

KANSAS DOT RESEARCH PROJECTS QUARTERLY PROGRESS REPORT

Lead Agency (University or Contractor): 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.

KDOT Project Number RE-0738-01	Transportation Pooled Fund Program - Report Period: <input type="checkbox"/> Quarter 1 (January 1 – March 31, 2020) <input checked="" type="checkbox"/> Quarter 2 (April 1- June 30,2020) <input type="checkbox"/> Quarter 3 (July 1 – Sept 30, 2020) <input type="checkbox"/> Quarter 4 (October – December 31, 2020)	
Project Title: Utilization of Laser Induced Breakdown Spectroscopy for Real-Time Quality Control Monitoring and Characterization of Aggregate Materials Used in Highway Construction using		
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Project Investigator: Warren Chesner Phone: 516-431-4031 E-mail: wchesner@chesnerengineering.com		
Lead Agency Project ID: RE-0738-01	Other Project ID (i.e., contract)	Project Start Date: July 1, 2017
Original Project End Date: June 30, 2020	Current Project End Date: August 31, 2020	Number of Extensions: 1

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
\$870,000.	\$759,0080	87.2 %

Quarterly Project Statistics:

Total Project Expenses This Quarter	Total Amount of Funds Expended This Quarter	Percentage of Work Complete This Quarter
\$870,000.	\$75,556	8.6%

Project Description:

The primary objectives of this research effort is to develop a near-real-time laser-scanning system to rapidly classify aggregates used in highway construction. The intent is to employ this classification process to

- Quantify specific engineering properties (e.g., acid insoluble residue, soundness, LA Loss, etc.)
- Assess whether an aggregate will pass or fail a defined engineering property test
- Identify and/or quantify the presence of deleterious materials (e.g., ASR, chert, shale, reactive aggregate)
- Determine the composition of blends in stockpiled aggregate
- Determine the source of an unknown aggregate

Six states are part of this TPF program. They include: KS, MD, OK, OH, NY and NM.

Each State is supplying aggregates that will be tested and evaluated to determine the efficacy of the technology

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

During this period, project activities were reinitiated after a project shutdown from early March through mid-May due to the Covid-19 pandemic. As a result the project schedule was severely impacted. In mid-May scanning activities began again and were accelerated and all scanning and laser lab activities were completed by the end of June. The remaining project period will be focused on data analysis and modeling and the preparation of a final report.

Anticipated work next quarter:

Data analysis and final report preparation.

Significant Results:

Completed all sample scans.

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, with recommended solutions to those problems).

Due to Covid-19 the project budget and schedule has been impacted. A new project end date has been projected: August 31, 2020.