PROJECT NUMBER:
06402

PROJECT TITLE:
Alabama Bridge Management System Plus

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PROJECT OBJECTIVE:
The objective of this project to Enhance the Alabama Bridge Information Management System (ABIMS) to assist the Alabama Department of Transportation (ALDOT) in formulating its bridge preservation strategy to appropriately utilize available state and federal bridge funds. In accordance with this purpose we propose to deliver a standardized repeatable process, compliant with state and federal standards, for use in identifying and prioritizing bridges in need of maintenance action.

PROJECT ABSTRACT:
ALDOT, like other state DOTs, is facing a significant bridge maintenance, rehabilitation, and replacement workload due to the natural aging of their structures and increasing traffic loads. This project will synthesize the current best practices to create the foundation for the Alabama Bridge Information Management System Plus (ABIMS+). Based on benchmarking data from state departments of transportation, AASHTO guidelines for bridge asset management, and FHWA and State regulations, this project will produce the design for an extension to the existing ABMIS system to provide budgeting and deterioration forecasts along with identification of alternative preventative maintenance, rehabilitation, and replacement actions. Ultimately, the ABIMS+ project will create a standard, repeatable process for identifying and prioritizing bridges in need of preventive maintenance, rehabilitation, and replacement.
TASK DESCRIPTIONS
Task 1) Project Kickoff Meeting – The UA research team will meet with the ALDOT Project Advisory Committee to review project work steps, data sources, expectations and deliverables.
Task 2) Develop System Requirements – This task will identify the current state of practice in bridge management practices.
Task 3) Develop Prototype – This task will designate specific bridges by report type, network/bridge location, funding, preventative maintenance action, and other constraints.
Task 4) Beta Test – This task will be a test of ABIMS add-on software, conducted with ALDOT Maintenance Bureau staff members. It will typically involve evaluation of bridge screening criteria, reports, workflow, and other portions of the model.
Task 5: Deployment Plan Development – This will includes a training plan and information technology installation plans for data migration, code walkthrough, server specification, and acceptance.
Task 6: Deployment – This task will involve implementation of the Deployment Plan, definition of detailed objectives for a phase 2 project (forecasting condition analysis), and preparation and delivery of the final report.

MILESTONE DATES:
Task 1: Sep 07
Task 2: Oct 06-Jan 07
Task 3: Dec 06-Feb 07
Task 4: Mar-Apr 07
Task 5: May-Jun ‘07
Task 6: Jul – Aug 07

PROJECT BUDGET:
One-year project, ALDOT State Planning & Research funds, $115,034.

RELATIONSHIP TO OTHER PROJECTS:
This project builds on a series of projects that have dealt with asset management and bridge management systems: 02114 – GASB 34 and Asset Management, 02411 – Phase II: GASB-34 Compliance, 03417 – GASB 34 Compliance-Phase III (Bridges), 02114 – GIS Resource Allocation Visualization, 03112 – Management of Bridge Decay/Maintenance Forecasting, 04111 – Web-Enabled Bridge Sufficiency Calculator; and 5109 – Risk-based Bridge Inspect Management. Some of these projects have been funded by ALDOT and some by UTCA.

POTENTIAL BENEFITS
This project will improve information to manage the bridge maintenance backlog through the development and application of the standardized repeatable process for identifying and prioritizing bridge in need of maintenance. It will also enhance support for budget allocation decisions among preventative maintenance, replacement, and rehabilitation alternatives.

TRB KEYWORDS
Bridge management system, bridge deterioration, bridge maintenance, bridge rehabilitation