UTC RESEARCH PROJECT DESCRIPTION

PROJECT NUMBER
04215

PROJECT TITLE
Alternative Project Delivery Systems for Highway Projects

PRINCIPAL INVESTIGATOR
Tarek Rizk, Ph.D., P. Eng.
Assistant Professor
Civil and Environmental Engineering Department
The University of Alabama at Birmingham
Phone: 205-934-8406
Fax: 205-934-9855
Internet: rizk@uab.edu

PROJECT OBJECTIVE
The main objective of this study is to investigate the possibility of using Alternative Project Delivery Systems (APDS) to deliver ALDOT projects.

PROJECT ABSTRACT
This research will focus on three Alternative Project Delivery Systems namely: Design Build (DB), Construction Management at Risk (CM@R), and Job Order Contracting (JOC). The research team will identify certain types of ALDOT projects where APDS might reduce cost, construction time, and improve public safety while delivering projects of better or similar quality when compared to those delivered using the traditional design-bid-build. The researches will determine the life cycle cost savings that might be realized by using APDS. This research will also focus on technology transfer activities including a one day workshop, and one day seminar. The objectives of the workshop and the seminar will be to promote awareness of the APDS process, and to address any concerns that ALDOT engineers might have regarding delivering projects using APDS.

PROJECT TASK DESCRIPTIONS
1- Determine whether Alternative Project Delivery Systems (APDS) are appropriate to replace the traditionally used Design Bid Build (DBB) method for delivering certain types of ALDOT projects.
2- Determine the conditions and projects where APDS might reduce construction cost, and time while delivering projects of similar or better quality when compared to those delivered by DBB (current system).
3- Determine the possibility of improving public safety through using APDS.
4- Promote awareness and understanding of the APDS processes through technology transfer activities such as workshops, publications, and seminars.
MILESTONES AND DATES
Startup – January 2001
Tasks will be conducted concurrently until December 31, 2004

BUDGET
One-year project: UTCA $48,436; total budget $96,991

STUDENT INVOLVEMENT
A master’s student will work full time on this research. Her/his master’s thesis will be on APDS for public projects. A graduate student will also work part time on the research project. This research will constitute part of his/her master’s thesis. The project will provide the students with an excellent research opportunity in construction management, and transportation projects delivery systems.

TECHNOLOGY TRANSFER ACTIVITIES
The research project will promote the awareness of the APDS process through technology transfer activities such as workshops, publications, and seminars including:

1- One day training course on APDS will be organized in June, 2004.
2- One day workshop on the research findings will be organized in December, 2004.
3- Two papers will be submitted for possible publication in the ASCE Construction Management Journal, and in the proceedings of the TRB 2005 meeting.

POTENTIAL BENEFITS OF PROJECT
The proposed research project will investigate the possibility of using APDS to deliver ALDOT projects. APDS may significantly reduce construction time and cost of ALDOT projects while delivering structures of similar or better quality when compared to those delivered using the traditional DBB. Initial research findings indicate that millions of dollars could be saved by bidding and delivering public projects using APDS. By reducing construction time, APDS will significantly reduce construction related accidents.

TRB KEY WORDS
Alternative Project Delivery Systems, Construction Management, Job Order Contracting, Design-Build, Design-Bid-Build.