TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Lead Agency (FHWA or State DOT): FHWA

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 # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)*	**Transportation Pooled Fund Program - Report Period:**
TPF-5(004)	☐ Quarter 1 (January 1 – March 31) ☐ Quarter 2 (April 1 – June 30) ☐ Quarter 3 (July 1 – September 30) ☑ Quarter 4 (October 4 – December 31)

Project Title:

Weigh-in-Motion Field Calibrations and Validations

Name of Project Manager(s):	**Phone Number:**	**E-Mail**
Olga Selezneva	410-540-9949	oselezneva@ara.com
Lead Agency Project ID:	**Other Project ID (i.e., contract #):**	**Project Start Date:**
DTFH61-10-D-00019		April 28,2010
Original Project End Date:	**Current Project End Date:**	**Number of Extensions:**
April 27, 2011	April 27, 2012	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	Percentage of Work Completed to Date
$617,459.20	$569,411.55	92.22%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
22.22%	$126,525.43	82.57%

Project Description:

This is a multi-year project consisting of one base year and 4 optional years. All budget and project completion information is provided on the up-to-date basis from the beginning of the base year to the end date of the current Option Year. This project currently under Option Year 1.

Work under this contract includes the calibration and validation of weigh-in-motion systems located at twenty-four Long Term Pavement Performance locations throughout the country. Specific validation tasks include:

1. Coordination with the LTPP Regional Support Contractor and Agency
2. Pre-visit evaluation of current profile and traffic data
3. Site inventory, including system electronic testing and photographs
4. Visual inspection of roadway and WIM equipment
5. Static weighing and measuring of test trucks
6. Pre-Validation – two or more test trucks make a total of forty runs over the WIM site to determine the current accuracy of the WIM equipment
7. WIM calibration (if necessary) - adjustments are made to system operating parameters to compensate for weight or spacing accuracy error
8. Classification algorithm assessment
9. Post-Validation (if required) - two or more test trucks make a total of forty runs over the WIM site to determine the WIM system statistical accuracy
10. Reporting of validation results for each site and submittal of Annual Report
11. Attendance to meetings and presentations per FHWA request

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

All scheduled field validation activities for Task Order 5 (9/23/11) were completed during this quarter. All but 2 site validation and calibration reports were submitted during this quarter. The last two reports for the OH sites were submitted early in January. Task Order 5 WIM System Field Calibrations and Validations were conducted at the following LTPP sites:

Virginia, SPS-1 (510100) - 11-Oct-11
Illinois, SPS-6, (170600) - 1-Nov-11
Kansas, SPS-2 (200200) - 15-Nov-11
Louisiana SPS-1 (220100) - 21-Nov-11
California, SPS-2 (060200) - 29-Nov-11
Maryland, SPS-5 (240500) - 7-Dec-11
Ohio, SPS-1 (390100) - 13-Dec-11
Ohio, SPS-2 (390200) - 13-Dec-11

Summary of Findings/Results:

All sites passed the Validations for all loading parameters.

The two Ohio sites failed for Overall Length and had excessive bias for steering axle weights but passing based on overall weight measurement error. To our knowledge, the equipment at Ohio sites does not allow for independent calibration for steering axle weights or overall length.

Anticipated work next quarter:

All Task Order 5 validations are completed. It is anticipated that the next Task Order will be issued late in January.

Significant Results:

Based on the results of the validation, the Phase II contractor has corrected the equipment issues encountered with the adjacent lane at the Virginia SPS-1 site.

According to the pre-validation equipment tests, all sites covered under Task Order 5 are in working order.

None of the sites included in Task Order 5 failed calibration with respect to axle weight measurements. All sites were either successfully validated or calibrated and produce research quality weight data.

All sites, with the exception of the Maryland SPS-5 site, demonstrated overall misclassification rates in excess of the 2.0% LTPP requirement for SPS WIM sites. The Ohio SPS-2, Virginia SPS-1 and Kansas SPS-2 sites demonstrated heavy truck misclassifications in excess of 2.0%. The main issues are cross classifications between Class 3, 5, and 8 vehicles. For heavy trucks, the main issue at the Ohio SPS-2 site was Class 9 vehicles being misclassified as Class 6 and Class 8 vehicles. For the Virginia SPS-1, 1 Class 9 was identified as a Class 8 and one Class 10 was identified as a Class 13 by the WIM system. And for the Kansas SPS-2, two Class 9 vehicles were identified as Class 14s by the WIM system.

No sites failed axle spacing validation and calibration.

The Ohio SPS-1 and SPS-2 sites failed for Overall Length because the system reports overall axle length as overall inductive length and the WIM system does not provide a way of changing this or calibrating the system to provide overall length without affecting the axle spacing measurement accuracies.

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).

Adverse weather conditions may create challenges in scheduling validations for the next quarter. Scheduling of the validations may be changed to avoid inclement weather.

Future schedule may be affected based on when next Task Order will be issued.

No other challenges are anticipated at this time.

Potential Implementation: