State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

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To: DISTRICT DIRECTORS

Date: March 7, 2007

From: RICHARD D. LAND
Chief Engineer

Subject: Use of Life-Cycle Cost Analyses for Pavements

Life-cycle cost analyses for pavements shall be performed and documented for all projects which include pavement work on the State Highway System, regardless of funding source, with the exception of the following projects:

- Major Maintenance.
- Minor A and Minor B.
- Projects using Permit Engineering Evaluation Reports.
- Maintenance pullouts.
- Landscape paving.

This new policy applies to projects that have a project approval date of July 1, 2007, or later. Projects with a project approval document approved prior to July 1, 2007, do not need to include life-cycle costs unless a supplemental report is needed due to a change in scope of the project. Life-cycle cost analyses are an effective and useful tool used nationwide to determine the best value for spending limited resources. A life cycle cost analysis takes into account various current and future financial obligations and impacts of a particular design, including initial costs, future maintenance costs, future rehabilitation costs, and costs of the user (motorist and the movement of goods). The alternative with the lowest life cycle cost is viewed as having the lowest impact to the State even if it has higher initial costs.

The Caltrans Highway Design Manual (HDM) was updated in June 2006, to incorporate the use of life cycle cost analyses to determine the optimum pavement design for new construction, widening and rehabilitation projects. Refer to Chapter 610, Topic 612 "Pavement Design Life" and Topic 619 "Life-Cycle Cost Analysis" of the HDM.

The Project Development Procedures Manual (PDPM) Chapters 8, 9, and 10, has recently been updated to reflect this new policy. Appendix OO of the PDPM has been added to provide direction on how to document the life- cycle cost analysis results. Refer to the Division of Design's (Division) website http://www.dot.ca.gov/hq/oppd/ for these updates. The Division has also developed a Life-Cycle Cost Analysis Procedures Manual for pavements that can be viewed and downloaded at http://www.dot.ca.gov/hq/oppd/pavement/guidance/.

For questions or comments regarding documentation, the new procedures manual, or life-cycle cost analyses in general, please contact William Farnbach, Chief, Office of Pavement Design, at (916) 227-5845 or Hector Vergara, Office of Pavement Design, at (916) 227-5841.

c: William Farnbach
Hector Vergara