



# CAIT

Center for Advanced Infrastructure & Transportation  
Rutgers, The State University of New Jersey

## QUARTERLY PROGRESS REPORT

Project Title:	Rut Testing of Hot Mix Asphalt		
RFP NUMBER:	NJDOT RESEARCH PROJECT MANAGER: Mr. Nicholas Vitillo		
TASK ORDER NUMBER/Study Number: Task Order No. 98 / 4-26677	PRINCIPAL INVESTIGATOR: Dr. Ali Maher		
Study Start Date: 01/01/2001 Study End Date: 12/31/2002	Period Covered: 4 <sup>th</sup> Quarter 2001		

Task	% of Total	% of Task this quarter	% of Task to date	% of Total Complete
Literature Search/Local Agency Survey	10%	10%	35%	3.5%
Lab Testing for Rutting Criteria	25%	50%	80%	20%
Lab Testing for NJ HMA Characterization	25%	10%	10%	2.5%
Lab Testing for SUPERPAVE vs Marshall	20%	10%	15%	3%
Field Calibration/Evaluation	10%	0%	0%	0.5%
Final Report	10%	0%	0%	0%
<b>TOTAL</b>	<b>100%</b>			<b>29.5%</b>

### 1. Progress this quarter by task:

- A. We are continuing to receive Marshall Mix Designs and gyratory samples from local aid. In the lab we are evaluating the gyratory samples in the Asphalt Pavement Analyzer (APA) to look at the rutting of the samples. Currently, we have looked at determining what gyratory level corresponds to the 4.0 air voids for a particular number of blows for the Marshall samples. At present, it appears that this is the first rational step to develop a relationship between the 2 mix design methods.
- B. Laboratory testing for the development of a rutting criteria has completed. Based on the results, sample type, temperature testing, and test procedure can be defined. Recommendations can also be made for the development of multiple criteria, based on the volume of traffic. However, there is still a need for further comparisons between laboratory-rutted samples and rutting in the field before "hardline" values can be recommended. Without the comparisons, only estimates can be given based on current criteria of other state agencies (Virginia and Arkansas). We have begun collecting cores from the NJDOT bulk density laboratory for evaluation in the APA, however, it is estimated that it will take some time before actual field rutting is observed for comparison purposes.

### 2. Proposed activities for next quarter by task:

- A. Marshall samples that continue to come in from local aid will be evaluated and tested for further comparisons and correlations.
- B. Continue to handing out survey and tallying results

### 3. List of deliverables provided in this quarter by task (product date):

N/A

### 4. Progress on Implementation and Training Activities:

N/A

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5. Problems/Proposed Solutions:

N/A

6. Budget Summary\*

Total Project Budget(# of years)	2 Years	\$321,867.00
Total Project Expenditure to date		\$26,960
% of Total Project Budget Expended		8%
Task Order Number/Study Number:		98 / 4-26677
Current Task Order Budget (# of years)	Year 1 and 2	\$321,867.00
Actual Expenditure to date against current task order		\$26,960
% of current task order budget expended		8%

\* These are approximate expended amounts for the project; these estimates are for reference only and should not be used for official accounting purposes. For a more accurate project accounting please review the quarterly invoice for this project.

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