

## 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.*

<b>Transportation Pooled Fund Program Project #</b> TPF-5(368)	<b>Transportation Pooled Fund Program - Report Period:</b> Quarter 1 (January 1 – March 31, 2017) Quarter 2 (April 1 – June 30, 2017) Quarter 3 (July 1 – September 30, 2017) <input checked="" type="checkbox"/> Quarter 4 (October 1 – December 31, 2017)	
<b>Project Title:</b> Performance Engineered Concrete Paving Mixtures		
<b>Project Manager:</b> Todd Hanson	<b>Phone:</b> 239-1471	<b>E-mail:</b> todd.hanson@dot.iowa.gov
<b>Project Investigator:</b> Peter Taylor	<b>Phone:</b> 515-294-9333	<b>E-mail:</b> ptaylor@iastate.edu
<b>Lead Agency Project ID:</b>	<b>Other Project ID (i.e., contract #):</b> Addendum 629	<b>Project Start Date:</b> 10/1/17
<b>Original Project End Date:</b> 12/31/2019	<b>Current Project End Date:</b>	<b>Number of Extensions:</b> 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
\$1,345,000	0.00	2%

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
0.00		

**Project Description:**

Concrete for pavements has historically been specified and field controlled around acceptance criteria that do not relate well to durability (slump, air content, strength). Paving concrete specifications need to be built upon engineering properties that directly relate to good field performance. With the recent advancements in research knowledge on failure mechanisms, and the parallel development of better tests, this is possible.

A review of many current and new specifications has found that they are still largely based on strength, slump, and air, which provide limited correlation with the mechanisms of pavement failure currently observed. The need for change in the way we specify concrete, especially concrete for paving mixtures, is becoming increasingly apparent as mixtures become more complex with a growing range of chemical admixtures and supplementary cementitious materials. Traffic loadings continue to increase, more aggressive winter maintenance practices are implemented, and demand increases to build systems more quickly, cheaply, and with increased longevity.

Tasks include:

- Task 1: Implementing What We Know
- Task 2: Performance Monitoring and Specification Refinement
- Task 3: Measuring and Relating Early Age Concrete Properties to Performance

**Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc.):**

For Quarter Ending December 31, 2017:

Web meeting held with TAC December 21 2017

Work was started on the following activities:

- Plan face to face TAC meeting in early 2018
- Developing schedule for needed training materials
- Planning which states to visit in 2018

**Anticipated work next quarter:**

- \* Continued work on scheduling the face to face TAC meeting in early 2018
- \* Continue developing training materials
- \* Contacting states regarding 2018 visits

**Significant Results:**

**Circumstances 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).**

**TAC members (conference call held December 21, 2017)**

**Name / Agency**

Ahlstrom, Gina / Federal Highway Administration  
Baer, Patricia / Pennsylvania Department of Transportation  
Dennis, Dan / New York State Department of Transportation  
Hanson, Todd / Iowa Department of Transportation  
Hayes, Chad / Wisconsin Department of Transportation  
Hodges, Darin / South Dakota Department of Transportation  
Hoops, Clint / Idaho Department of Transportation  
Hunter, Brian / North Carolina Department of Transportation  
Krstulovich, James / Illinois Department of Transportation  
Meggers, Dave / Kansas Department of Transportation  
Miller, Dan / Ohio Department of Transportation  
Prieve, Eric / Colorado Department of Transportation  
Staton, John / Michigan Department of Transportation