

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(233)	Transportation Pooled Fund Program - Report Period: <input checked="" type="checkbox"/> Quarter 1 (January 1 – March 31, 2014) <input type="checkbox"/> Quarter 2 (April 1 – June 30, 2014) <input type="checkbox"/> Quarter 3 (July 1 – September 30, 2014) <input type="checkbox"/> Quarter 4 (October 1 – December 31, 2014)	
Project Title: Technology Transfer Intelligent Compaction Consortium (TTICC)		
Project Manager: Steve Megivern	Phone: 239-1936	E-mail: stephen.megivern@iowa.dot.gov
Project Investigator: David White Pavana Vennapusa	Phone: 294-1463 294-2395	E-mail: djwhite@iastate.edu pavanv@iastate.edu
Lead Agency Project ID: RT 0347	Other Project ID (i.e., contract #): Addendum 385	Project Start Date: 8/6/10
Original Project End Date: 3/15/14	Current Project End Date: 06/30/2014	Number of Extensions: Ongoing pooled fund; interim budgets

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
\$249,000	\$207,862.91	ongoing

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Completed This Quarter
\$42,842.73		

Project Description:

Increasingly, state departments of transportation (DOTs) are challenged to design and build longer life 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 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 and emerging technologies and systems. The purpose of this pooled fund project is to identify, support, facilitate and fund intelligent compaction research and technology transfer initiatives.

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

- A web meeting was conducted with the TAC on January 6, 2014. Meeting minutes are provided below.
- A draft version of the IC101 video was presented at TRB 2014 meeting and was also provided to TAC for review and comments. The final video was updated based on comments received from TAC.
- The final IC 101 video has been posted on CEER Youtube channel. The video received over 1,100+ views by the end of this quarter.
- The IC101 video was also presented at the GeoCongress 2014 meeting.
- A new CEER-TTICC webpage was designed to highlight the video and an interactive IC project locations map. The ISU research team compiled a list of demonstration/research and pilot projects (with specifications) conducted in the US by the state and federal agencies. A total of 125 projects have been identified from 2002 to 2013. The TTICC website is currently being updated with this information. The goal is to show the project locations by differentiating the locations by HMA or earthwork projects, demonstrations or pilot projects, and links to specifications, project reports, tech briefs, magazine articles, or any other relevant information available from each project. CEER is working with the InTrans Publications in updating the map.

Anticipated work next quarter:

- Update CEER-TTICC webpage with content added to the interactive project locations map.
- 3-4 additional Case Histories.
- Conference call to plan summer meeting details
- Work with FHWA to integrate TTICC products into the EDC training program (by request)

Significant Results:

- IC101 video posted on CEER Youtube channel. The video received over 1,100+ views in about 2 months.
- A new CEER-TTICC webpage was designed (<http://www.ceer.iastate.edu/tticc>).
- An interactive project locations map has been updated with 125 project locations and is posted on the new webpage.

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).

The TTICC group is still working on setting up the 2014 meeting. Once these details are set, the budget can be updated.

TAC committee:

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	Jed Peters	WiDOT	jed.peters@dot.wi.gov

TTICC Web Meeting Minutes

January 6, 2014

Attendees:

Bill Stone (BS) – Missouri DOT
Kevin McLain (KM) – Missouri DOT
Dan Ash (DA) – Missouri DOT
Craig L. (CL) – Ohio DOT
Dan Clark (DC) – Pennsylvania DOT
Sherri – Pennsylvania DOT
Edward Hoppe (EH) – Virginia DOT
Jed Peters (JP) – Wisconsin DOT
Judy Ryan (JR) – Wisconsin DOT
Melissa Serio (MS) – Iowa DOT
Steve Megivern (SM) – Iowa DOT
Al Casteel (AC) – Georgia DOT
David White (DW) – ISU/CEER
Pavana Vennapusa (PV) – ISU/CEER

Updates from State DOT:

Iowa DOT (MS): We have requested funding support for technology transfer with MN. Yet to receive approval from FHWA.

Missouri DOT (BS): FHWA's IC workshop is planned for March 19/20th (not confirmed yet). Dan Ash and Bill are working on setting up Pilot HMA IC projects with retrofitted systems.

Wisconsin DOT (JR/JP): There are some overlay projects coming up and may present an opportunity for using IC. Currently implementing base layer compaction spec, few hurdles to jump through before implementing IC on soils/base.

Virginia DOT (EH): Nothing new to report since last meeting. We are still looking for possibilities.

Penn DOT (DC): Pre-construction meeting on first IC project in District 3. Not sure if it will be this year or next. IC workshop planned in Harrisburg on April 7th. As soon as it is finalized, we will advertise.

Georgia DOT (AC): Two projects with IC are scheduled this year as discussed during last meeting – both are earthwork projects (subgrade and base). We also have a conference/IC workshop in April.

Ohio DOT (CL): Ohio conducted FHWA IC workshop last summer for soils/HMA. Did a pilot project and collected data, but correlations with density did not turn out that well.

WisDOT (JR): Wondering if IC can be a solution for problems with longitudinal joints? There is a pretty big push right now on HMA side on issues with longitudinal joints. Probably worth looking at it.

ISU/CEER (DW): Showed slides of IC projects to date. 122 research/demonstration and pilot projects (with specs) so far till 2013. We are in the process of linking each project location with links to project specs, reports, tech briefs, etc., where available. Please keep us posted with new projects so this database can be updated.

Iowa DOT (MS): Would be good to know how many of these are earthwork vs. HMA.

ISU/CEER (PV): The interactive map on the new TTICC website will have tabs that differentiate earthworks vs. HMA projects as well as whether they are research/demonstration projects or pilot projects with specs.

Wis DOT (JR): It is great to see this many total number of projects, but surprising why the technology is not catching on.

Ohio DOT (CL): We did see value from pass count data, but we are seeing challenge in writing a spec requiring it because of its lack of correlations with density.

Virginia DOT (EH): Do we have any tech briefs that demonstrate that the technology would save costs?

Wis DOT (JR): It doesn't have to directly show cost savings, any time savings can also be cost savings.

Penn DOT (DC): Biggest feedback we got is the possibility of having pass count info. But all the specs have density in it which makes it hard to implement the IC for QA. I see uniformity as a big positive with using the technology.

Wis DOT (JR): We don't need to give up density spec – but it would be great if we can integrate the uniformity aspect from IC data and control the number of tests required. It also gives a dataset to compare future performance.

GaDOT (AC): We had good success with the contractor to accept the technology. Our biggest problem is the software.

Wis DOT (JR): So what are our biggest barriers? Data management makes implementation difficult.

ISU/CEER (DW): Lot of good discussion. GeoCongress 2014 paper specifically addresses some of these aspects but definitely there is still ways to go. Although there have been quite a few projects, there are several implementation challenges.

2014 Meeting:

Penn DOT (DC): Submitted a request of meeting to upper management. Trying to see if we can get permission for meeting. Will let you know as soon as I find out. Field work schedule is uncertain, but will update soon.

MoDOT (BS): We'd be happy to host the meeting if PF budget can help people get to the meeting and piggy back on the IC workshop meeting by FHWA.

WisDOT (JR): Having the states completed with their workshops before we meet might be beneficial. Would be nice to piggy back with one of the FHWA workshops.

ISU/CEER (DW): Follow-up after TRB in a conference call to finalize the 2014 meeting date and location.

IC 101 Video:

Received an incomplete draft – DW and PV reviewed the draft – 15 min long.

We will have a draft completed by end of this week and share it with the TTICC team for review – need comments by end of the month so we can finalize and post it online.

Final Comments:

PennDOT (DC): I like the interactive map. I will send an email regarding details on the possibility to host the meeting in a couple of days.

WisDOT: Like the new website layout with the video highlighted. It is definitely more inviting and engaging for the visitors.

ISU/CEER (DW): You will see another Doodle poll for our next phone call meeting Jan 3rd/4th week and we will finalize the next meeting time.