

**State of Wisconsin/Department of Transportation**  
 RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: March 31, 2006

<b>Program: SPR-0010(36) FFY99</b>	<b>Part: II Research and Development</b>
<b>Project Title:</b> Construction Vibration Attenuation with Distance and Effect on Quality of Early-Age Concrete	<b>Project ID:</b> 0092-06-04
<b>Administrative Contact:</b> Nina McLawhorn	<b>Sponsor:</b> WHRP
<b>WisDOT Technical Contact:</b> Robert Arndorfer	<b>Approved Starting Date:</b> 10/20/05
<b>Approved by COR/Steering Committee:</b> \$230,805	<b>Approved Ending Date:</b> 10/20/08
<b>Project Investigator (agency &amp; contact):</b> HNTB Corporation, John M. Siwula	

**Percent Complete:** Approximately 6 %

**Project Description:** Research of construction vibrations and attenuation with distance from the 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:** Met with the Milwaukee Constructors (Pile driving contractor) to discuss research project in order to address any contractor concerns with the research on construction schedule, preliminarily determined test locations and coordinated the start of field monitoring. Contractor has the research proposal for review, but has not yet commented on same. Review of vibration data from the Marquette Interchange Pile Load Test Program was also performed.

**Work Next Quarter:** Meet with DOT and discuss research field work plan of action, based on meeting with pile driving contractor. Start field monitoring of pile induced vibrations and associated noise measurements. Start laboratory testing phase of research.

**Circumstances Affecting Progress/Budget:** None at this time. However, pile driving contractors schedule may affect progress in the future.

**Gantt Chart:**

ID	Task Name	Duration	Start	Finish	
1	Phase I Project Reconnaissance	50 days	Mon 1/23/06	Fri 3/31/06	S
2	Phase II Field Monitoring	180 days	Mon 5/1/06	Fri 1/5/07	
3	Phase III Data Modeling, Analysis and Evalu	150 days	Thu 9/28/06	Wed 4/25/07	
4	Report Generation	90 days	Thu 1/24/08	Wed 5/28/08	