UTC RESEARCH PROJECT DESCRIPTION

PROJECT NUMBER
04303

PROJECT TITLE
County Road Pavement Management System

PRINCIPAL INVESTIGATOR
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OBJECTIVE
The Alabama Department of Transportation is currently upgrading its pavement management system (PMS) for state and federal routes. A similar but simpler tool is needed for county engineers to manage roadway pavement segments under their jurisdiction. The objective of this project is to develop a PMS targeted specifically for county roads. The anticipated system will take basic roadway condition and traffic inputs to identify pavement sections in greatest need of attention. The proposed PMS will provide county engineers an independent measure to compare roadway sections and supply the basis for infrastructure improvement decisions.

ABSTRACT
Pavement management systems are intended to supply information to support investment decisions and alternative analyses to improve the roadway infrastructure in a particular community. Network level pavement management systems examines all pavement segments in an area and are used to identify the segments that should be scheduled for activity in the current year, and those which can be postponed to later years. These systems incorporate various roadway, traffic and accident data and determine needs for future maintenance, rehabilitation or reconstruction activities. This proposal focuses on the development of a countywide, network level pavement management system intended to operate in either a spreadsheet or geographic information system software. The PMS will assist county engineers in making decisions regarding investment and budgeting for pavement maintenance and rehabilitation activities.

TASK DESCRIPTIONS:
1) Task one is the review of other pavement management systems.
2) Task two is the development and testing of the proposed county pavement management system.
3) Task three is the analysis of operation for the pavement management system.
4) Task four is the development of documentation and preparation of the pavement management system for transfer to other counties.
MILESTONES AND DATES
The time frame of the project is from January 1, 2004 – December 31, 2004.

Task 1: Jan. 1 - Mar 31  
Task 2: Mar. 1 – Jun. 30  
Task 3: Jul. 1, 2004 – Oct. 31  
Task 4: Nov. 1 - Dec. 31  

STUDENT INVOLVEMENT
There will be one graduate and one undergraduate student in the Civil Engineering Department at the University of Alabama in Huntsville assisting Dr. Anderson. They will assist in performing the literature review and developing the system.

RELATIONSHIP TO OTHER PROJECTS
This project is indirectly related to UTCA Project 03416 “Pavement Management System Review,” which is being conducted for the Alabama Department of Transportation.

TECHNOLOGY TRANSFER ACTIVITIES
The results of the project will be made available to county engineers as a tool for pavement management within each county. The project will develop software tools and documentation which will be presented at meetings of county engineers from Alabama.

POTENTIAL BENEFITS OF THE PROJECT:
The potential benefit of this project is a working pavement management system tool that will be available to county engineers to assist in identification roadways in need of rehabilitation or repair.

TRB KEYWORDS:
Pavement Management System, County Engineers