

## Rebecca S. McDaniel

*Purdue University*

**T**echnical Director of the North Central Superpave® Center at Purdue University, Rebecca McDaniel works to enhance the state of the art and practice in asphalt construction by training paving inspectors and other personnel; developing standards and conducting research; sharing information via technology, including a website, presentations, webinars, and an electronic newsletter; and mentoring graduate, undergraduate, and high school students.

McDaniel is a Purdue alumna with bachelor's, master's, and doctoral degrees in materials. In 1985, she joined the Indiana Department of Transportation's (DOT) Division of Research, working in pavements, materials, and accelerated testing. For several months in 1986 and 1987, she served as loan staff to the first Strategic Highway Research Program (SHRP); she recalls

on others creates a recognizable bond and brings to mind the engineer's commitment to serve and protect the public, McDaniel observes. She notes that asphalt research is fundamental to transportation infrastructure: "It is vital to our economy and way of life. Making asphalt pavements that last longer, are quieter, are more sustainable, are safer, and can be constructed quicker or more economically is vitally important."

As a woman in the field of engineering, McDaniel admits that her gender has brought her recognition but also has raised challenges. "Being in the minority lets you stand out and be noticed in a sea of men," she comments. "Yet on many occasions I have had to prove myself because of my gender, especially in the field when I was fresh out of college." She completed her Ph.D. over 10 years, while working full time and

raising her three children; she still can recall the feeling of accomplishment when she turned in her dissertation. She currently is the second vice president of the Association of Asphalt Paving Technologists (AAPT) and is in line to become the second-ever female president of AAPT in 2012. "I would encourage young women to persevere—the rewards are worth it," she affirms.

McDaniel's first career influence was her father, an engineer and U.S. Army veteran who had worked on the Alaska Highway. "Childhood vacations included

a visit to Alaska to 'his' highway, and frequently involved driving along construction projects—dodging dowel bar baskets and sometimes being stopped by bridges that were not finished," she recalls. Other mentors include Leonard E. Wood, her major professor at Purdue, who prompted McDaniel to become involved in TRB, and D. W. Lucas of Indiana DOT. "Mentoring younger people, to show them how rewarding a career in engineering and research can be, is very important," McDaniel comments.

McDaniel is a longtime active member of TRB committees. She chairs the Expert Task Group on Long-Term Pavement Performance Special Activities and the General Issues in Asphalt Technology Committee; she is a current or past member of the Mineral Aggregates Committee, the Characteristics of Asphalt Materials Committee, the Asphalt Materials Section, and of several National Cooperative Highway Research Program project panels. She also serves as vice chair of the American Society for Testing and Materials Committee on Road and Paving Materials and is a member of the Federal Highway Administration's Expert Task Group on Hot-Mix Asphalt Recycling and of the Multiregional Training and Certification Group.



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this as a highlight of her career: "Even though it was before full funding was received, serving on the SHRP staff was a fabulous experience. I met some icons of the industry, learned how major research programs work, and got in on the ground floor of the most influential research program of the past half century or so." While with SHRP, McDaniel attended her first TRB Annual Meeting and has missed only two meetings since.

"Now that the North Central region has adopted Superpave as the routine asphalt mix design system, our work has expanded to asphalt in general," McDaniel notes. Current research at the center, which handles asphalt and Superpave issues for approximately 10 Midwestern states, includes increasing the use of locally available aggregate materials instead of importing high-friction aggregates, using reclaimed asphalt pavement (RAP) in surface mixtures, evaluating plant-produced asphalt mixtures that contain up to 40 percent RAP, and developing a decision strategy to determine if a substandard low air void mix should be replaced.

A registered professional engineer in the state of Indiana, McDaniel wears a special ring that reminds her of her obligations as a member of the Order of the Engineer. Seeing the ring