

State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: December 31, 2006

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| Program: SPR-0010(36) FFY99 | Part: II Research and Development |
| Project Title: Database Development for a Hot-Mix Asphalt Pavement Performance Analysis System | Project ID: 0092-06-13 |
| Administrative Contact: Jason Bittner | Sponsor: MRUTC |
| WisDOT Technical Contact: James McDonnell | Approved Starting Date: November 16, 2006 |
| Approved by COR/Steering Committee: FY07, \$50,000, 12 months | Approved Ending Date: November 15, 2007 |
| Project Investigator (agency & contact): Robert Schmitt, UW-Platteville | |

Description:

| Total study budget | Current FFY budget | Expenditures for current quarter | Total Expenditures to date | Percent Complete |
|--------------------|--------------------|----------------------------------|----------------------------|------------------|
| \$50,000 | \$50,000 | \$6,500 | \$6,500 | 10 |

Progress This Quarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

A teleconference kick-off meeting between the MRUTC, advisory panel, and research team was held on December 20, 2006. Meeting minutes can be found in a stand-alone document, and were distributed via email to all participants.

Task 1. Literature Review

The objective of Task 1 is to identify, collect, review, and synthesize literature and research to understand all relevant literature on the relationship of pavement performance to design, construction, maintenance, and environmental variables. Task 1 is 50% complete, and a full literature review will be presented when the work is 100% complete.

Task 2. Survey and Review of Pavement Management Systems

The objective of Task 2 is to survey state highway agencies to acquire information on their pavement management systems (PMS). From the literature review in Task 1 it was learned that a synthesis of current practices from all states was published in 2004, as NCHRP Synthesis Report #335. Thus, the survey has been temporarily suspended.

During this quarter, WisDOT databases were collected for performance, design, traffic, and construction data. A merging of the databases by key fields was investigated. Work is just beginning with this effort.

Task 3. Database System Development

The objective of Task 3 is the development of a database system including several elements, such as the overall purpose of the system, data types and formats to be collected and managed, software and hardware requirements, as well as institutional issues involved in the implementation and use of the system. No work was performed on Task 3 this quarter.

Task 4. Numerical Modeling and Statistical Analysis

The focus of Task 4 is to develop an analysis template for aligning design and construction datasets with the pavement performance indicator datasets, and demonstrating methodologies for analyzing the data. No work was performed on Task 4 this quarter.

Task 5. Final Report

The objective of Task 5 is to submit a final report documenting all findings in the project. No work was performed on Task 5 this quarter.

Work Next Quarter:

Task 1. Literature Review

Work will continue with a review of all literature related to this topic. A complete synthesis of literature will be provided in the next quarterly report.

Task 2. Survey and Review of Pavement Management Systems

No survey work is planned during the next quarter, due to the published synthesis of current practices.

Work will continue on investigating the data fields of each database.

Task 3. Database System Development

It is planned that work will begin on the development of the database next quarter, concurrent with work in Task 2.

Task 4. Numerical Modeling and Statistical Analysis

No work is planned on Task 4 during the next quarter. However, developments with NCHRP 9-22, Development of Performance-Related Specifications for Hot Mix Asphalt, will be monitored. Deliverables from this study include a prototype software (PaveSpec) to develop performance models of data.

Task 5. Final Report

No work is planned on Task 5 during the next quarter.

Circumstances affecting progress/budget:

The start of the project has been delayed 2 months from contract signing, along with a delay by the research team beginning work on the project. There has been no effect on the project budget.

