



**To:** Tommy Nantung, INDOT, and Lee Gallivan, FHWA  
**From:** Jan Olek, Director, North Central Superpave Center  
**Date:** August 17, 2006  
**Subject:** Status Report April 1 – June 30, 2006

### **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 April – June 2006**

Training: No training was performed during this quarter. Next quarter a representative from the NCSC will travel to Missouri to conduct on-site training for approximately sixteen DOT employees. Plans for the next training season will be made near the end of the next quarter.

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

The new National Newsletter contract was mailed to the Southeast Superpave Center for signature and payment. The contract period will run from May 2006 through November 2007. The first issue of the newsletter contract was published in early June. An electronic version of the newsletter is now available to individuals through an ECN subscription service. A user can sign up and will automatically receive an electronic copy of the newsletter.

The NCSC is investigating moving the website to the engineering web cluster, which is a large server housed within the Engineering Computer Network (ECN). One of the benefits of moving the website is the readily available technical assistance through ECN. A content management software product is also available through ECN.

Routine updates were made to the NCSC website. Information is added and updated when received. The Searchable Database links are updated by NCSC staff as new information becomes available.

Discussion on a web re-design will resume when the Marketing Subcommittee makes recommendations for the NCSC. The NCSC Marketing Subcommittee is awaiting a draft marketing plan from a FHWA marketing strategist to determine a plan of action to market the Center and direct the Center's activities in a way to attract industry and state agency funding.

Third Party Lab: No third party testing was required this quarter.

## Research

The JTRP study *Continued Monitoring of Indiana's SPS9A Site* is underway. Preliminary field survey data is being requested for analysis in order to proceed with the next phase of the study.

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. All testing has been completed except for Purwheel testing, which could not be done due to continued trouble with the Purwheel test machine. One last attempt will be made to resolve the Purwheel problems, then the project will be completed with or without that data. A short extension will be requested next quarter when a better estimate of the time needed can be made.

*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). Aggregate blending and sample preparation has been completed. Needed modifications to the slab polisher were identified; an estimate for the changes is pending from the machine shop. A no-cost extension will be requested since the NCSC had to take on work planned for Iowa State University after the professor who was working with us left the university.

Follow-up monitoring of *Long Term Performance of a Porous Friction Course* is on-going. Next quarter additional noise and friction testing will be conducted.

Work continued on the study *Determining the Binder Content of Hot Mix Asphalt Containing Dolomitic Aggregates Using the Ignition Oven*. Testing is nearly complete. Limited validation work on the proposed modified test method will be performed using plant-produced material next quarter, then the study will be concluded.

A comparison of candidate simple performance tests to shear tests, funded by FHWA, continues. Creep testing on same mix samples at effective temperature was delayed due to equipment scheduling conflicts. A former graduate student will return to campus early next quarter to provide training on the equipment to Ayesha Shah, after which testing will be completed.

A new project, *Investigating the Feasibility of Integrating Pavement Friction and Texture Depth Data in Modeling for INDOT PMS*, began in the first quarter of 2005. Periodic friction and surface texture measurements are being conducted on the INDOT Research Test Road to allow comparison of the friction values obtained with the portable Dynamic Friction Tester and Circular Texture Meter to the towed friction trailer. A survey requesting information on friction monitoring in PM systems around the country is nearly complete.

The NCSC will work with Heritage Research Group to perform a quick study of plant-produced mixtures containing various amounts of RAP. The study will be funded by FHWA and will be completed by the end of October 2006.

The Technical Director is taking over a project for Dr. Terhi Pellinen, who is leaving Purdue. This study, *Validation of NCAT Structural Test Track Experiment using INDOT APT Facility*, will require a post doc or graduate student to help analyze the large amount of data collected in the APT and will need a no-cost extension. The extension will be requested next quarter when the possible start date of a post doc is known.

Interaction with other Centers and Organizations: The Superpave Centers cooperate with each other routinely. The North Central Superpave Center serves as the publisher/editor for the regional

Superpave Center newsletters. Two centers are currently participating in the centralized Newsletter publication.

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. The next meeting of the NCAUPG will be held January 10-11, 2007, in Minneapolis at the Hilton Minneapolis St. Paul Airport Mall of America.

**SAC Meeting:** The next annual NCSC Steering Committee meeting will be held on January 9, 2007, prior to the North Central Hot Mix Asphalt Technical Conference in Minneapolis, Minnesota.

**Work Next Quarter:** The website will be moved to the ECN server. The NCSC draft marketing plan will be available and an NCSC Market Subcommittee conference call will take place to determine the next steps to take. Work will begin on redesigning the NCSC web in accordance with the NCSC Marketing Plan. The searchable database will continue to be updated. Research will continue as planned. A training class will be conducted at the Missouri DOT.