

## **Transportation Pooled Fund Program**

**Project Title:** Accelerated Bridge Construction (ABC) Decision Making and Economic Modeling Tool

**Project Number:** TPF-5(221)

**Reporting Period:** 1/1/2010 to 3/31/2010

**Project Start Date:** 12/23/2009

**Expected Project End Date:** 6/30/2011

**Percentage of Work Completed:** 17%

**Principal Investigator:** Dr. Toni Doolen  
Oregon State University  
541-737-5641

**Project Manager:** Benjamin Tang  
Oregon Department of Transportation  
503-986-3324

### **Progress:**

In January 2010, the first TAC team meeting was held. At this meeting each state member presented the research team with a brief summary of their projects and current state of applying ABC techniques and pre-fabricated bridge elements within their state. In this meeting, an agreement on the problem and research objectives was achieved and the work statement was approved by the members. The outcomes of this meeting were summarized and presented to the TAC members in two separate documents -- "presentation summary" and "discussion summary." In an effort to make it easier to share documents, analyses, and findings from the ABC Pooled Fund Study, a secure, collaborative research site using a product call Blackboard was created. This research site is being hosted at OSU and requires an account to access.

Based on the work statement approved in January's TAC meeting, the first task planned for the project was initiated. In this step, a comprehensive literature review on current state of the ABC was conducted. As a result, more than 40 documents including journal papers, conference publications, technical reports, theses, and presentations were collected and reviewed. These documents contain reports and presentations that identify the processes used by various state DOTs and other local agencies to implement ABC, summarize best practices associated with successful ABC projects, provide economic models and/or evaluation processes for estimating both hard and soft costs associated with general construction projects, and capture recommendations from AASHTO, NCHRP, RBG, and FHWA.

Based on a detailed review of the documents, four primary content areas were identified:

- Decision making
- Successful ABC projects
- PBES techniques and innovations
- Cost estimation

In March 2010, a tele-conference meeting was held to provide the TAC members with the research findings, resulting from the literature review (Task 1). A road map for the next steps was discussed, feedback from TAC members was received, and next face-to-face meeting was scheduled.

**Problems:**

None noted

**Work Planned for Next Quarter:**

In the second task, 8 ABC projects completed under the Highway for Life program will be fully analyzed. To capture the data from the completed projects, a data collection template will be developed. The development process will be conducted in collaboration with other TAC members. The preliminary drafts will be posted to enable dynamic feedback on the data template and study direction. During this step, plans for retrieving archival records and conducting interviews will also be developed to support the collection of data related to previous ABC projects. A summary report of Task 2 and the data template developed from the analysis of previous ABC projects will be presented to TAC members.

**Funds Available:** \$120,000.00

**Expenditures:** \$6,281.28

**Funds Remaining:** \$113,718.72