PROJECT OBJECTIVES
The objective of this project is to review historical and ongoing methodologies employed in Alabama for damage assessment, redesign, construction contracting, funding, project management, and overall fiscal management oversight in the event of major transportation facility infrastructure damage due to natural forces or malicious terrorist acts. Results will be used to recommend a framework for a formalized contingency planning process involving government and private sector EPC firms to assure rapid and cost effective response to disasters involving the transportation infrastructure. The recommendations may also outline legislation necessarily to enhance rapid response to qualifying incidents.

PROJECT ABSTRACT
The recent damage caused by hurricanes, Katrina, Rita, and Wilma have demonstrated the potential for enormous property damage and loss of life as well as disruption of government and other institutions in Alabama. Similar damage could be the result of a terrorist attack or series of attacks. Due to the low probability of terrorist attacks and uncertainty where natural disasters or terrorist attacks will occur, it is difficult to justify contingency planning dollars for the repair or even replacement of specific facilities. Nevertheless, when a disaster incident occurs, the urgency of the situation suggests that a deliberate design-bid-build process is not practical and an alternative approach is used to resolve the crisis. It is reasonable to question whether the quality of design; value engineering; material and service procurement; contractor selection; worker compensation and safety; and government oversight are in proper balance to insure just and reasonable costs to the taxpayers. Well crafted and comprehensive plans and procedures for the management, control and oversight of the Construction Industry during the recovery and rebuilding operations in Alabama is a responsible and proactive approach to security management. The proposed research project addresses the need to review historical performance and to present ideas for preplanning and implementation process enhancement. The project consists of four work tasks. The first task will be a compilation of available data describing the recovery and reconstruction experiences of transportation infrastructure facilities after accidents or natural disasters. The second phase will be a study of the potential approval, procurement, contracting, funding and scheduling processes associated with recovery and reconstruction from disaster events. The third phase will be the formulation of recommended contingency planning processes for recovery and reconstruction operations based on the results of the workshops and other supporting research. The final phase will be documentation and preparation of the final report.

PROJECT TASK DESCRIPTIONS:
Task 1: The first task will be a compilation of available data describing the recovery and reconstruction experiences of a few example transportation infrastructure facilities after accidents and natural disasters with particular emphasis on the recovery activities following hurricane Katrina in Alabama, Mississippi and Louisiana. Government and private sector participants will be interviewed and public records of contracts, costs, Inspector General reports, etc. will be reviewed. Local site visits will be conducted and some of the prime contractors and subcontractors will be interviewed.

Task 2: The second task will be a study of the potential approval, procurement, contracting, funding and scheduling processes associated with recovery and reconstruction from disaster events. This phase will include at least one workshop at UAB attended by knowledgeable government and private engineering and construction participants. At the workshop the research team will report findings from task 1 and present preliminary concepts for process improve/modification. The workshop dialogue will result in further refined recommendations and suggestions for further consideration and study.

Task 3: The third task will be the formulation of a recommendation contingency planning process for recovery and reconstruction operations based on the results of the workshops and other supporting research. Results may include recommendations for legislation.

Task 4: The fourth task (2 months) is the completion of the final report and submission for review. In addition to the final report, the project team will prepare additional summary and educational materials to be used in the education and technology transfer process following completion of the project study.

MILESTONES AND DATES:
Task 1: Jan 1 - Apr 30
Task 2: May 1 - Jul 31
Task 3: Aug 1 - Oct 31
Task 4: Nov - Dec 31

TOTAL BUDGET:
One-year project: UTCA $49,116; total budget $98,287

STUDENT INVOLVEMENT: Two graduate students from the Department of Civil and Environmental Engineering will be partially funded during this project. This work is timely and will spawn additional topics for further study by incoming students in the Graduate Construction Management Program at UAB.

RELATIONSHIP WITH OTHER RESEARCH PROJECTS:
This project is a stand-alone project as it does not tie to any other UTCA projects.

TECHNOLOGY TRANSFER: Results of this research will be excellent material for journal articles on the topic. Summary results will be specially tailored into short courses so as to maximize the ongoing technology and information transfer of UTCA projects.

POTENTIAL BENEFITS OF THE PROJECT: The results of this project are expected to provide a much needed understanding of the reconstruction process and a recommended roadmap for future planning and implementation processes which will result in reasonable costs and responsible contracting and construction management processes. In addition, the work products of this research project will include educational materials directly related to the transportation infrastructure of the state of Alabama and should be a valuable aid for orientation and education of transportation professionals in the state.