# State Planning and Research Program
## Annual Report

| **PROJECT TITLE:** Pavement Surface Characteristics Rehabilitation MnROAD Study. TPF 5 (134). |
| **OBJECTIVES:** To demonstrate and field-validate some lab-tested unique diamond grinding configurations that optimize noise, Friction, Texture and Ride Quality |
| **PERIOD COVERED:** Jan to March 2010. **STATUS:** Active. **LEAD STATE:** Minnesota |
| **PARTICIPATING AGENCIES:** Mn/DOT, TXDOT, FHWA, ACPA, IGGA. |
| **PROJECT MANAGER:** Bernard Izevbekhai | **SP&R PROJECT NO:** TPF-5 (134) | **PROJECT IS:** |
| **LEAD AGENCY:** Mn/DOT |  | Planning |
| **PRINCIPAL INVESTIGATOR:** W. James Wilde, PhD, P.E. |  | Research & Development |
WORK COMPLETED:
- ACPA / IGGA performed the Grinding of 3 configurations at MnROAD Cell 37 for a proof –of –Concept and Preliminary On-Board –Sound –Intensity (OBSI) pre and post grind measurements on the 3 configurations + control. Mn/DOT performed Ride Friction, and Texture measurements on the same pre and post grind configurations.
- Memorandum of Understanding with Diamond Surface Incorporated to perform the Diamond Grinding Full width on cell 7 and 8 MnROAD.
- Measurements of Surface Characteristics parameters on the MnROAD Low volume Road.
- Actual grinding of the Mainline cells 7 and 8 to the current and Innovative grinding configurations.
- Pre-grind Measurements for the MnROAD Mainline.
- Grinding of Cells 7 and 8 full width by Diamond Surfaces Inc.
- Initial Post Construction Ride texture friction Ride measurement by Mn/DOT.
- Draft Construction (Grinding Report for cells 7 and 8 Innovative Grinding & Conventional configurations).
- Development of Limited Scope of Consultant Activity for MnSCU Mankato.
- Mn/DOT Initial Testing, Mn/DOT Rodeo (June 2008).
- Spring Testing Noise texture, Ride friction Measurements.
- Consultant (Minnesota State University, Mankato) Appointed for Data Analysis and Reporting. Principal Investigator is W. James Wilde, PhD.
- MnROAD Cell 9 Ultimate Grinding Cell Created Ground and Tested.
- Spring Testing (Texture ASTM E-965, E-2157, Friction GN & FN, IRI, OBSI).
- Proposal to Conduct comprehensive evaluation (OBSI, CPB, SPB) on a Real Roadway. (Prescott WI or Monticello TH 94 MN) Estimated to Cost $62,000. ($20,000 Approved from by the Pooled Fund) Contract with HDR executed.
- OBSI and SPB in Progress near Hasty MN. The 1000-ft section is ground and east of that section an unground portion is being evaluated.
- Successful Web meeting on June 1 2009. Plans for a RODEO discussed but not yet done.
- Analysis of Friction Ride and OBSI over time Presented by W.J. Wilde.
- Omnibus Cell 7 8 & 9 Report.
- Mn/DOT Transtec Rodeo on Cells 37 7, 8, 9 and others.
- OBSI and SPB in Progress near Hasty MN. The 1000-ft section is ground and east of that section an unground portion is being evaluated. Draft SPB Report Review.
- Summer 2009 Measurements.
- Fall 2009 Measurements.
- Statistical Pass Bys Testing Completed (HDR).
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- Draft report on Statistical Pass Bys Testing Completed (HDR).
- Spring testing by Mn/DOT OBSI Ride and texture (Mn/DOT).

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT Quarter:
- Continuous monitoring.
- Annual Report.
- Final Report on SPB.
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**STATUS AND COMPLETION DATE:**
- Project is on schedule. Consultant Task 1 Draft report Completed
- Data Analysis (OBSI Friction, texture, IRI)
- Can be completed On Schedule