UTC RESEARCH PROJECT DESCRIPTION

PROJECT NUMBER
05302

PROJECT TITLE
Internet Based Surveys and Traffic Modeling Work

PRINCIPAL INVESTIGATOR
Michael Anderson
Associate Professor of Civil Engineering
Department of Civil Engineering
University of Alabama in Huntsville
Huntsville, AL 35899
(256) 824-5028, (256) 824-6724 fax
midea@cee.uah.edu

OBJECTIVE
The objectives of this project are twofold. First, this project will test the applicability of Internet-based travel survey tools to collect travel information. The collected travel data will be validated statistically to evaluate Internet-based traffic data collection schemes in Alabama. The data collected will be published as updated urban modeling parameters. Second, this project will perform some general traffic modeling work. The travel modeling includes converting all the existing models to a single coordinate system and reviewing national environmental justice processes to develop a best practices manual for Alabama.

ABSTRACT
This project focuses on the needs of transportation planners and modelers within Alabama, who are responsible for maintaining the travel demand models use to develop long-range plans and justify major infrastructure investments in the metropolitan areas. The project will test the applicability of using Internet-based travel survey tools to collect information regarding transportation activities of individuals within the urban cities in Alabama. These travel data are vital as inputs to develop and improve travel modeling within the state. The travel information collected will be the basis for updating parameters in urban planning models that predict future roadway traffic volumes. Therefore, improving the accuracy of the urban planning models essentially improves the ability to forecast future traffic volumes and allows transportation professionals in Alabama to make better decisions regarding investment in new roadway facilities and infrastructure. In addition, the project will perform some needed traffic modeling work. The travel modeling work being proposed will include converting all the Metropolitan Planning Organization models to the same coordinate system and reviewing and evaluating existing environmental justice processes at the national level to work towards the development of a best practices manual for Alabama.

TASK DESCRIPTIONS
1) Design and test of the Internet based travel survey tool
2) Publication and data collection phase of the project
3) Analysis of data collected
4) Technology transfer of the information gathered
5) Conversion of the existing travel models into a single coordinate system
6) Review and evaluation of existing environmental justice processes
7) Final report

MILESTONES AND DATES
Task 1: Jul-Sep, 2005
Task 2: Oct
Task 3: Oct-Dec
Task 4: Jan, 2006
Task 5: Jan-Mar
Task 6: Mar-Apr
Task 7: Jun, 2006

STUDENT INVOLVEMENT
Two graduate students will be funded to work on this project. Each student will be awarded a graduate research assistantship position within one of the two disciplines (Civil or Industrial Engineering) and will be expected to complete a thesis based on this research effort.

RELATIONSHIP TO OTHER PROJETS
This project is being conducted independently of other research projects funded by UTCA.

TECHNOLOGY TRANSFER ACTIVITIES
The results of the project will be made available to transportation professionals who perform traffic modeling within the state. In addition, the results of the review of environmental justice practices will be provided to the Metropolitan Planning Organizations to improve the process and ensure Alabama is using the best possible techniques and analyses.

POTENTIAL BENEFITS OF THE PROJECT
The potential benefits of this project include a successful demonstration of the Internet as a tool for collecting travel data, as well as the publication of updated parameters to improve travel modeling within the state. In addition, the results of the coordination of existing travel models in a single coordinate system will be beneficial to the long-range of developing a comprehensive statewide travel model for Alabama and the environmental justice review will be beneficial to ensure Alabama is utilizing the best possible practices.

TRB KEYWORDS
Travel Surveys, Internet, Modeling