

TRANSPORTATION POOLED FUND PROGRAM QUARTERLY PROGRESS REPORT

Date: _____ 12-19-2016 _____

Lead Agency (FHWA or State DOT): _____ Indiana 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.

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| Transportation Pooled Fund Program Project # <i>(i.e., SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX))</i> TPF-5(021) | Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31) <input type="checkbox"/> Quarter 2 (April 1 – June 30) <input type="checkbox"/> Quarter 3 (July 1 – September 30) <input checked="" type="checkbox"/> Quarter 4 (October 1 – December 31) | |
| Project Title: North Central Superpave Center Base Funding | | |
| Name of Project Manager(s): Tommy Nantung | Phone Number: 765/463-2532 x 248 | E-Mail: tnantung@indot.in.gov |
| Lead Agency Project ID: TPF-5(021) | Other Project ID (i.e., contract #): | Project Start Date: October 1, 2002 |
| Original Project End Date: | Current Project End Date: | Number of Extensions: |

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 | Percentage of Work Completed to Date |
|----------------------|--------------------------------|--------------------------------------|
| Continuing | | Continuing |

Quarterly Project Statistics:

| Total Project Expenses and Percentage This Quarter | Total Amount of Funds Expended This Quarter | Total Percentage of Time Used to Date |
|--|---|---------------------------------------|
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Project Description:

The North Central Superpave Center began on July 1, 1995, as one of five regional centers established to assist the states/provinces and industry in the region with the implementation of the Superpave mix design system for hot mix asphalt. The role of the NCSC has evolved to include all general hot mix asphalt issues as states in the region have adopted Superpave. The Center is administered through the Joint Transportation Research Program at Purdue University and is guided by a Steering Committee consisting of representatives of the agencies and industry in the participating states.

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

Progress will be reported in terms of the major activities planned for this project as established by the Steering Committee.

Training: Training will be developed and provided to participating states and other groups upon request.

Communication: Information requests are processed as they arrive; about 20-25 per month are received. Updates to the website and hosted sites (Multi-Regional Training and Certification Group (M-TRAC) and Combined State Binder Group (CSBG) were also posted. Published reports have now been downloaded from the Joint Transportation Research Program website about 8800 times.

Third Party Lab and Testing Services: Work continued on proficiency testing and maintenance of AMRL accreditation records. The NCSC has been contacted by a contractor in Vermont who once again would like testing completed on their RAP stockpiles; the samples were received at the end of the quarter for testing in early January.

Research: The study *Performance of Warranted Asphalt Pavements* was completed last quarter. This quarter, the final proof was reviewed and report published. In addition, a paper submitted to the Transportation Research Board was accepted for presentation. Based on the results, the Indiana Department of Transportation is planning to reinstate a warranty program for asphalt pavements.

The final report on *Analysis of the Multiple Stress Creep and Recovery Asphalt Binder Test and Specifications for Use in Indiana* was published this quarter.

Work continued on the study *Tack Coat Installation Performance Guidelines*. Testing of samples fabricated in the lab from plant-produced intermediate and surface mixes and of cores from a milled pavement is on-going. Concrete cylinders were cast last quarter but the diameter is too large for the gyratory compactor, so they are being remade. INDOT allowed the construction of a test section of highly polymer-modified tack in November and samples were collected testing. A six-month no cost time extension was requested and approved by the study advisory committee.

Samples were obtained for an industry-supported project on *Determining the Fiber Content in Crack Sealing Materials* and testing began. A meeting was held with the sponsor to discuss results to date.

Development of a Friction Performance Test for Compacted Asphalt Mixtures started October 1. The first step is developing a method to hold the compacted samples in place for polishing and testing.

Investigation of Delta T_c for Implementation in Indiana began November 1. In addition to the literature review, efforts to obtain RAP samples for testing this winter began; two contractors have offered six different samples.

Best Practices for Patching Composite Pavements was approved to start in mid-October. A literature review is underway and a survey questionnaire is being developed for approval by the study advisory committee.

Proposals were written and submitted this quarter for projects on Intelligent Compaction for the Illinois Tollway, an NCHRP project on in-place asphalt recycling, and an NAPA synthesis on Alternative Asphalt Binders. The first was not successful and the other two are pending.

Technology Transfer: The Technical Director participated in the National Pavement Preservation Conference in October. She was invited to participate in a Superpave Workshop for Manitoba Infrastructure in March 2018. She also participated in Planning a TRB workshop on implementation of Warm Mix Asphalt and why some states are lagging behind; this will be of to invited participants in 2017.

Anticipated work next quarter:

Training: No training is currently planned but will be developed and provided upon request.

Communication: Updates to the NCSC and NCAUPG websites will be posted. Information requests will be answered as received.

Third Party Lab and Testing Services: Third party testing will be performed as needed. Work will continue on maintaining the AMRL accreditation. The NCSC staff continued to work with the Civil Engineering Business Office on setting up a recharge center for billing this type of testing; it is anticipated this will be ready next quarter.

Research: Work will continue as planned on the research projects. New research needs will be identified and proposals prepared as appropriate.

Technology Transfer: The NCSC staff will attempt to schedule state visits throughout the region to learn of their top issues regarding asphalt mixtures and pavements and to reacquaint DOT staff with the Superpave Center and its resources. Based on the findings, proposals for pooled fund research and/or funding requests will be developed. A third regional forum will be scheduled.

Significant Results:

Readership reports for the published research reports show that they have been downloaded about 8800 times.

An increase in third party testing requests demonstrates the value of AMRL accreditation of the lab and represents an increasing funding source.

Circumstance affecting project or budget. (Please 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).

No new problems this quarter.

Potential Implementation:

Research results are considered individually for possible implementation by the states as they become available. There is great interest across the country in the study on optimizing compaction and on past recycling research, which is leading to numerous speaking engagements, which serve to spread the results to a broader audience. INDOT is constructing another trial of so-called Superpave5 based on a completed project and is pursuing reinstating an asphalt warranty program based on results of another. INDOT was planning to implement the findings of the study on the MSCR test and specification, but has reversed and now will not implement at this time.