

Expo success stories

Duane Smith, CTRE's Associate Director for Outreach

SOLVING PROBLEMS, evaluating standard practices, learning new techniques, sharing information, comparing new equipment—these are just a few of the benefits cited by the people who attend Iowa's Maintenance Training Expo.

Since 1997, Iowa has offered two Expos each year, one focusing on summer and one on winter roadway maintenance. This year the two events will be combined into one information-packed, two-day Expo for maintenance staff and supervisors.

The Expo includes classroom training sessions, vendor displays, and product demonstrations. In addition, a snowplow rodeo and motor grader competition are held the day after the Expo. This mix of activities has been the key to the Expo's success. At least that's what we are hearing from people who attend.

Ron Johnston, maintenance superintendent from Poweshiek County, tells us that the Expo allows employees to meet their peers and get feedback on how other counties are operating. The motor grader competition is a highlight for Ron. As he puts it, "It allows the operators a chance to show off their skills."

The city engineer from Creston, Tom Meyers, has a slightly different perspective. Tom sends five or six employees to every Expo. Information presented at the Expos has helped him solve problems and reevaluate ways of doing business. For example, sessions he attended at one Expo helped Tom decide to use pre-wetting and anti-icing techniques for winter roadway maintenance. He had known about these techniques, and the Expo provided a format to discuss them with others before he decided to proceed.

The Iowa Department of Transportation (Iowa DOT) has made a strong commitment to the Expo. Jeff Owen, area maintenance manager in district 4, has rotated all district-4 maintenance employees through the summer and winter Expos. He says their attendance at the Expo facilitates employees' acceptance of changes the Iowa DOT is implementing. Sometimes talking with peers can be

more influential in changing attitudes than a directive from management. Employees hear about successes and failures from others who have similar jobs, and there are many opportunities for open dialogue along with questions and answers.

Dave Anthony, Boone County engineer, sends about half of his maintenance staff to the Expo every year. Dave believes taking part in the Expo improves employee morale and encourages staff to take pride in their work. Dave has learned about anti-icing techniques and is considering implementing them. He has been observing the Iowa DOT's anti-icing operations in and around his county and comparing his observations to what he is learning at the Expos.

From Bettendorf, we hear from Stan Erickson, manager of the city's streets, sewers, and signs. Bettendorf usually conducts its own snow plow rodeo competition, and the top four competitors come to the Expo and compete against other agencies in the Expo-related rodeo.

According to Stan, there are two benefits to the Expos: well trained employees, and improved practices. The event provides experienced employees with an excellent review of standard maintenance information and techniques, and provides newer

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Expo attendees have hands-on access to vendor displays.

LTAP Advisory Board

The people listed below help guide and direct the policies and activities of the Center for Transportation Research and Education's Local Technical Assistance Program (LTAP). The board meets at least annually.

Contact any of the advisory committee members to comment, make suggestions, or ask questions about any aspect of LTAP.

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Transportation Research
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Technology News.*



**Removable orange
rumble strips warn drivers
approaching a work zone.**

*Photos courtesy of
Eric Meyer, University of
Kansas, and Advance Traffic
Markings.*



**Direction indicator
barricades guide motorists
through work zones.** *Photo
courtesy of WLI Industries,
Inc./United Rentals Highway
Technologies.*

Work zone safety products

CHECK OUT the following products that may provide your agency with effective, relatively low cost, and convenient means for improving safety in work zones. These products are designed to give workers advance warning of and protection from inattentive drivers or errant vehicles, help motorists navigate confusing work zones, and alert drivers of changing traffic conditions.

Some of these products comply with National Cooperative Highway Research Program (NCHRP) Report 350 guidelines for crashworthiness, although you will need to check specific manufacturers. See "The importance of NCHRP Report 350" (page 6) for a brief reminder about how these guidelines affect you.

The Midwest Smart Work Zone Deployment Initiative (MwSWZDI) is investigating 20 different traffic control and management strategies and devices, some of which are featured here. For more information on MwSWZDI, see "Midwest states study work zone safety products" (page 5).

Temporary rumble strips

Temporary rumble strips, which can be orange in color, alert motorists to changing traffic conditions, such as the need to slow down for an upcoming work zone.

Developed through the Strategic Highway Research Program (SHRP), temporary rumble strips are cut to size and attached to the roadway with adhesive backing about 100 meters before the work zone begins. A limited crew can install and remove the strips quickly, and MwSWZDI testing shows that the rumble strips remain in good condition throughout the work period. Temporary rumble strips may be best suited for low-speed roads that carry few heavy trucks. The strips may also work best in an urban setting.

Plastic signs and sign supports

Cloth roll-up signs are becoming a common sight in work zones because of the need for portability and safety; however, windy conditions can adversely affect their visibility with some designs. Although stability may always be problematic, new plastic signs perform better in the wind while providing safer conditions for workers and motorists.

During crash testing, plastic signs and sign supports caused only minor windshield damage, no occupant compartment intrusion or deformation, and no dangerous debris, making these devices less hazardous in crashes than traditional road signs. In addition, the signs are easily portable.

Lighted raised pavement markers

Lighted raised pavement markers (RPMs) provide greater visibility in work zones than traditional temporary pavement markings such as pavement marking tape. Lighted RPMs are especially helpful in delineating crossovers in work zones, significantly reducing vehicle speeds, and increasing the number of passenger cars that stay in the correct lane.

Ground-mounted and illuminated, RPMs can be operated in flashing, racing, or steady-burn modes.

MwSWZDI research showed that installation and removal of RPMs is hassle free; however, extensive cabling required to power the lights could be problematic in some areas. Solar-powered units are also available and may solve this problem.

Direction indicator barricades

Direction indicator barricades direct traffic more clearly through a crossover. Arrows and lights make these barricades more visible than traditional drums, making needed lane changes more quickly apparent to motorists. The barricades are designed to collapse and lay flat when struck by a vehicle and

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employees with some helpful initial training. Upon returning from the Expo, employees share the information with other staff in the shop. For Stan, attending the Expos has resulted in a major change in the city's anti-icing practices. He has changed anti-icing materials because of what he's learned at the Expo and what the Iowa DOT has experienced in the Bettendorf area.

Employees in Stan's shop particularly enjoy seeing new equipment at the vendor displays. Product and process demonstrations are also valuable. Demonstrations like the one of the Missouri Department of Transportation's scrub seal operation give Expo participants an opportunity to see the products and processes that have been developed in other parts of the country. Ron Johnston summed up his feelings about the Expo: "You're on the right track. Keep it up." •