

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

Program: SPR-0010(36) FFY99		Part: II Research and Development	
Project Title: Construction Vibration Attenuation with Distance and Effect on Quality of Early-Age Concrete		Project ID: 0092-06-04	
Administrative Contact: Nikki Hatch		Sponsor: Wisconsin Department of Transportation	
WisDOT Technical Contact: Robert Arndorfer and Dr. Hussein Bahia		Approved Starting Date: 10/20/05	
Approved by COR/Steering Committee: \$230,805		Original End Date: 10/20/08	
Project Investigator (agency & contact): HNTB Corporation, John M. Siwula		Current End Date: To be determined based on final field test locations	
		Number of Extensions: 1	

Percent Complete: 40 %

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

Reason for No Cost Time Extension: Marquette Interchange pile contractor did not allowing research team to access site for data collection. Therefore, the DOT and research team are investigating other possible field test locations.

Project Description: Research of construction vibrations and attenuation with distance from the vibration source. Also determine effects of vibration and cure time on the quality of recently placed concrete. Noise generated by pile driving will also be measured. The Department wants to use the research to reduce the distance between pile driving and concrete placement operations in order to reduce construction periods and/or costs.

Progress This Quarter:

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

Mr. Siwula and Dr. Helwany met with the Port Authority of Milwaukee and the Edward E. Gillen Co. to discuss use of a Port Authority site on the shore of Lake Michigan for the field portion of the research. The Port Authority has given the research team verbal authorization to use their land as an alternate field test site. Dr. Sam Helwany, the coinvestigator from UWM has continued the second phase of laboratory testing this quarter. The vibration table and the beam test (Instron) equipment is operational. The concrete beams are in the process of being vibrated, cured, and broken. UWM has become familiar with the seismographs to be used for field monitoring of pile driving vibrations.

Work Next Quarter: The field portion of the research is planned to be performed on the Port Authority site. Pile driving will be done by the Edward E. Gillen Co. Lab testing of concrete beams will continue and should be completed.

Circumstances Affecting Progress/Budget: The lack of a field test site has not allowed field vibration attenuation monitoring to start.

Gantt Chart: Not in this report.