



To: Tommy Nantung, INDOT
From: Jan Olek, Director, North Central Superpave Center
Date: April 5, 2010
Subject: Status Report –January - March 2010

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 2010

Training:

There are currently no firm plans for offering formal training. Discussions are underway with the Wisconsin Asphalt Pavement Association to provide training for construction inspectors and supervisors in Wisconsin next quarter. At the NCSC Steering Committee meeting, we discussed the idea of offering training on various topics via webinars; the idea was well-received. Over the next few months, we will be exploring the best way to provide this training, suggesting topics to offer, and setting up groups interested in various topics.

Communication:

Work is underway on the next issue of the newsletter which will be published next quarter. The Superpave Center at Auburn is still setting up a new pooled fund account and therefore has not yet committed to continuing to work with us on publishing the newsletter.

Routine updates were made to the NCSC website. Information is added and updated when received. Presentations, HMA “hot topics” and news articles, as well as HMA-related calendar events are frequently added to the website. Pertinent abstracts from the 2010 TRB Annual Meeting and the Association of Asphalt Paving Technologists were added this quarter.

NCSC staff respond to approximately 25 calls and emails each quarter that include questions and requests for information from HMA professionals across the country.

The 2010 NCAUPG HMA Technical Conference was held February 3-4, 2010, and was organized by the NCSC staff. Over 140 people attended the event. PDF versions of the presentations have been posted on the NCAUPG website, which is hosted and maintained by the NCSC. The NCSC Steering Committee and NCAUPG Management Committee both met on February 2. Minutes of those meetings were prepared by the NCSC staff and distributed to all members of the respective committees along with copies of the presentations given.

Third Party Lab and Testing Services:

The NCSC staff performed additional friction and texture testing on samples of thermoplastic pavement marking materials for the manufacturer.

The NCSC was contacted by another manufacturer to perform testing following discussions at the NCAUPG meeting.

Research:

The NCSC staff worked with the INDOT Office of Materials Management to obtain preliminary mix designs for the study on *Maximizing the Use of Local Materials in HMA*. All of the needed aggregates have now been obtained and work will begin next quarter on developing mix designs for slab fabrication and testing/polishing.

The draft report on the study *Identification of Laboratory Techniques to Optimize Superpave HMA Surface Friction Characteristics* was submitted to Iowa and Indiana for review last quarter. Comments have been received from Iowa and will be addressed early next quarter (April). The PI will participate in a meeting of the Iowa Highway Research Board via telephone to present the findings on April 30.

NCSC staff identified field test sites for the study *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT Pavement Management System* and field friction and texture testing was completed last quarter. Data analysis is underway.

On the *History of Superpave* study, interviews, reviewing of documents and report writing are in progress. We are still working on the research chapter. The PI met with a key research author to accelerate progress; the key researcher is making plans to come to Indiana to work with the PI April 22-26 to finally finish this project.

The study entitled *Risk Management of Low Void Content Asphalt Mixtures* is underway. Near the end of December, mixtures were produced and placed in the Accelerated Pavement Testing (APT) Facility. The trafficking and data collection plans were developed this quarter. FWD testing was completed, and trafficking on the sections will begin soon.

Comments on the draft final report on the *Long Term Performance of a Porous Friction Course* project were received and are being addressed. The revised final report and revised implementation plan will be completed early in the next quarter. A SAC meeting will be held to discuss the implementation plan.

Work continues on data analysis and report preparation for the *Evaluation of Recycled Asphalt Pavement for Surface Mixtures* study. The current plan is to have the data analysis and report completed next quarter.

Regarding the *Continued Monitoring Indiana's SPS9-A Site* study, the binder extraction process was completed this quarter. IDT testing of the surface layers was planned but still could not be conducted because of continuing equipment issues with the Indirect Tension Testing machine; low temperature testing is considered essential because of observed cracking in the field.

Work continued on obtaining materials for the Quiet Pavements study this quarter; a source for the PG76-22 binder was identified. The literature review was updated and revised. Mix design work was completed this quarter and Cantabro testing continued. A request for extension will be prepared and submitted to the sponsor early next quarter.

NCSC Progress Report, January - March 2010

On the *Determining the Binder Content of Hot Mix Asphalt Containing Dolomitic Aggregates Using the Ignition Oven* study, the report revision will be completed and the paper rewritten next quarter.

The draft final report for the study on the *Investigation of Low and High Temperature Properties of Plant-Produced RAP Mixtures, Phase II*, was largely completed this quarter. While revising the draft final report, some data gaps were identified and testing to fill the gaps was initiated. The report will be finished next quarter.

Technology Transfer, Presentations and Interactions with other Centers and Organizations:

The NCSC has always worked closely with the North Central Asphalt User Producer Group (NCAUPG), serving as secretary and coordinator of the annual meeting since 2002. As noted above, the meeting was held this quarter, with over 140 people attending. Presentations have been posted on the NCAUPG website.

The NCSC website, <https://engineering.purdue.edu/NCSC>, has a frequently updated library that includes technical presentations delivered by NCSC staff members at conferences and meetings throughout the country.

The Technical Director gave two presentations at the Tennessee Road Builders Quality Asphalt Initiative meeting in January and presented at the NCAUPG Technical Conference. She was also elected second vice president of the Association of Asphalt Paving Technologists this quarter.

SAC Meeting: The Steering Committee met on February 2, 2010 in Overland Park, KS. Draft minutes have been sent to all committee members.

Work Next Quarter: Work will continue on research, communication, training and testing as planned.

Financial Information

North Central Superpave Center Base Funding Expenditures TPF-5 (021)					
July 1, 2009 - June 30, 2010 (Base Six-Year One)					
States	Quarter One July - Sept 09	Quarter Two Oct - Dec 09	Quarter Three Jan - Mar 10	Quarter Four Apr - June 10	Total per State
Illinois	\$5,000	\$5,000	\$5,000		\$15,000
Indiana	\$6,250	\$6,250	\$6,250		\$18,750
Iowa	\$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	0	0			0
Missouri	\$6,250	\$6,250	\$6,250		\$18,750
Wisconsin	0	0			0
Quarterly Total					
Cumulative Grand Total					\$108,750