CAIT

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

QUARTERLY PROGRESS REPORT

Project Title:	Stormwater System Monitoring and Evaluation
RFP NUMBER: 2007-10	NJDOT RESEARCH PROJECT MANAGER: Edward Kondrath
TASK ORDER NUMBER: TO 200 / RU Acct 4-28300	PRINCIPAL INVESTIGATOR: Dr. Qizhong (George) Guo
Project Starting Date: 01/01/2007 **Original** Project Ending Date: 12/31/2008 **Modified Completion Date:** 10/31/2009	Period Covered: 3rd Quarter 2009

Task #	Task	% of Total	Fixed Budget	% of Task this quarter	Cost this quarter	% of Task to date	Total cost to date
1	Mobilization	1.61%	$ 3,000	0.0%	$ -	100.0%	$ 3,000
2	Pre Literature Search	1.61%	$ 3,000	0.0%	$ -	100.0%	$ 3,000
3	1. LITERATURE SEARCH	6.99%	$ 13,000	0.0%	$ -	100.0%	$ 13,000
4	2. TECHNICAL PANEL	5.37%	$ 10,000	0.0%	$ -	100.0%	$ 10,000
5	3. THREE REGIONS	8.60%	$ 16,000	0.0%	$ -	100.0%	$ 16,000
6	4. REPRESENTATIVE DEVICES	5.37%	$ 10,000	0.0%	$ -	100.0%	$ 10,000
7	5. PRE-MONITORING CLEAN-OUT	5.37%	$ 10,000	0.0%	$ -	100.0%	$ 10,000
8	6. MONITORING AND ANALYSIS	40.31%	$ 75,000	0.0%	$ -	100.0%	$ 75,000
9	7. MAINTENANCE GUIDANCE	6.99%	$ 13,000	90.0%	$ 11,700	100.0%	$ 13,000
10	8. Final Report and Quarterly Reporting	17.78%	$ 33,080	45.0%	$ 14,886	70.0%	$ 23,156
11		0.00%	$ -	0.0%	$ -	0.0%	$ -
12		0.00%	$ -	0.0%	$ -	0.0%	$ -
13		0.00%	$ -	0.0%	$ -	0.0%	$ -
14		0.00%	$ -	0.0%	$ -	0.0%	$ -
15		0.00%	$ -	0.0%	$ -	0.0%	$ -
16		0.00%	$ -	0.0%	$ -	0.0%	$ -
17		0.00%	$ -	0.0%	$ -	0.0%	$ -
18		0.00%	$ -	0.0%	$ -	0.0%	$ -
19		0.00%	$ -	0.0%	$ -	0.0%	$ -
20		0.00%	$ -	0.0%	$ -	0.0%	$ -
	TOTAL	100.00%	$ 186,080		$ 26,586		$ 176,156

Blue text is entered once at the beginning of the project

Green text is updated ever quarter

Black text is automatically updated or static

Project Objectives:

1. Monitor the amounts of sediment, oil, grease, and buoyant debris that would be actually trapped in the stormwater treatment system units installed by NJDOT.
2. Relate the trapped amounts of sediment, oil, grease, and buoyant debris to highway drainage area characteristics.
3. Provide NJDOT with quantitative guidance on the maintenance/cleanup schedule and measures to reduce maintenance/cleanup frequency.

Project Abstract:

To improve the quality of highway runoff and meet the new stormwater management requirements, the New Jersey Department of Transportation (NJDOT) has installed numerous prefabricated stormwater treatment systems throughout the state produced by a range of manufacturers. The use of such systems, known as Manufactured Treatment Devices (MTDs), is expected to continue in the foreseeable future. As the responsible party for the maintenance of these MTDs, NJDOT is interested in determining optimum maintenance intervals and expected maintenance costs for the range of MTDs utilized by the Department. This project will monitor and document maintenance procedures, intervals, and costs for a representative range of MTDs.

1. Progress this quarter by task:

Task 7 (Development of Maintenance Guidance)

This task was completed.

All the data, info, and analysis results were utilized to develop the maintenance guidance including maintenance interval and maintenance measures.

Take 8 (Final Report and Quarterly Reporting)

The last quarterly report was prepared and submitted.

The draft Final Report was prepared and submitted.

2. Proposed activities for next quarter by task:

Only one month left before end of the project. The draft Final Report will be revised incorporating comments, and the Final Report will be submitted.

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

Draft Final Report.

4. Progress on Implementation and Training Activities:

1) The NJDOT maintenance personnel were involved in the actual cleanout of the devices. The NJDOT maintenance personnel as well as the contractors gained the valuable field maintenance experience.

2) Early observations and suggestions on maintenance accessibility and interval were provided to NJDOT. The NJDOT was suggested to add manufactured treatment devices into the highway database such as the "Straight Line Diagrams," to additionally consider device accessibility during design and construction despite other constraints, and to minimize the amount of gross solids that would enter the devices.

3) A device inspection form was made and provided to NJDOT Maintenance Division for their use.

4) A field trip was organized for the NJDOT personnel to Montgomery County, Maryland on June 5, 2008 to observe their maintenance program on stormwater manufactured treatment devices.

5) Progress of the project and early observations and recommendations were presented at the NJDOT Research Showcase on November 28, 2007 as well as on October 16, 2008.

5. Problems/Proposed Solutions:

After 12 months or more, none of the monitored devices had sediments accumulated to the maximum sediment storage capacity. It was suggested that NJDOT continued to monitor the devices up to the maintenance maximum in order to confirm the maintenance interval extrapolated from the monitoring results from this project.

Year 1 Budget	$186,080
Years 1 & 2 Cumulative Budget	
Years 1, 2 & 3 Cumulative Budget	
Total Project Budget	$186,080
Modified Contract Amount:	$186,080
Total Project Expenditure to date	$176,156
% of Total Project Budget Expended	94.67%

NJDOT Research Project Manager Concurrence: _____ Date: _____