TRANSPORTATION POOLED FUND PROGRAM
QUARTERLY PROGRESS REPORT

Date: ___Jan 16, 2012_____

Lead Agency (FHWA or State DOT): __South Dakota 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.

Transportation Pooled Fund Program Project # *(i.e, SPR-2(XXX), SPR-3(XXX) or TPF-5(XXX)* TPF-5(054)	**Transportation Pooled Fund Program - Report Period:** Quarter 1 (January 1 – March 31) ☐Quarter 2 (April 1 – June 30) ☐Quarter 3 (July 1 – September 30) XQuarter 4 (October 1 – December 31)

Project Title: **Development of a Maintenance Decision Support System**		
Name of Project Manager(s): **Dave Huft**	**Phone Number:** **605-773-3358**	**E-Mail** Dave.Huft@state.sd.us
Lead Agency Project ID: **SD2002-18**	**Other Project ID (i.e., contract #):** **310814**	**Project Start Date:** October 14, 2002
Original Project End Date: **April 30, 2003**	**Current Project End Date:** **September 30, 2012**	**Number of Extensions:** 29

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	Percentage of Work Completed to Date
$5,476,937.00	$4,846,240.01	88.48%

Quarterly Project Statistics:

Total Project Expenses and Percentage This Quarter	Total Amount of Funds Expended This Quarter	Total Percentage of Time Used to Date
$266,689.89 (4.87%)	$266,689.89	92.5%

Project Description:

- The Maintenance Decision Support System research program is responsible for research and development related to the implementation of new information technologies to support transportation maintenance decisions, including both winter and summer decision support tools. The program also performs substantial research and development into parallel applications for the transportation industry that may either share data with MDSS, or benefit by leveraging technologies developed under the program (for instance, sharing of data between MDSS and other agency systems, or the development of management-oriented tools that leverage MDSS' capabilities).

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

- Continued development of a prototype MDSS application for Android smartphone and tablet devices, intended for initial release to members of the Technical Panel in early Q1 of 2012.

- Completed migration and continued associated debugging of MDC/AVL data processing hub. This hub now serves MDC/AVL data operationally to MDSS, and serves as the backbone for a suite of new management-oriented tools that will permit agencies to better utilize data collected by their MDC/AVL units (intended for release in early Q1 of 2012).

- The operational Version 8 of the MDSS GUI was released. Identified the cause of software exceptions / lock-ups in the MDSS GUI and rectified the problem, which was the result of use of a memory defragmentation option within the associated Java compiler.

- Provided operational support, including route additions / configuration adjustments, customer support, and weather forecasting support.

- Onsite training was conducted for several agencies. Each training session was tailored to user present. These training sessions included new users, maintenance management tools, and new features.

Anticipated work next quarter:

- Make the initial release of, and continue to refine and solicit feedback on, an MDSS application for Android smartphone and tablet devices.

- Release an initial version of the new MDC/AVL Management Tool, and continue to refine and solicit feedback on that tool.

- Continue the process of identifying and resolving bugs and other shortcomings in MDSS or other underlying processes.

- Implement a modified plan for assessment of MDSS recommendations during the 2011/2012 winter season, along with GUI modifications required to support the revised approach.

- Continue winter operations support, including weather forecasting support, customer support, and operational maintenance forecasts.

Significant Results:

- Significant results this quarter include the formal release of Version 8.0 of the MDSS GUI, and the near completion of initial development on both a prototype MDSS smartphone app, and a new MDC/AVL Management Tool, both of which were expected to be released at the beginning of Q1 2012.

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).

- Project was extended 1 year to continue work on the states research priorities and conduct operational field deployment trials.

Potential Implementation:

- The MDSS research program is presently entering its 7th phase of work. The core MDSS software / services have been operational within numerous state transportation agencies for several years or more, depending upon the agency.

- Meridian expects that both an operational Android MDSS application, and a new management tool aiding evaluation of agency maintenance operations through interpretation of agency MDC/AVL data, will be made available to Technical Panel members during the very early portions of Q1 2012.