**TRANSPORTATION POOLED FUND PROGRAM**

**QUARTERLY PROGRESS REPORT**

Lead Agency (FHWA or State DOT): MICHIGAN DEPARTMENT OF TRANSPORTATION

**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.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)*TPF-5(308) | **Transportation Pooled Fund Program - Report Period:**X Quarter 1 (January 1 – March 31) **[FY16- 2nd Qtr.]**□Quarter 2 (April 1 – June 30)□Quarter 3 (July 1 – September 30)□Quarter 4 (October 1 – December 31) |
| **Project Title:**The Use of Bridge Management Software in the Network Analysis of Big Bridges |
| **Name of Project Manager(s):**Rebecca Curtis | **Phone Number:**517-449-5243 | **E-Mail**Curtisr4@michigan.gov |
| **Lead Agency Project ID:**OR14-022 | **Other Project ID (i.e., contract #):**2016-0022 | **Project Start Date:**12/10/2015 |
| **Original Project End Date:**9/30/2017 | **Current Project End Date:**9/30/2017 | **Number of Extensions:**0 |

Project schedule status:

□ On schedule x On revised schedule □ Ahead of schedule □ Behind schedule

Overall Project Statistics:

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|  **Total Project Budget** |  **Total Cost to Date for Project** |  **Percentage of Work**  **Completed to Date** |
| $348,018.00 (plus PM Costs) | $32,023.10 | 7 % |

***Quarterly*** Project Statistics:

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|  **Total project expenses and** **percent to date** | **Project expenses and percent****expended this report period**  |  **Total Percentage of**  **Time Used to Date** |
|  $32,023.10/ 9.2 %  | $24,892.10/ 7.2 %  | 14.8 % |

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| **Project Description**:Current financial outlay plans for a network of standard bridges are managed by scheduling preservation and replacement projects based upon whole bridge needs. This is viewing element condition as an entirety for the bridge when for complex, long span or large deck bridge (Big Bridges) it may make more sense fiscally to view contiguous element groups, structure components, or bridge spans as a series of interactive networks. The AASHTO National Bridge Elements, Bridge Management Elements, and Agency Defined Elements were developed for standard structures and should be reviewed to see if the elements and their units are appropriate for the management of Big Bridges. Big Bridges are those that because of their size, complexity, or importance have dedicated maintenance and management staff or programs. Big bridges may include slab on girder bridges of significant length as well as other structures including suspension bridges, cable stay, trusses, movable bridges, arches, or boxes. Using element level bridge inspection data, engineers and managers of Big Bridges need to develop short, medium, and long range preservation management plans, they must predict when partial or full replacement of elements or components are most cost effective, and they need to develop maintenance budgets, business plans, and capital outlay planning accordingly. Management of the decks of Big bridges is of particular interest. |

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

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|  The review of recent research and literature was conducted, and a draft report was circulated to the research team for peer review. Bridge inspection and management reports were collected from some big bridge owners that M&M has close relationships with. A nationwide survey regarding the collection and use of element level data for the management of big bridges was developed and distributed to over 90 bridge owners throughout the country. Approximately 20 responses have been obtained.  |

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| **Anticipated work next quarter**:

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|  Recent research and literature review will be submitted to MDOT PM for TAC review on April 15, 2016. Continue to collect management and inspection reports from big bridge owners. Review these reports and generate a summary document of findings that presents commonalities, discrepancies, and unique practices between the various inspection and management programs. Send survey reminder to those bridge owners who have not responded and re-send survey request to alternate email addresses for ones that were rejected. Create summary report of survey results.  |

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| **Significant Results:** |
| **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).**

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| Delays in obtaining information from AASHTO committees and subcommittees has left some shortcomings in the research review document. This information will be filled in as it becomes available. Due to unique confidentiality requirements for each bridge owner, the acquisition of inspection and management reports may delay completion of Task 2 report.  |

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|  Survey questions and distribution list was submitted to MDOT PM on February 22, 2015. Pooled fund TAC meeting scheduled for March 29th was cancelled. Research team has been holding bi-weekly meetings to discuss upcoming work on Tasks 1, 2 and 3.  |

**The contract was initiated a month behind predicted schedule, however the research team believes that this time will be made up and there is not currently a need to change the end date of the project.** |

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| **Potential Implementation:** To be determined.  |