

## 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(313)	<b>Transportation Pooled Fund Program - Report Period:</b> Quarter 1 (January 1 – March 31, 2018) Quarter 2 (April 1 – June 30, 2018) X Quarter 3 (July 1 – September 30, 2018) Quarter 4 (October 1 – December 31, 2018)	
<b>Project Title:</b> Technology Transfer Concrete Consortium (TTCC) TPF-5(313)		
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<b>Lead Agency Project ID:</b> RT 0273	<b>Other Project ID (i.e., contract #):</b> Addendum 532	<b>Project Start Date:</b> 2/5/15
<b>Original Project End Date:</b>	<b>Contract End Date:</b> 12/31/2019	<b>Number of Extensions:</b> Incremental funding, PFS

Project schedule status:

On schedule       On revised schedule       Ahead of schedule       Behind schedule

Overall Project Statistics:

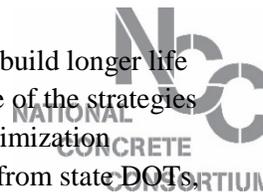
Total Project Budget	Total Cost to Date for Project	Total Percentage of Work Completed
\$1,520,000	\$966,647.92	NA

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$22,383.89	N/A	N/A

## Project Description:

Increasingly, state departments of transportation (DOTs) are challenged to design and build longer life concrete pavements that result in a higher level of user satisfaction for the public. One of the strategies for achieving longer life pavements is to use innovative materials and construction optimization technologies and practices. In order to foster new technologies and practices, experts from state DOTs, Federal Highway Administration (FHWA), academia and industry must collaborate to identify and examine new concrete pavement research initiatives. The purpose of this pooled fund project is to identify, support, facilitate and fund concrete research and technology transfer initiatives.



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
- Provide guidance as part of the Track Team for the CP Road Map Mix Design/Analysis Track
- Provide assistance as requested by the CP Road Map Executive Committee on other select tracks

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

- Fall meeting was held in Saratoga Springs, New York, September 18-20
- The meeting summary is attached. PowerPoint information and other details from the spring meeting can be found at: <http://www.cptechcenter.org/ncc/TTCC-NCC-2018/>
- Reimbursements and expenses for the fall meeting are being processed.
- Planning for the 2019 Spring meeting, scheduled for April in Denver, Colorado

### Anticipated work next quarter:

- Continued planning for the Spring meeting.
- Writing a draft Problem Statement for continuation of the pooled fund project.

### Significant Results:

See <http://www.cptechcenter.org/ncc/TTCC-NCCMeetings.cfm>

**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).**

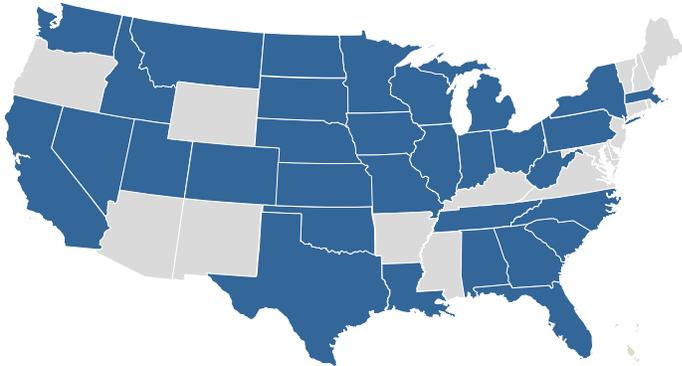
N/A

There are 32 TTCC TPF 5(313) TAC member states. Representative attendance varies by meeting.

State & # of Reps									
Alabama	2	California	1	Colorado	2	Florida	2	Georgia	4
Idaho	2	Illinois	2	Indiana	2	Iowa	2	Kansas	3
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	2	Pennsylvania	1		
South Carolina	2	South Dakota	2	Tennessee	2	Texas	2	Utah	1
Washington	1	West Virginia	1	Wisconsin	1				

## Fall 2018 National Concrete Consortium Highlights

Saratoga Springs, New York – September 18–20, 2018



TTCC TPF 5(313)

32 Member States + Illinois  
Tollway

The 2½-day spring meeting of the National Concrete Consortium (NCC<sup>2</sup>) hosted by the New York DOT brought together the expertise and experience of 185 attendees from: FHWA, 33 DOTs (68 individuals), the Illinois Tollway, the New York State Thruway Authority, academia, and industry in an excellent event focused on improving concrete performance and structural concrete applications. Maria Masten, Concrete Materials Engineer from the Minnesota Department of Transportation, is the current chairperson. The meeting agenda and all technical presentations are available on the NCC website ([www.cptechcenter.org/ncc](http://www.cptechcenter.org/ncc)).

Discussion Items from the State DOT representatives meeting:

- National Concrete Pavement Technology Center updates:
  - Peer-to-Peer pavement preservation meetings and workshops
  - List serve survey – 7 questions since the Spring meeting
  - TTCC TPF-5(313) Pooled Fund update - Pooled fund projects need to be renewed every five years. Iowa DOT (lead state) and CP Tech Center working towards the new pooled fund solicitation being active by March for some states research commitment timetable.
  - *Fiber Reinforcement for Concrete Overlays and Bridges* update – completion date December 31, 2018
  - Training topics
- Jeff Roesler, PhD, PE presentation on Fiber Reinforcement for Concrete Overlays and Bridges
  - Fiber dosage spreadsheet for pavements
  - Will be 3 workshops
  - Report under review as a companion to the spreadsheet
  - Bridge section to be included in the final document
- Open Discussion:
  - FHWA Study on Corrosion Resistant Metallic Dowel Bars
  - O-Dowel and approvals – Wisconsin and Iowa allow
  - Early age opening to traffic – IA uses maturity since 1997, MnRoad study on early loading, MN doing a roundabout with fibers and no joints.
  - ASR database maintained by CP Tech Center and updated via list serve surveys.
  - Train-the-trainer workshops

- Research on form work removal considering accelerated mixes and traditional mixes – Oklahoma State University
- Internal curing – where is it headed and latest findings. NY required it on a bridge deck and WI is looking at cost effectiveness.
- MIT scan discussion – some states using for acceptance, airblast furnace slag can affect results, still have to cut wires, name change for dowel location but MIT scan designated for thickness measurement.
- 3M natural pozzolan – not a lot of field data yet and cost concerns.

The general session consisted of 23 topics, 5 presentations by representatives from state agencies, 3 from FHWA, 5 from academia, and 5 from the industry sector.

General meeting presentation highlights include:

- Updates:
  - National Concrete Pavement Technology Center
  - Federal Highway Administration
  - State reports – QC/QA state practices, tolerance, quality plans, plant certification, E-construction and PEM status
- Performance Engineered Mixtures (PEM):
  - Pooled fund update
  - IA and MN experience
  - Variability of PEM Tests – FHWA mobile concrete trailer experience
  - Industry SAM testing with various cements
- Acceptance when Balancing Quality/Cost/Time:
  - Constructing a quality product
  - Development and use of effective quality plans
- Quality Assurance – Quality Control and Quality Acceptance:
  - Industry perspective
  - Seasoned experience with QC/QA - Illinois
  - Recent implementation of QC/QA – New York
- Research:
  - Salt and deicers scaling
  - FHWA concrete pavement preservation strategies
  - SPS-2 performance update
  - Determining optimized traffic opening time through an in-situ NDT method
- Accelerated Construction – Use of Precast Concrete for Pavements and Bridges:
  - UHPC/precast DOT experience – New York
  - New NY Bridge – New York State Thruway Authority
  - Preview of Fort Miller field trip – Schuylerville, NY
- Use of Technology and E-Documentation:
  - E-Construction
  - C-tag and app for tracking PP84 field implementation
  - LADOTD Evaluation of HeadLight: an E-construction inspection technology

Upcoming meetings:

- Spring 2019 NC<sup>2</sup> meeting: Lakewood, Colorado on April 2-4, 2019.
- Fall 2019 NC<sup>2</sup> meeting: Montana (location and dates TBD)
- Spring 2020 meeting: Alabama (location and dates TBD)
- Fall 2020 meeting: tentatively in conjunction with ISCP's 12<sup>th</sup> International Conference on Concrete Pavements in Minneapolis, Minnesota