Statement No. 37

Arkansas State Highway and Transportation Department
Transportation Research Committee

RESEARCH PROBLEM STATEMENT

DATE: 08/16/2010 | **PROJECT AREA:** Maintenance

TITLE: Investigating the use of GPS Data Collection for Maintenance Operations

PROBLEM STATEMENT:

Locating bridges, culverts, signs and where maintenance activities are performed has long been accomplished using the established County, Route, Section and Log Mile maps. This system has served as the method to locate everything on the State's highway system. However, several problems with this system exists, such as inaccurate log miles, route changes or renumbering of routes, and the lack of updated log mile information. District maintenance operations heavily rely on this system for reporting where work is performed. Public utilities and many other agencies have converted over to a global positioning system (GPS) using latitude and longitude. AHTD is also using this GPS system in several applications.

However, the use of GPS for generating a database for maintenance activities has not reached the Districts. An investigation into the use of GPS data collection for maintenance operations is needed. The investigation would focus on supplying a District bridge inspection crew, a County maintenance crew, and the District Maintenance Engineer with GPS equipment to collect data on projects as part of their normal work activities. A procedure for utilizing this data into a GIS environment would then be developed.

OBJECTIVES:

The primary objective of this research is to collect GPS information during normal Maintenance operations and incorporate this data into a GIS system for Department use.

Form of Research Implementation:

This research would be implemented as a data collection procedure for the collection of GPS data and a GIS platform as a first step toward upgrading or replacing the existing County, Route, Section and Log Mile system.

Total Estimated Cost and Project Duration: **$** 125,000 **and** 24 **months.**

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ADVISORY COUNCIL RANKING	TRC RANKING	Statement Combined with Statement Number(s)
21	__	_____

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