

**State of Wisconsin/Department of Transportation/Midwest Regional University Transportation Center  
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: September 30, 2005**

<b>Project Title:</b> Incorporating Road Safety into Pavement Management: Maximizing Surface Friction for Road Safety Improvements		<b>Project ID:</b> 04-04
<b>Administrative Contact:</b> Jason Bittner		<b>Sponsor:</b> MRUTC
<b>WisDOT Technical Contact:</b> Nina McLawhorn		<b>Approved Starting Date:</b> July 1, 2003
<b>Approved by COR/Steering Committee:</b>		<b>Approved Ending Date:</b> December 31, 2005
<b>Project Investigator (agency &amp; contact):</b> UW-Madison, David Noyce		

**Description:** The objective of this research is to integrate road safety and pavement management strategies. Specifically, objectives include:

1. Determine the relationship between skid resistance and traffic safety;
2. Develop asphalt pavement mix design strategies that consider skid resistance as its primary measure of effectiveness;
3. Identify existing prediction models for skid resistance, propose modifications to models, and identify minimum skid resistance ranges to trigger the need for roadway maintenance;
4. Incorporate skid resistance and safety in a pavement asset management tool.

Total study budget	Expenditures for current quarter	Total Expenditures to date
\$221,038 (\$93,007 from other sources)	\$0 (LZ06) \$13,609.54 (ME92)	\$113,430.30

**Percent Complete: 95%**

**Progress This Quarter:** This quarter was spent summarizing data and generating the components of the final report. The literature review continues to be updated when new material is available. We have analyzed the skid data, sand patch data, and initial crash data and generated some of our initial findings.

**Work Next Quarter:**

Continue effort to complete the analysis and write the final report.

**Circumstances affecting progress/budget:** It took over 6 months to get the necessary field and crash data. WisDOT required some cost share for their skid trailer data collection. We requested a no cost time extension so we have the summer construction season to conduct a few follow up experiments and complete the report in early Fall. Formal approval of the time extension is requested.

**Please attach Gantt chart**

Tasks		2003						2004						2005										
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
Task 1: Literature Review; Focusing on the Region 5 States	Proposed	█	█	█	█																			
	Actual		█	█	█	█	█																	
Task 2: Analyze Existing DOT Skid Numbers	Proposed		█	█	█	█	█																	
	Actual		█	█	█	█	█	█	█	█	█	█	█	█	█									
Task 3: Define Correlation Between Road Safety and Skid Resistance	Proposed							█	█	█	█	█	█	█										
	Actual						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Task 4: Develop methods for measuring skid numbers	Proposed										█	█	█	█										
	Actual														█	█	█	█	█	█	█	█	█	█
Task 5: Develop Guidelines for Using Skid Numbers	Proposed														█	█	█	█	█					
	Actual														█	█	█	█	█	█	█	█	█	█
Task 6: Develop Maintenance Activities guidelines	Proposed																█	█	█	█				
	Actual																						█	█
Task 7: Prepare and submit final report	Proposed																				█	█	█	█
	Actual																						█	█

Tasks (CONTINUED)		2005												
		J	F	M	A	M	J	J	A	S	O	N	D	
Task 1: Literature Review; Focusing on the Region 5 States	Proposed													
	Actual													
Task 2: Analyze Existing DOT Skid Numbers	Proposed													
	Actual	█	█	█	█	█	█							
Task 3: Define Correlation Between Road Safety and Skid Resistance	Proposed	█	█	█	█	█								
	Actual	█	█	█	█	█	█	█	█					
Task 4: Develop methods for measuring skid numbers	Proposed	█	█	█	█	█								
	Actual	█	█	█	█	█	█	█	█					
Task 5: Develop Guidelines for Using Skid Numbers	Proposed	█	█	█	█	█								
	Actual						█	█	█					
Task 6: Develop Maintenance Activities guidelines	Proposed						█	█						
	Actual													
Task 7: Prepare and submit final report	Proposed		█	█	█	█		█	█	█	█			
	Actual		█	█	█	█						█	█	

