Period Covered: Through March 31, 2006 (Quarterly Report)

ALDOT Progress Report for the

State Planning and Research Program

PROJECT TITLE: Mix Design Criteria for 4.75mm Superpave Mixes										
PROJECT MANAGER: Dr. Randy C. West (334) 844-6857	SPR Project No: TPF-5(107) ALDOT Research Project No. 930-615P	Project is: PLANNING X RESEARCH & DEVELOPMENT								
Annual Budget	Multi Year Project Total Budget for Project 240,000.00 Total Cost to Date for Project 127,068.23									

Research Objectives

The objectives of this pooled-fund study are to:

- Refine and field validate mix design criteria for 4.75 mm NMAS Superpave mixtures
- Provide guidelines for appropriate application of 4.75 mm Superpave mixes
- Provide guidelines for production and construction of 4.75 mm mixes

Activities During This Reporting Period

Mix designs were completed for the mixture using materials received from the last of the participating states and the blend adjustment mixtures. Analysis was conducted on the volumetric properties and factors which influence the optimum asphalt content, VMA, and VFA. Overall, the mix designs with the supplied fine aggregates were generally satisfactory with regard to current AASHTO criteria. The most common problem is meeting the maximum VFA requirement. Most of the performance testing for the laboratory prepared mixes and the baseline mixtures was completed. The remaining performance tests include a few TSRs and permeability tests, and fracture energy ratio tests for about half of the mixtures. Many of the laboratory mix designs had poor rutting results in the Mix Verification Tester. Some analysis was conducted to provide guidance on how to improve the rutting resistance of these mixtures.

The draft Phase I report was begun. The fracture energy testing and further analysis of the laboratory tests need to be finished before the report can be completed. The Phase I report should be ready for review in late May.

Activities Planned For Next Quarter

- Complete fracture energy testing of remaining 4.75 mm mixtures.
- Complete Phase I report and present the findings to the research panel
- Begin Phase II of the research. States that have made preliminary plans for field projects using 4.75 mm mixtures for the validation work are Minnesota, Virginia, Tennessee, and Florida.

Problems Encountered or Anticipated

The work is progressing well now, just running about four months behind the original schedule.

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	\$ \$	178.9	133.3	135.3	164.2	160.6	202.9	130.9	129.6	102.2	119.5	160.8	117.8	190.0	141.6	157.9	177.1	108.7	108.2	105.3	136.8	146.5		220.1	164.4	137.1	209.4		159.8	49.2			117.5			101.7
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	film thickness (missons)	6.1	5.4	6.3	5.7	5.9	5.1	6.3	5.8	11.8	10.8	9.6	8.9	7.1	7.4	6.9	5.8	12.8	12.1	10.9	8.9	7.7		5.4	7.3	6.7	7.1		9.2	9.6	6.5	╛	7.9	\Box	8.9	6.3
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6-12%	2000 0218	11.1	11.1	11.6	11.6	10.6	10.6	10.1	10.1	7.7	7.7	7.7		-	11.2	11.2	11.2 E	6.0	6.0	6.0	7.1 4	7.1		10.7	2.0	8.5	7.1		8.2	8.2	10.1	50	$\overline{}$	$\overline{}$	9.5	9.5
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	Va Schlot W	404	0.9	3.9	4.0	4.0	1.9	1.4	4.0	4.1	4.1	5.9	3.8	0.0	4.1	4.1	5.9	3.9	3.7	5.8	4.1	5.9		5.9	3.1	3.9	5.2		4.0	4.1	4.0	4.0	3.9	0.9	4.1	5.9
	Air voids	4.0	6.0	\vdash	4.0	4.0	0.9	4.0	\vdash	4.0	4.0	6.0	4.0	9.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	6.0		4.0	3.5	0.9	4.0		4.0	4.0	4.0	4.0	\dashv		4.0	0.9
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STATUS AND COMPLETION DATE	
Percentage of work completed to date for total project 52.9	
Project is: X on schedule behind schedule, explain:	
Expected Completion Date:1/31/2007	