

TXDOT's RESEARCH AND TECHNOLOGY IMPLEMENTATION OFFICE
RESEARCH SUPERVISOR SEMI-ANNUAL PROGRESS REPORT

Fiscal Year 2003

Date of This Report March 1, 2003 Project Number 0-4568 / TPF-5(055) RMC 5

Period Covered by This Report September 1, 2002 – February 28, 2003

Project Title Rapid Bridge Replacement Techniques

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Project State Date March 28, 2002

Approved End Date August 31, 2003

1. REQUESTED CHANGES FOR POSSIBLE PROJECT MODIFICATION

Project Duration: No change in project duration is required at this time. (See comments about possible contract modification provided under “Work Plan” below.)

Project Personnel: No change in project personnel occurred during this report period and none anticipated during the next report period.

Funding Needs: No additional funding is required at this time. (See comments about possible contract modification provided under “Work Plan” below.)

Work Plan: No change in the current work plan is required at the time. However, some questions have been raised about the need for a computer based “Intelligent System” tool as a product from this project. Such a tool is feasible but beyond the scope of the current project agreement, and its development would require a contract modification to increase the project scope of work, duration, cost, and deliverables.

Deliverables Table: No change in the current Deliverables Table is required at this time. (See comments about possible contract modification provided under “Work Plan” above.)

2. PROGRAM DEVELOPMENT INFORMATION

This project is currently scheduled to terminate at the end of FY 2003.

3. EQUIPMENT

No equipment is currently scheduled to be purchased under this project agreement.

4. PROGRESS TO DATE, BY TASK

Phase I

Task 1: A large number of articles and information sources have been identified, acquired, and reviewed. The literature review process will continue throughout the project as additional sites and information become available. A list of TxDOT critical structures have been reviewed, and the predominate types of superstructures and substructures have been identified. Additional information addressing substructure repair and replacement techniques will be identified and reviewed during the next report period. A large number of potential case study incidents and projects have been identified, reviewed, and summarized.

Task 2: A literature review summary and strategic plan was presented to TxDOT personnel on August 15, 2002, and again to representatives from the participating pooled-fund states on September 10, 2002. Both presentations were held in Austin, Texas. A positive decision was made to continue Phase II of the project.

Task 3: The required strategic plan development was completed during the summer of 2002, and it was presented and approved at the 2 meetings identified in the Task 2 write-up above.

Phase II

Task 4: Additional information addressing substructures and approach spans of the critical structures identified in Texas was requested, received, reviewed and summarized. Materials and techniques identified in Task 1 continue to be evaluated for applicability and summarized for incorporation into the project. Two meetings were held with TxDOT personnel, one in the Houston District and one in the Austin District, to identify and discuss repair procedures and materials that have been successfully used in these districts. A meeting was also held with Paul Mkalar who is associated with the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi to discuss emergency bridge replacement. Another meeting is anticipated in the spring of 2003. Meetings and contacts with Eugene Sobecki of Acrow Bridge Corporation have been utilized for information associated with temporary bridge structures. Identification and evaluation of applicable expedient bridge replacement and repair techniques and materials will continue.

Task 5: In 1998, Interstate 95 @ Chester Creek Bridge incident was approved as one of the case studies during the September 10, 2002, meeting in Austin. The draft of this case study is near completion and submission to TxDOT for review and comments is anticipated by March 7, 2003. Several other potential case studies have been identified and summarized. Submission to TxDOT of this summary with a ranked order recommendation for the remaining case studies is also anticipated by March 7. Following approval by TxDOT, work on the remaining case studies will continue during the next report period.

Task 6: Identification of how incentives and advanced preparations can impact emergency bridge repairs or replacements has been ongoing through reviews of potential case studies, discussions at meetings, and reviews of emergency response plans and documents. The submission of draft comments and recommendations related to Emergency Response Procedures to TxDOT for its review and comments is anticipated by March 7, 2003.

5. PROGRESS DEVELOPMENT OF CURRENTLY APPROVED “PRODUCT” DELIVERABLES

Data and information need for Product No. 1 and Deliverables No. 1 and S, is under development and on schedule for a timely completion.

Product No. 2 was presented/provided at the August 15, 2002, meeting in Austin, Texas.

6. MEETINGS/CONFERENCES

Texas Tech University research staff meetings have been and will continue to be held on a weekly basis. A meeting with representatives from the pooled-fund states was held in Austin, Texas, on September 10, 2002. A meeting with Acrow Bridge Corporation was held in Lubbock, Texas on October 15, 2002. A meeting with U.S. Army, Engineer Research and Development Center was held in Lubbock, Texas, on October 28, 2002. A meeting was held with TxDOT Houston District personnel in Houston, Texas, on December 17, 2002. A meeting was held with TxDOT Austin District personnel and Jim Daily (TxDOT’s Emergency Response Coordinator) in Austin, Texas, on January 10, 2003. Additional meetings are anticipated but no specific dates or times have been set at this time.

7. POSSIBLE CANDIDATES FOR FORMAL PRESENTATIONS AT THE UPCOMING RMC MEETING

If no additional contact modifications are implemented, this project will be completed by August 2003, and will have a high potential for presentation at either the November 2003, or June 2004, RMC 5 Meeting.

8. MISCELLANEOUS

None.