particularly in heavily traveled urban areas. One such software tool that is now available to all State highway agencies is the "Construction Analysis for Pavement Rehabilitation Strategies" (CA4PRS) software.

The CA4PRS software was developed by the Institute of Transportation Studies at the University of California at Berkeley under an FHWA pooled-fund study in 2002. California, Minnesota, Texas, and Washington State have participated in the study. In 2006, the CA4PRS software was selected as a priority technology by AASHTO's Technology Implementation Group (TIG), and in August 2008 the FHWA selected the CA4PRS software as a market-ready technologies and innovations product available for nationwide deployment. In support of this deployment, FHWA recently initiated changes through the pooled fund project to allow for licensing of the CA4PRS software by State transportation departments and to fund associated training and outreach on the use of CA4PRS and other construction analysis software tools (CAST). With these changes, all State highway agencies may now have unlimited access to the CA4PRS software and associated technical support at their request and at no cost. Basic training in the use of the software will also be available to States at no cost for a limited period of time on a first come first serve basis.

The CA4PRS software is a decision-support tool that helps transportation agencies select more effective and economical strategies for highway rehabilitation and maintenance projects. The CA4PRS can be used to identify rehabilitation strategies that balance the construction schedule with inconvenience to drivers and transportation agency costs. The software can evaluate the "what if" scenarios for a number of different alternatives including rehabilitation strategy types; construction windows and lane closure tactics; pavement cross-sections and

materials; and contractor logistics such as access to the site and production rates. The software aids in developing PS&E packages in the design stage, establishing baseline schedules including construction staging plans, developing transportation management plans, preparing engineer's estimate including life-cycle costs, and assessing contracting methods such as A+B (cost plus time) or incentives and disincentives. The *CA4PRS* results can also be integrated with traffic simulation models to quantify the impact of work zone lane closures on the whole highway network, including local arterials and neighboring freeways. Additional information about the capabilities of *CA4PRS* can be found in the attached fact sheet.

The FHWA and the AASHTO TIG are planning to use a variety of methods to communicate the use of *CA4PRS* and other CAST technologies. These include activities such as training workshops, online webinars, peer exchanges, case studies, brochures and other guidance documents. Additional information on these products will be provided as they are developed and delivered.

The FHWA Divisions are encouraged to coordinate with their local State highway agency to make them aware of this technology. Agencies interested in obtaining a copy of the *CA4PRS* software; scheduling training on the use of CAST technologies; or obtaining additional information may contact any one of the following:

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Addition information about *CA4PRS* can also be found at the following web links:

<http://www.dot.ca.gov/research/roadway/ca4prs/index.htm>

<http://www.tfhrc.gov/focus/oct08/01.htm>

<http://www.fhwa.dot.gov/crt/lifecycle/ca4prs.cfm>

Attachment