



Research & Library E-News - February 2008

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Program updates

Need information? We're here to help.

The Research & Library Unit can help you quickly and effectively access the information you need to do your job. We offer the following services to all staff on an ongoing basis.

Transportation Literature Searches

Both the Research Program and Library conduct targeted keyword searches of transportation, scientific and academic databases on requested topics. The resulting Transportation Literature Search contains a listing of completed research and other authoritative information in the area of interest, along with brief descriptions and links to the documents online.



Transportation Synthesis Reports

TSRs are brief reports that capture recent research and best practices on any transportation-related topic. They help WisDOT staff learn from the experiences of other state DOTs, avoid duplicating research, identify new technologies and practices, make better investment decisions, and monitor federal guidelines and key transportation trends. See examples of the nearly 200 reports we've completed on the [WisDOT Web site](#).

Peer exchanges

To help WisDOT staff learn from the best practices of other agencies, the Research Program provides planning and logistical support, travel expenses, and reporting services for WisDOT-hosted peer exchanges. These two- to four-day conferences include presentations and active discussions on high-priority topics or issues identified by WisDOT staff. See reports from previous peer exchanges coordinated by Research on the [WisDOT Web site](#).

Contact us at research@dot.state.wi.us or (608) 261-8198 to request one of these services anytime.

At the October 2007 DMV Peer Exchange (pictured above), WisDOT participants discussed vehicle titling issues with their state agency peers and industry representatives. One participant said she valued, "the ability to exchange ideas, questions, and concerns with peers in a structured environment where there was adequate time for discussion."

New Internet search classes coming soon!

Thank you to everyone who responded to our November survey asking what you'd like to see in an advanced information search techniques class.

Based on your responses, we're putting together three one-hour classes:

- Transportation Web sites
- Search engines
- Transportation databases



Each class will be held once per month, with a different class offered each week. The classes will take place at Hill Farms in the WisDOT iCommons on the first floor. You will receive one-on-one attention from our research and library professionals and handouts for future reference. Look for invitations in the coming weeks to reserve your spot in any of these classes.

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In the Library

Cherney trades best practices with peers at TRB

As a national leader among transportation librarians, John Cherney was thrilled to participate for the first time in the Transportation Research Board's Annual Meeting in Washington, D.C. From January 13 to 17, he joined thousands of other transportation professionals from around the country to share ideas and collaborate on joint initiatives.

Cherney took part in several committee meetings with DOT librarians from other states, trading best practices and differing approaches to key DOT issues. "It was valuable being able to survey these folks right there for key comparative data," Cherney said. As the chairman of the Midwest Transportation Knowledge Network, he also met with his counterparts in the Eastern and Western TKNs for face-to-face coordination on issues affecting the future of information services at WisDOT.

Topics discussed included digitization of collections and the use of performance measures in evaluating library success. Among several presentations that John attended was one by Washington State DOT on using the DOT library staff as information brokers, giving patrons access to and guidance in the disparate data sources maintained by various subsections of the DOT. "This is an avenue that WisDOT would like to pursue further," Cherney said, "and I was encouraged to see another DOT have such success with this approach."

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Project impacts

New data helps WisDOT shift to latest high-tech HMA design

WHRP Project 0092-04-07, Testing Wisconsin Asphalt Mixtures for the AASHTO 2002 Mechanistic Design Procedure

Shifting to a new pavement design method is no small matter. Engineers must adapt to new design language and adjust to new software, specifications must be updated and manuals revised, and new testing equipment and practices must be adopted.

WisDOT has kept abreast of research and new technologies and incrementally updated its practices since adopting its foundational design methodology, the 1972 AASHTO standards. Nevertheless, the new AASHTO Mechanistic-Empirical Pavement Design Guide represents a sea change, a shift toward more science. New methods require *mechanistic* values drawn from sophisticated testing of location-specific pavement and subgrade materials, data that become inputs to software that calculates expected performance based on *empirical* relationships between pavement structures, traffic, and environment.

Until this study concluded, WisDOT's hot-mix asphalt pavement designers lacked the most critical of these inputs: dynamic modulus, a measure of how pavement material springs back repeatedly from heavy loading.

This recently published WHRP report provides WisDOT with a database of dynamic modulus values and flow numbers for 21 common Wisconsin HMA mixtures. WisDOT designers have already been using these figures for new pavements, offering Wisconsin drivers sophisticated pavements designed for specific construction sites and conditions—asphalt that will resist rutting and cracking and will last longer.

For more details, see the [project page](#) on WHRP's Web site or contact [Len Makowski](#), chair of the Flexible Pavements Technical Oversight Committee, at (262) 548-5618.




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At your service

TSR spotlight: Recruiting and retaining young IT workers

Skilled professionals in the information technology field are in high demand, and WisDOT's Bureau of Information Technology Services has faced growing challenges in recruiting and retaining young, talented IT workers.

Janet Perry-Judd, a supervisor in BITS' Application Development Support Section, has hired several young, entry-level workers in the last few years. "As managers, we are motivated to keep them and have them build their careers at WisDOT," she said. She asked WisDOT Research to identify methods used by other state DOTs, and other organizations, for attracting and retaining young staff.

Research staff responded with a [Transportation Synthesis Report](#) —a quick-turnaround summary of available information on a transportation topic, including related research, other states' practices and national resources.

We located relevant practices at several state DOTs, including an NCHRP report that detailed strategies used by agencies across the country, and related reports and publications from organizations outside the transportation field.

"The TSR provided us with many retention ideas from other state agencies that could reasonably be implemented at WisDOT," Perry-Judd said. "The research indicated that the younger workforce is motivated by finding job satisfaction through helping others and through work that results in a positive influence in the world. We can explore ways to increase the opportunities for staff to see the value and impact of department work efforts."

WisDOT Research produces TSRs at the request of staff in all divisions and regions, with topics ranging from materials and construction issues to planning, operations, safety, environmental, motor vehicle and business management concerns. See [recently published TSRs](#) on the Research Web site.

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Events and outreach

New workshop to develop policy research ideas

The Research & Library Unit is now soliciting policy research ideas for FFY '09 funding consideration. Entering its second year, our new Policy Research Program funds projects aimed at evaluating the technical merits of current department policies, evaluating the potential effects of policy alternatives, and measuring the impacts of specific research programs and projects.

To aid staff in developing project ideas, we'll be holding a brainstorming workshop in early April with representatives from across the department. Together we'll work from high-level issues identified by senior management as well as project ideas submitted prior to the workshop to generate solid project proposals that address DOT needs.

For more information or to submit a project idea, contact [Kim Linsenmayer](#) at (608) 628-3806.



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Regional and national

Research coordinates department attendance at TRB Annual Meeting

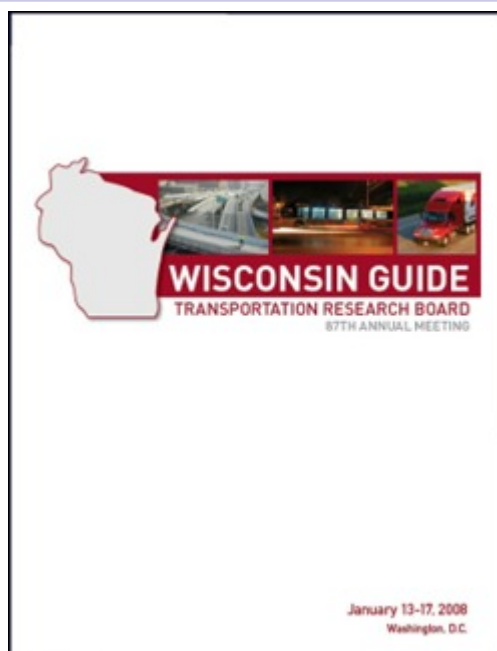
Thirty WisDOT staff from six divisions and offices attended this year's TRB Annual Meeting, an event that brings together 10,000 transportation professionals from around the world to share research findings and exchange ideas.

To maximize WisDOT's investment and the attendees' time, Research worked with the attendees to identify meeting sessions of high value to the department, to coordinate attendance of those sessions, and to help attendees share what they learned with other staff at Hill Farms and in regional offices.


With nearly 600 sessions to choose from, attendees often find it challenging to be present at every session that interests them. Research staff helped the attendees use TRB's online [planning tool](#) to prepare for the meeting, held January 13 to 17 in Washington, D.C. Attendees assembled relevant sessions into personalized meeting programs, and Research compiled the programs to identify overlaps and opportunities for staff to attend underrepresented sessions.

At a planning meeting before the conference, Deputy Secretary Ruben Anthony, Jr., stressed the value of learning from other states' best practices and emerging research. "I asked everyone attending the meeting to come back with one idea that WisDOT could consider putting into practice," Anthony said.

To help staff capture these lessons from other states, Research created a session summary form for attendees to use in taking notes on new practices and technology, assessing the information's value to WisDOT, and identifying how WisDOT could implement and disseminate the new concepts.



Research is coordinating a debriefing meeting this month where attendees can share what they learned. Research staff can assist attendees in completing their session summary forms before the meeting.

As in years past, Wisconsin research was well represented at the TRB meeting, with over 60 presentations and committee meetings led by WisDOT staff and Wisconsin university researchers. Research produced its fifth annual [Wisconsin Guide](#)  (985 KB) to the TRB Annual Meeting, which showcased Wisconsin's contributions to the meeting.

Clear Roads selects new projects for 2008

The WisDOT-led Clear Roads winter maintenance pooled fund research program held its semiannual meeting on January 28 to 30 in Denver. Representatives from the 14 member states, as well as FHWA and AASHTO, participated in the meeting.



Participants discussed more than 20 project proposals, including several generated through a national peer exchange of winter maintenance professionals last fall. Working with a \$350,000 budget, the group funded the following projects:

- National Standards for Fleet Communications to Support GPS/AVL
- Cost-Benefit Analysis of Winter Maintenance Practices, Equipment and Operations
- Development of a Video Public Service Announcement for the "Ice and Snow ...Take It Slow" Winter Driving Safety Campaign
- Implementation Guide for Calibrating Ground-Speed-Controlled Salters

WisDOT will issue Requests for Proposals for these projects in early spring, and the Clear Roads Technical Advisory Committee will select investigators this summer at its meeting in Madison.



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For the record

This quarter, WisDOT Research produced four research briefs, four Transportation Synthesis Reports and two literature searches for WisDOT staff.

Research Report and Briefs

Determination of Shear Strength Values for Granular Backfill Material Used by the Wisconsin Department of Transportation

0092-05-08, November 2007

[Final report](#)  (1.9 MB)

[Research brief](#)  (256 KB)

Test Method to Determine Aggregate/Asphalt Adhesion Properties and Potential Moisture Damage

0092-05-12, November 2007

[Final report](#)  (2.1 MB)

[Research brief](#)  (187 KB)

Development of In-Place Permeability Criteria for HMA Pavement in Wisconsin

0092-06-02, November 2007

[Final report](#)  (727 KB)

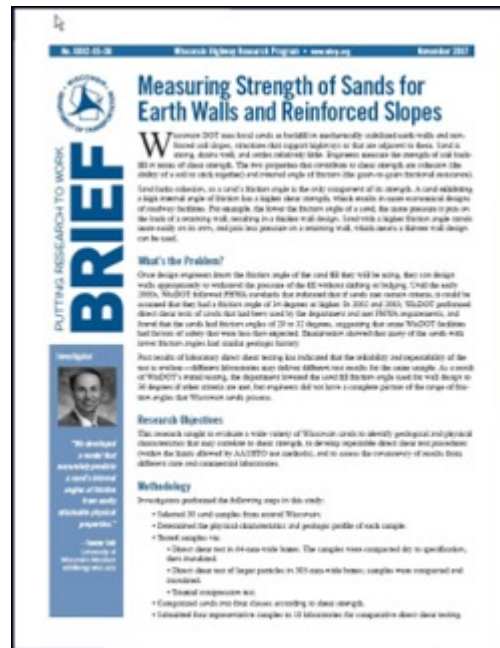
[Research brief](#)  (316 KB)

Field Evaluation of Wisconsin Modified Binder Selection Guidelines

0092-03-13, October 2007

[Final report](#)  (343 KB)

[Research brief](#)  (224 KB)



Transportation Synthesis Reports

[Recruiting and Retaining Young IT Workers: Effective Strategies from the Public and Private Sectors](#)  (106 KB)

December 2007, DBM/BTS

[Managing Vegetation Under Cable Median Barriers: Mow Strip Design and Practices](#)  (447 KB)

December 2007, DTSD/BPD

[Methods for Reaching Young Adults With Traffic Safety Messages](#)  (65 KB)

October 2007, OPA

[Alternative Dowel Bar Size and Placement in Concrete Pavements](#)  (189 KB)

November 2007, DTSD/BTS

Transportation Literature Searches

Safety of Marked Crosswalks vs. Unmarked Crosswalks
November 2007, DTSD/BHO

Dowel Bar Size and Spacing for Rigid Pavements
October 2007, WHRP Rigid Pavements TOC



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Calendar

February

6—FHWA Webinar on pooled fund financial procedures

12-14—[WCPA Annual Workshop](#), Appleton

18—WHRP Technical Oversight Committees Chairs Meeting

20—Deadline for submitting NCHRP ballots through the AASHTO Research Advisory Committee

28—[University of Minnesota Geotechnical Engineering Conference](#), Minneapolis, Minnesota

March

6—WHRP Rigid Pavement Technical Oversight Committee Meeting

31—Quarterly progress reports for research projects due

April

3—Frozen Four pooled fund meeting in Madison

4—WHRP Structures Technical Oversight Committee Meeting

7—Policy Research Workshop, 1 p.m. to 4 p.m.

11—WHRP Steering Committee Meeting

24—Research and Library Advisory Committee Meeting, 9 a.m. to noon



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For more information

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