



To: Tommy Nantung, INDOT
From: Jan Olek, Director, North Central Superpave Center
Date: November 16, 2007
Subject: Status Report January 1 – March 31, 2007

Background

The North Central Superpave Center began on July 1, 1995, as one of five regional centers established to assist the states/provinces and industry with the implementation of the Superpave Mix Design system for hot mix asphalt. The role of the NCSC has evolved to include all general hot mix asphalt issues, as states in the region have adopted Superpave. The Center is administered through the Joint Transportation Research Program at Purdue University.

Work Performed January – March 2007

Training: Because of declining enrollments, no routine training is planned for the winter although the Center will continue to offer training for participating states as needed.

Communication: The latest issues of the newsletters can be found at <http://bridge.ecn.purdue.edu/~spave/Newsletters/Newletters.htm>.

The Spring newsletter was published this quarter. The new communications specialist is becoming familiar with the newsletter software and printing processes.

The existing NCSC website (<http://cobweb.ecn.purdue.edu/~spave/>) has been transferred to the engineering web cluster, which is a large server housed within the Engineering Computer Network (ECN). Redesign of the website is currently on hold pending adequate staffing and further guidance from the marketing subcommittee.

Third Party Lab: The NCSC performed permeability testing on cores from Arizona as part of the sealer-binder study. Minnesota DFT/CTM and permeability test results were analyzed and a presentation on the results was prepared for Gayle King to use at a meeting about the project held during TRB.

The NCSC also analyzed data from the Wisconsin DOT. They had received data on dynamic modulus, fatigue, and other tests from FHWA and other sources, but needed assistance in the analysis and interpretation of the results.

Research

The JTRP study *Continued Monitoring of Indiana's SPS9A Site* is continuing. Field cores were sawn to separate the surface layer from the binder layer. Binder extraction and recovery from the cores was initiated.

The study *Performance Certification of Indiana Superpave Hot Asphalt Mixes* is funded by JTRP and is being conducted in cooperation with the Indiana Department of Transportation, Division of Research. Testing is completed, but report is past due; there has not been sufficient time or staffing to analyze the massive amount of data collected.

Identification of Laboratory Techniques to Optimize Superpave HMA Surface Friction Characteristics, is funded by INDOT and the Iowa Department of Transportation through JTRP. Partial funding was also provided by the Institute for Safe, Quiet and Durable Highways (SQDH). Slab polishing and testing is underway. The extension was granted but the delays in transferring the funds continue.

Follow-up monitoring of *Long Term Performance of a Porous Friction Course* was not conducted this quarter due to weather conditions. Noise and friction testing will resume next quarter.

Work continued on the study *Determining the Binder Content of Hot Mix Asphalt Containing Dolomitic Aggregates Using the Ignition Oven*. The draft final report is in preparation.

A comparison of candidate simple performance tests to shear tests, funded by FHWA, continues.

Progress on the project *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT PMS* was slow this quarter. Field testing was not attempted due to winter weather and there has been no news on a contract between INDOT and the consultant. Testing will begin again in the Spring and contact will be made with the consultant, when hired.

The NCSC completed additional testing for a study on plant-produced RAP mixtures and draft report preparation is underway. Based on the interesting findings, plans are being made to replicate the experiment in other hot mix plants. This study is being conducted in cooperation with Heritage Research Group and is funded by FHWA.

Data analysis is underway for the project *Validation of NCAT Structural Test Track Experiment using INDOT APT Facility*. Plans are being made for the continuation of the project. When plans are finalized, probably next quarter, a no-cost extension will be requested.

The NCSC is the PI on an NCHRP study documenting the history of the Superpave system. Work this quarter involved completing interviews with key researchers and implementors.

The NCSC was contacted this quarter about performing some testing in support of a Wisconsin DOT perpetual pavement study; the NCSC agreed and is awaiting details from WisDOT. The NCSC was also contacted by a consultant working with the Maryland SHA; they are interested in the laboratory polishing and friction/texture testing procedures developed under the friction optimization study; a visit is being planned to the NCSC labs.

Interaction with other Centers and Organizations: The Superpave Centers cooperate with each other routinely; two remain active on a national level. The NCSC is also very active with numerous other organizations within and beyond the region in the areas of hot mix asphalt, binders, aggregates, noise and more.

A very successful meeting of the North Central Asphalt User Producer Group (NCAUPG) was held this quarter. The NCSC serves as secretary of this group and was mainly responsible for overseeing the meeting arrangements. Presentations were made about the Center and its research.

The NCSC also collaborates with other organizations in the field. This quarter the Technical Director made presentations at the New York State HMA Technical Conference. NCSC staff also participated in the TRB and AAPT annual meetings, including making presentations and chairing sessions at TRB.

SAC Meeting: The annual NCSC Steering Committee meeting was held on January 9, 2007, prior to the North Central Hot Mix Asphalt Technical Conference in Minneapolis, Minnesota. The minutes are available on the web at <http://cobweb.ecn.purdue.edu/~spave/Steering%20Committee/Meeting%20Minutes%20NCSC.htm>.

Work Next Quarter: Work will continue on following up on the marketing plan, third party testing and continuing research as planned.

Financial Information

North Central Superpave Center Base Funding Expenditures TPF-5 (021)					
July 1, 2006 - June 30, 2007 (Base Five-Year Two)					
States	Quarter One July - Sept 06	Quarter Two Oct - Dec 06	Quarter Three Jan - Mar 07	Quarter Four Apr - June 07	Total per State
Illinois	\$6,250	\$6,250	\$6,250		\$18,750
Indiana	\$6,250	\$6,250	\$6,250		\$18,750
Iowa	\$6,250	\$6,250	\$6,250		\$18,750
Kansas	\$6,250	\$6,250	\$6,250		\$18,750
Michigan	\$6,250	\$6,250	\$6,250		\$18,750
Minnesota	\$6,250	\$6,250	\$6,250		\$18,750
Missouri	\$6,250	\$6,250	\$6,250		\$18,750
Wisconsin	\$6,250	\$6,250	\$6,250		\$18,750
Quarterly Total	\$50,000	\$50,000	\$50,000		
				Cumulative Grand Total	\$150,000