

**State Planning and Research Program
Quarterly Report**

PROJECT TITLE: Design and Construction Guidelines for Thermally Insulated Concrete Pavements

OBJECTIVES:

The main objective of the proposed research is to develop design and construction guidelines for thermally insulated concrete pavements (TICP), i.e. composite thin HMA overlays of new or structurally sound existing PCC pavements. A secondary objective is to develop recommendations for feasibility analysis of newly constructed TICP or thin overlays of the existing concrete pavements.

PERIOD COVERED: January - March, 2008 (1st Quarter)

PARTICIPATING AGENCIES: Minnesota Department Of Transportation, Caltrans, Federal Highway Administration, Local Road Research Board, Washington State Department of Transportation

PROJECT MANAGER:

Tim Clyne

SP&R PROJECT NO:

TPF-5(149)

PROJECT IS:

 Planning
 X Research & Development

LEAD AGENCY:

Minnesota Dept. of Transportation

PRINCIPAL INVESTIGATOR:

Lev Khazanovich, University of Minnesota

ANNUAL BUDGET:

The total project budget is \$455,000. Of that \$16,000 is reserved for pooled fund administrative costs, which leaves \$439,000 available for research.

PROJECT EXPENDITURES TO DATE: Travel Costs for designated state representative for the September 12 TAP meeting (3rd Quarter 2007) held in Minnesota: \$1636.

WORK COMPLETED:

The contract award to the University of Minnesota was executed in the 1st Quarter of 2008. The subcontracts with the University of California-Davis and University of Washington are still in the process.

A literature review on asphalt concrete overlays started this quarter. The review focused on current construction methods such as: Fractured Slab Approach; Interlayer Grids and Fabrics; Interlayer Stress Absorbing Composite (ISAC); Cold in Place Recycling. Also a review of the design of asphalt concrete overlays on PCC pavements was started, with focus on AASHTO Mechanistic Empirical Pavement Design Guide and on the modeling and prediction of reflective cracking.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

The research subcontracts contracts are expected to be signed and executed. The research team will continue the literature review efforts.

STATUS AND COMPLETION DATE:

This project is just getting underway, with completion expected by November 30, 2010.