

State of Wisconsin/Department of Transportation
RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: September 30, 2008

Program: SPR-0010(36) FFY99		Part: II Research and Development	
Project Title: Comparison of Three Different Methods for Determining Pile Bearing Capacities		Project ID: 0092-07-04	
Administrative Contact: Nikki Hatch		Sponsor: Wisconsin Department of Transportation	
WisDOT Technical Contact: Bob Arndorfer		Approved Starting Date: Oct. 1, 2006	
Approved by COR/Steering Committee: \$30,000		Original End Date: April 1, 2008	
Project Investigator (agency & contact): James H Long/ Univ. of Illinois		Current End Date: September 30, 2008	
		Number of Extensions: 1	

Percent Complete: 99%

Request a No Cost Time Extension (Please Select One): YES NO

Reason for No Cost Time Extension:

Project Description:

This project will quantify the ability of four methods (EN, Gates, and PDA, and Washington DOT) for predicting pile capacity in a way that allows Wisconsin DOT to assess when or if it is appropriate to use each of the methods and to confidently estimate the reliability/safety and economy associated with each method.

The steps necessary to achieve the overall objectives stated above are listed below:

- to review the current use and state of practice for using the three methods
- to collect load test information, statewide and nationwide, that will allow the calculation of EN, Gates, and dynamic pile test and/or static load tests results
- to quantify the agreement between EN, Gates, dynamic pile tests and/or static load test results
- to compare the predictions made with EN, Gates, and dynamic pile tests
- to quantify the accuracy of each of the methods and identify their limitations
- to assess the cost-effectiveness for each of the methods

Particular emphasis will be directed toward investigating the FHWA-modified Gates method since WisDOT is considering its use. In addition, an alternative modified Gates formula will be developed as part of this study to assess if better accuracy can be achieved using a minor modification to the Gates equation.

Progress This Quarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

The PI met with the Technical Review Panel on April 25 and presented results of the study. The panel provided helpful feedback that was incorporated into the draft report.

The draft report was submitted in early June and is currently in the review process. The review process is in progress. Upon completion of the review, the PI will incorporate draft comments into the final report and issue the final version.

Work Next Quarter:

The next quarter we incorporate draft comments into the final version of the report and issue the report

Circumstances Affecting Progress/Budget:

See comments in "Progress this Quarter."

Gantt Chart: The Gantt chart for the project is given on the next page.

WORK-TIME SCHEDULE

Task	Description	Month																			
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
1a	Collect Publ.	xx	xx	xx																	
1b	Review Publ.		xx	xx																	
1c	Interim Rpt.			xx																	
2a	Collect PI's Pile Data	xx	xx	xx	xx	xx															
2b	WDOT MI* Data		xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx	xx							
2c	WDOT misc	xx	xx	xx	xx	xx															
2d	Catalogue Data						xx					xx									
3a	Quant Methods with Static Load Tests							xx	xx	xx	xx										
3b	Quant Methods with Dynamic Load Tests									xx	xx	xx									
3c	Dev. Improved Gates											xx	xx								
3d	Identify Limitations of Gates												xx	xx							
3e	Identify Cost Savings													xx	xx	xx	xx				
3f	Prepare and Submit Report														xx	xx	xx	xx			

3g	Review, re- edit, and Issue Final Report																		xx	xx	xx
	Meetings	* M			*M											*M					