# TRANSPORTATION POOLED FUND PROGRAM
# QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): _____**Kansas 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.*

<table>
<tr>
<td><b>Transportation Pooled Fund Program Project #</b><br><b>TPF-5(311)</b></td>
<td><b>Transportation Pooled Fund Program - Report Period:</b><br>☐Quarter 1 (January 1 – March 31)<br>X☐Quarter 2 (April 1 – June 30)<br>☐Quarter 3 (July 1 – September 30)<br>☐Quarter 4 (October 4 – December 31)</td>
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<tr>
<td colspan="2"><b>Project Title:</b>       <b>Implementation of the AASHTO Mechanistic-Empirical Design Guide (AASHTO Pavement ME) for Pavement Rehabilitation</b></td>
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<tr>
<td colspan="2"><b>Project Manager:  David Behzadpour, P.E.   Phone: (785) 291-3847   E-mail:David.Behzadpour@ks.gov</b></td>
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<td colspan="2"><b>Project Investigator:    Mustaque Hossain  Phone: (785) 532-1576           E-mail:mustak@ksu.edu</b></td>
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<td><b>Lead Agency Project ID:KS</b></td>
<td><b>Other Project ID (i.e., contract #):</b><br><br><b>RE-0678-01; C 2061</b></td>
<td><b>Project Start Date:</b><br><br><b>12/01/14</b></td>
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<td><b>Original Project End Date:</b><br><b>Multi-year project</b></td>
<td><b>Current Project End Date:</b><br><b>12/31/20</b></td>
<td><b>Number of Extensions:</b><br><b>2 (1 cost extension)</b></td>
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Project schedule status:

X☐ 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 |
|---|---|---|
| **$1,555,000** | **$1,149,055.94** | 80% |

*Quarterly* Project Statistics:

| Total Project Expenses This Quarter | Total Amount of Funds Expended This Quarter | Percentage of Work Completed This Quarter |
|---|---|---|
| **$0.00** | **$0.00** | 0% |

**Project Description**:
The Kansas Department of Transportation (KDOT) and the New York State Department of Transportation (NYSDOT) have been using Chapter 5 of the 1993 AASHTO Design Guide for rehabilitation design. AASHTO has adopted the pavement rehabilitation design procedures developed under the NCHRP 1-37A project for flexible and rigid pavement structures. These new procedures are based on mechanistic-empirical principles and they replace the earlier empirical procedures from the 1993 AASHTO Design Guide. The new procedures are incorporated in the AASHTOWare Pavement ME Design software.
The main objective of this research project is to conduct the local calibration of the AASHTOWare Pavement ME design procedure for pavement rehabilitation in Kansas and New York state. The results of the research will enable KDOT and NYSDOT to expedite the use of this new tool for the design of rehabilitated pavements. The results will also provide KDOT and NYSDOT with the necessary input values to design rehabilitated pavements using the mechanistic-empirical methods.

**Progress this Quarter (includes meetings, work plan status, contract status, significant progress, etc**.):
In this quarter, no work could be accomplished due to closure of KSU labs because of Covid-19.

**Anticipated work next quarter**:
Lab tests will continue on materials from one project. Some materials from the state of New York have been received. Work got interrupted due to the university closure due to Covid-19 issue. The subcontractor will continue the development of the software for FWD data processing for the NYSDOT part of the contract. The collection of data necessary for the calibration and the analysis of the traffic data will also continue. The literature review on the calibration activities conducted by other states and countries, and the recently developed models to be incorporates into the AASHTOWare Pavement ME will continue. Sampling of materials will continue and the laboratory testing will commence. The project progress is slow at KSU due to lack of a graduate student (a new student is expected to start in June 2020).

**Significant Results:**

This research work aims to contribute to the implementation of the AASHTOWare Pavement ME design software for rehabilitation design in Kansas and New York by performing the local calibration first.

**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).**

The AASHTOWare Pavement ME has a new version (2.5) which contains new models for cracking in flexible pavements, new material parameters and new calibration coefficients.