

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): IOWA DOT

INSTRUCTIONS:

Project Managers and/or research project investigators should complete a quarterly progress report for each calendar quarter during which the projects are active. Please provide a project schedule status of the research activities tied to each task that is defined in the proposal; a percentage completion of each task; a concise discussion (2 or 3 sentences) of the current status, including accomplishments and problems encountered, if any. List all tasks, even if no work was done during this period.

Transportation Pooled Fund Program Project # TPF-5(313)		Transportation Pooled Fund Program - Report Period: Quarter 1 (January 1 – March 31, 2020) Quarter 2 (April 1 – June 30, 2020) X Quarter 3 (July 1 – September 30, 2020) Quarter 4 (October 1 – December 31, 2020)	
Project Title: Technology Transfer Concrete Consortium (TTCC) TPF-5(313)			
Project Manager: Khyle Clute		Phone: 239-1471	E-mail: Khyle.Clute@dot.iowa.gov
Project Investigator: Steve Tritsch		Phone: 294-8103	E-mail: stritsch@iastate.edu
Lead Agency Project ID: RT 0273	Other Project ID (i.e., contract #): Addendum 532	Project Start Date: 2/5/15	
Original Project End Date:	Contract End Date: 12/31/2020	Number of Extensions: Incremental funding, PFS	

Project schedule status:

☒ On schedule
 ☐ On revised schedule
 ☐ Ahead of schedule
 ☐ Behind schedule

Overall Project Statistics:

Total Project Budget	Total Cost to Date for Project	Total Percentage of Work Completed
\$2,000,000	\$1,648,647	NA

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$11,296	N/A	N/A

Project Description:

The goal of the TTCC is to:

- Identify needed research projects
- Develop pooled fund initiatives
- Provide a forum for technology exchange between participants
- Develop and fund technology transfer materials
- Provide on-going communication of research needs faced by state agencies to the FHWA, industry, and CP Tech Center
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Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):

- Progress on the 5 syntheses:
 - Shrinkage & Crack Free Bridge Decks: Jason Weiss
 - Pavement ME Upgrades: Georgene Geary
 - Maintaining Smoothness: Jerod Gross
 - Fast Setting Patching Materials: Tyler Ley
 - Dowel Testing: Mark Snyder/ ACPA

Dowel Design/Testing - Jerry Voigt/Mark Snyder**Progress this quarter:**

All planning and preparatory work for the testing was performed and the testing was conducted in accordance with the project scope of work. CTL provided a report summarizing the work performed and the results obtained. This report was reviewed and only minor editorial comments were generated. Work began on analyzing the test results and comparing them with the results predicted by previously performed finite element analyses.

Anticipated work next quarter:

Analyses will be completed and a project report will be prepared. The report will include recommendations for implementing the test procedure in specifications for pavement dowels, and those recommendations will be implemented in the NCC/ACPA guide specification that is under development.

Percentage of work completed: 60 percent.

Pavement ME Upgrades – Georgene Geary**Progress this quarter:**

- Completed Task 1 and submitted literature review. Literature review identified 159 references to be considered as part of the Tech Brief
- Proposed an improvement on the literature review to be included with Task 2 draft report.
- Purchased software and associated documentation identified as part of the project.
- Started drafting Tech Brief, Task 2.

Anticipated work next quarter:

- Complete Task 2 Draft Tech Brief

Percentage of work completed: 35%

Guidance on Shrinkage & Crack Free Bridge Decks – Jason Weiss**Problems:**

During the last quarter aspects of COVID-19 related delays as well as fire related delays could have been incurred. We have worked hard to stay on track. Specifically slowed internet traffic has resulted in a bit slower searches however this is now off and running. One aspect however that should be noted is that we have uncovered a large number of papers.

Progress this quarter:

A large literature review was initiated and the outline has been started. A literature review is being performed to form the basis for a document that is approximately thirty five pages. To date approximately 3,000 papers have been discovered and the papers are currently being evaluated. The annotated bibliography is being initiated. A chapter has been started on restrained shrinkage cracking testing and the work is starting to come together however sorting items into various locations will take longer than originally anticipated. I believe we are slightly advanced on the literature collection; however the writing is still coming into focus. Papers are currently being reviewed. Task 1 is complete and Task 2 has been initiated with the general writing and the factors that contribute to restrained shrinkage cracking are underway.

Anticipated work next quarter:

During the coming quarter it is anticipated that the first chapter will be ready near the end of October or the beginning of November. It is anticipated that by the end of the quarter four chapters will be ready. Topics to be discussed will include aspects of mixture proportioning as well as features of the water to cementitious materials ratio and the chemistry of the cementitious materials.

Percentage of work completed: 12.5 %

Maintaining Smoothness – Jerod Gross**Progress this quarter:**

Literature search is complete. We have requested IRI information from state agencies and have begun reviewing the data. We are reviewing case studies for PCC diamond grinding. For the state of practice, we have assembled an inventory of NCC states specifications for smoothness.

Anticipated work next quarter:

We will continue to request IRI performance data from state agencies and review data. We will be assembling the draft report.

Percentage of work completed: 25%

Fast Setting Patching Materials – Tyler Ley**Progress this quarter:**

I have been collecting literature for the report and talking to people in the industry.

Anticipated work next quarter:

Finish up the literature review and begin writing the report.

Circumstance affecting project or budget (Describe any challenges encountered or anticipated that might affect the completion of the project within the time, scope, and fiscal constraints set forth in the agreement, along with recommended solutions to those problems). N/A

There are 34 TTCC TPF 5(313) TAC member states. Representative attendance varies by meeting.

State & # of Reps		State & # of Reps		State & # of Reps		State & # of Reps		State & # of Reps	
Alabama	2	California	1	Colorado	2	Florida	2	Georgia	4
Idaho	2	Illinois	2	Indiana	4	Iowa	2	Kansas	4
Louisiana	2	Massachusetts	2	Michigan	2	Minnesota	2	Missouri	1
Montana	2	Nebraska	1	Nevada	1	New York	1	North Carolina	2
North Dakota	2	Ohio	2	Oklahoma	3	Pennsylvania	1	South Carolina	2
South Dakota	2	Tennessee	2	Texas	2	Texas	2	Utah	1
Washington	1	West Virginia	1	Wisconsin	1	Kentucky	2	Massachusetts	2
Oregon	1								