# Crossroads

Fall 1995

TRANSPORTATION Information Center

University of Wisconsin–Madison

## New work for county safety commissions

County traffic safety commissions have been around for nearly 25 years—with varying degrees of activity and effectiveness. Now WisDOT is looking to them to help carry out the federal ISTEA mandate for local safety management systems. Coordinating the effort is Jerry Smith, community traffic safety program manager at WisDOT. "The commissions are ideal for this purpose," says Smith. "They already exist and bring together all the disciplines which are involved in safety at the local level."

Since they were created in 1971, the commissions were supposed to meet quarterly; keep an accident location system; and be a focal point for safety programs, for reviewing unsafe roads or intersections, and for recommending ways to address the problems. "Some work in a



Reviewing crashes is one of the jobs of County Traffic Safety Commissions

perfunctory way while others are very active," says Smith, who has been attending many of the meetings around the state.

The commissions can be very helpful to small and large municipalities who have to address unpopular or expensive safety decisions. As an unbiased review group, they can make a recommendation that is politically difficult for the local officials. For example, citizens often react to a crash or injury by demanding a stop sign, a traffic signal or lower speed on a section of

Continued on page 4

## Keeping local roads safe

Sometimes it takes major reconstruction or expensive equipment to improve local road safety. Adding traffic or railroad crossing signals or rebuilding hazardous intersections, narrow roads or deficient bridges can be costly.

However, safety can also be significantly improved by paying attention to many smaller details. For example, checking signs, shoulders and guardrail, and mowing or brushing roadsides to improve vision can add important safety margins for drivers.

Inspecting and maintaining highway signs, and especially replacing critical missing signs, are major responsibilities of local streets and highway agencies.

Keeping them up can help prevent serious crashes.

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## Idea Exchange

#### Safety cage for forklift



This forklift mounted cage makes working in high places safer.

How many maintenance workers does it take to change a light bulb? The answer is no joke when the bulb is 30 feet up in the ceiling of a maintenance garage. Changing light bulbs is just one of the hazardous tasks made safer by a forkliftmounted cage built by the Portage County Highway Department. The 46x42 in. cage

is made of 2 in. square tubing,  $\frac{3}{16}$  in. thick. The sidewalls are made of  $\frac{1}{2}$  in. expanded steel, 42 in. high on three sides and 72 in. high on the back. The back wall protects the worker's fingers, feet, arms, and clothing from getting caught in the hoist mechanism. All sides go flush with the floor deck to protect the worker's feet. The deck is made of  $\frac{1}{8}$  in. anti-slip diamond plate and the forks slide into a 6 x 3 x  $\frac{1}{4}$  in. rectangular tubing.

Other safety features include a bolt mechanism to hold the cage to the forklift, an emergency "off safety" switch for the forklift inside the cage, and a fall arrest safety belt for the worker. It also is equipped with 110 v. power and a shop light inside the cage, and castor wheels for easy mobility when it is not in use.

"We've been using it for about five months and we're getting a lot of use out of it," says Kenny Gliszinski, patrol superintendent and shop supervisor. He designed the cage which is also used for servicing overhead motors and cranes in the maintenance shop, changing overhead furnace filters, painting, cleaning rain gutters, and other jobs.

Gliszinski estimates the cage cost \$750, which includes about 6 hours to build and 2 hours to wire.

For more information contact Kenny Gliszinski, Portage County Highway Dept., 800 Plover Rd., Plover, WI 54467, 715/345-5230.

#### Cold mix holder good patrol tool

A patrol worker often has to stop and patch small potholes when he is out driving his section. Traditionally he works off the back of the truck, shoveling patching material out of the truck's bed. Not a very safe place to be, especially on higher volume roads. A few years ago Eau Claire County Highway Department patrolman Harold Hess suggested fabricating a frontmounted holder for patching material. The pan is built around a snowplow hitch and can be mounted and dismounted as easily as a



It's easier on the back and safer to patch small potholes from this front-mounted cold mix holder.

plow. It is about eight feet wide and three feet deep front to back. The back wall is about one foot high and the sloping front lip is about six inches high. It typically holds about one-half a yard of cold mix patching material which is loaded in the yard by a front loader. "It costs about \$500 in parts and labor depending on the cost of the hitch and what materials are already in the shop," says Tim McMillan, shop superintendent.

"Fellow employees were skeptical at first," says Tom Walther, county transportation and public works director. "After a couple years when everyone had a chance to try the pan, attitudes changed. Today crews regularly use seven pans and during the big spring pothole season even this number doesn't meet requests."

Using the pan is safer since it puts the truck between the worker and the traffic. Shoveling from knee height is easier on the back and shoulders than the chest high tailgate. The operation is more efficient, too, since the patrol truck can tow an arrow board, eliminating need for a shadow truck and driver. The pan also works well for carrying lawn mowers, compactors, etc.

For more information contact Tim McMillan, Eau Claire County shop superintendent at 715/839-2954.

Do you have an idea to exchange? Have you designed a gadget or found a new way to do something that other streets and highway people can use? Use the form on page 7 to let us know, or call Don Walker or Steve Pudloski at 800/442-4615.

#### **Crossroads**

A newsletter providing information on roads and bridges to local officials, published quarterly by the Transportation Information Center, located at the UW-Madison, Dept. of Engineering Professional Development, 432 N. Lake St., Madison, WI 53706. Phone: 800/442-4615. Fax: 608/263-3160.

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## Are you ready for winter? Join the snowplow rodeo

Thursday, October 5th, the sixth annual Snowplow Rodeo competition will be held in Waukesha. The event, sponsored by the Wisconsin APWA, can be a great way to train or update your plowing crews. Hold a local rodeo and send the winning team to Waukesha for the statewide competition.

Publicity not only builds pride among your work crew, it is a great opportunity to remind the public of the service you provide, and their responsibilities during snowstorms. Print and TV reporters love photos of crews and equipment.

In addition to the written exam and obstacle course competition, this year's rodeo offers some new features:

- Separate events for 10 foot and 11 foot blades
- Endloader competition
- A mechanic on the team for the safety inspection
- A public officials event (They drive the same obstacle course in a 4x4 with plow blade attached.)

Team not ready, but want to know more? Observers are welcome. Contact Mark Hochschild to get information for a local rodeo.

Where: Waukesha County Fairgrounds. Just off I-94 on CTH T.



At the snowplow rodeo drivers guide their plows through an obstacle course and take a written exam.

When: October 5: 8:00 a.m. registration; 9:00 a.m. event begins

Who: Teams of two. Your truck or ours. Endloader provided. How much: \$50 per team

How: Contact Mark Hochschild, City of Greenfield, phone: 414/761-5376, fax: 414/761-5321.

**Deadline:** September 8. Late registrations accepted, but early registrations help with planning food, events, prizes, etc.

## Calendar.

#### T.I.C. workshops

Specific details and locations for workshops are in the announcements mailed to all Crossroads recipients.

Winter Maintenance A chance to rethink your operations, learn from others, and tune up your approach to snow and ice control and other winter maintenance activities.

Sep 12	Green Bay	Sep 20	Cable
Sep 13	Brookfield	Sep 21	Eau Claire
Sep 14	Barneveld	Sep 22	Tomah
Sep 19	Rhinelander		

Access Management, Location and Design If you are involved in the planning, design, and/or approval of access to existing sites or new developments, then you should plan to attend this highly rated three-day National Highway Institute course. In this intensive course you will learn the most effective access management techniques, when they are warranted, and the geometric standards for their use. Explore strategies to retrofit existing streets, review samples of access policies and practices, and consider several case studies.

Nov. 14-16 Brookfield

Equipment Maintenance Your chance to re-evaluate your approach to equipment maintenance and repair, including preventive maintenance and scheduling.

Dec 5	Rhinelander	Dec 12	Green Bay
Dec 6	Cable	Dec 13	Brookfield
Dec 7	Eau Claire	Dec 14	Barneveld
Dec 8	Tomah		

#### Barneveld

#### UW–Madison Seminars

Local government officials are eligible for a limited number of scholarships for the following engineering courses in Madison. Use the form on page 7 for details or call 800/442-4615.

Traffic Engineering Fundamentals, Sep 18-19 Work Zone Traffic Control, Sep 21-22 Effective Detention Basin Design Techniques, Oct 9-12 Managing Snow and Ice Control Operations, Oct 12-13 Timing Traffic Signals Using PASSER, TRANSYT and NETSIM, Oct 23-25

Advanced TEAPAC Applications for Traffic Signals, Oct 26-27 Pavement Rehabilitation and Construction, Nov 6-8 Improving Quality in Street and Highway Design and Construction, Nov 15-17

Bridge Inspection, Dec 4-6

Keeping local roads safe

This drop-off is over five inches deep and is a hazard. Drop-offs commonly occur along the inside of curves and at intersections.



Beam guardrail will deflect several feet before it restrains a vehicle. This installation is dangerous. Also, there does not appear to be a good reason to install guardrail at this location.



This rail is too low and could cause a vehicle to roll over. A minimum height of 27 in. to the top of the rail is recommended. Also, the blunt end can be hazardous. In addition, the intermediate posts are missing. Posts should be spaced at six feet three inches apart. Upgrading the guardrail is desirable if it is to be effective.

#### from page 1

Severe drop-offs at the edge of pavements are also a hazard. Drop-offs as small as two inches can be a hazard for high speed traffic. They can occur when the pavement is overlaid and additional shoulder material is needed to match the new road cross-section. Traffic or water action can also cause shoulder drop-offs.

Routine inspections can spot hazardous shoulder drop-offs. You'll often find them along the inside of curves and at intersections where traffic is running near the edge of the pavement or off on the shoulder. Repair them by grading existing gravel back up to meet the pavement edge or adding more shoulder gravel.

Guardrail can effectively shield the motorist from roadside hazards, but the guardrail can become a hazard itself if it is improperly installed and maintained. For example, the area between the pavement and the guardrail is intended to be level and free of obstacles. Watch for and remove excess gravel, windrows of gravel, soil or other material, and snowbanks.

Inspect guardrails routinely. Those which are at the wrong height or in the wrong place, or which have blunt ends won't provide the safety they are intended to give. In fact, they are hazards. For example, guardrail is intended to deflect or bend about three feet during a crash. Make sure there is at least three feet of clearance between the guardrail and the hazard it is shielding.

Maintain your guardrail. Check the posts on beam guardrail and repair or replace those that are rotted or not completely imbedded. It doesn't work unless it has proper support. Guardrail that is corroded or missing hardware won't function properly either. Some improvements can be low cost; others may require completely removing or upgrading the guardrail systems.

The T.I.C. will address roadside safety improvement at its January safety workshops. We are also working on developing information manuals to help you inspect roadways for critical safety improvements. These manuals will provide a rating and priority selection system to help local officials in budgeting and in setting priorities for roadside improvements.



Short portions of rail are not as effective or able to restrain a large vehicle as longer ones. The guardrail in the bottom photo seems to be needed. Both need repair and are a hazard in their current conditions.

**County safety commissions** from page 1 road. The commission can review the applicable traffic safety regulations and advise on whether the request is appropriate.

"Often they will go out to the site themselves or have their staff do a study to find the best answer," says Smith.

A committee organized by WisDOT is looking into how to meet the ISTEA safety management requirements. They sent a survey out to commissions in late spring to see how they function and what changes, if any, are needed. The results, due back in late August, will guide the next phase of the project. The system is supposed to be in place by late 1996.

"I think that among other things we'll want to encourage more use of the commissions," says Smith. "In some counties they have sort of been forgotten." He'd also like to see them use state-generated crash reports more.

You can reach your county highway safety commission through the county highway safety coordinator or sheriff.

### Resources

All items are available from the T.I.C. unless otherwise noted. To get your copy, call 800/442-4615 or use form on page 7.

**Stormwater Ponds, An Effective Way to Control Urban Runoff**, published by UWEX for the Wisconsin Priority Watersheds Program, 8 pp. Developed as a public information pamphlet to explain retention ponds, the descriptions, drawings, basic design features, and pictures are a clear and concise tool you can use in educating others. You can get copies from your county Extension Office or by calling 608/262-3346.

**Blading Aggregate Surfaces**, National Assoc. of County Engineers Training Guide Series, 1990, 50 pp. This small pocket guide is written for grader operators, road maintenance supervisors and crews. Information is easy to read and illustrated with many drawings. Supervisors can use it to explain proper maintenance procedures to crew members. Only a few copies are available.

The Basics of a Good Road, T.I.C. Wisconsin Transportation Bulletin, No. 19, June 1995, 4 pp. This latest in the series of T.I.C. factsheets reviews the basic concepts of building a road to last. It is written to be particularly useful to individuals with limited technical expertise and experience. This will help you answer commonly asked questions about road building and maintenance.

**Videotape Lending Library Catalog**, T.I.C., June 1995, 41 pp. Your guide to over 200 video tapes you can borrow for training. The collection is organized in 12 topic areas with a brief description of each tape. Easy to use.

**Work Zone Traffic Control Information Catalog**, Federal Hwy. Admin., FHWA-SA-92-037, July 1992, 30 pp. A comprehensive resource listing standards and guides, handbooks and manuals, training courses, video and slide-tape presentations, and research reports and technical papers on traffic control and safety in highway construction and maintenance zones.

Highway Accidents Involving Hazardous Materials, A Primer for First Responders, UW-Extension, 10 pp. Describes step-by-step procedures for a safe and effective response to an accident involving hazardous materials. Helps prepare you and your team to successfully follow the five simple but essential safety rules.

**Correction** Some County Extension offices and phone numbers for borrowing video tapes were left out or were listed incorrectly in the new *Videotape Lending Library Catalog.* 

#### Getting help from WisDOT Districts

The staff at your Wisconsin Department of Transportation District Office can be very helpful in dealing with many different types of highway and transportation questions. You may have noticed that *Crossroads* articles often refer you to them. What you may not know is how to reach them and the many types of issues they can help with. You may wish to copy the following lists and keep them as a handy reference.

When you call the District Office, ask for someone in the appropriate section. They may refer you to a specialist. Be patient. While WisDOT is understaffed for all they are asked to do, they will be helpful. If what they suggest doesn't meet your need, contact us at the Transportation Information Center for additional ideas. You can reach us at: 800/442-4615 or mail/fax the form on page 7.

WisDOT	District	Offices

Eau Claire	715/836-2891
Green Bay	414/492-5643
La Crosse	608/785-9022
Madison	608/246-3800
Rhinelander	715/362-3490
Superior	715/392-7925
Waukesha	414/548-5902
Wisconsin Rapids	715/421-8300

For information on	Ask for	For information on	Ask for
Accident data	Traffic	Plat, survey & zoning review	Planning
Aggregate sources	Materials	Projects (status of plans/approvals, State &	· ·
Bridge reports (local bridges)	Maintenance	Federal Aid, highway & bridge projects)	Design
Bridge overload permits	Maintenance	Railroad coordination	Design
Construction projects	Construction	Relocation assistance	Real Estate
Contracts	Construction	Right-of-way	Real Estate
Design of roads	Design	Road inventory (local)	Planning
Detours	Traffic	Safety	Traffic
Driveway permits	Maintenance	Signing and signals	Traffic
Environmental issues	Design	Snow removal	Maintenance
Federal Aid programs	Planning	Specifications	Construction
Highway aids	Planning	Speed zoning	Traffic
Maintenance (roads, bridges, waysides)	Maintenance	Surveying	Design
Materials, quality control	Materials	T.E.A.	Planning
Mowing	Maintenance	Traffic counts	Planning
Oversize loads	Traffic	Transit	Planning
Pavement markings	Traffic	Utility coordination	Design

## Big CDL employers advise: start early, join forces

January 1, 1996 will be here before you know it. That's when the federal drug and alcohol testing mandate takes effect for employers of fewer than 50 CDL holders. *Crossroads* asked some of the "big guys" what advice they have for smaller employers.

They all agree on two things: don't wait till the last minute and don't try to invent your own program.

"Remember, they have to be *in compliance* by January 1," says Mike De Haan, field service director of the Wisconsin Motor Carriers Association (WMCA). "That means, all the training, testing systems, and policies have to be in place. If they wait till mid-November, they're going to have problems getting everything done."

Testing, chain of evidence, and record keeping are being pretty well covered by the vendors, clinics and consortiums that have developed to serve this need. Disciplinary policy is a tough area. While many commercial carriers have tough "zero tolerance" policies a positive test means the driver is fired—some municipal employers are trying a more compassionate approach.

"Generally I've taken a pretty tough position, but we're trying to give another chance to a few of the longer term employees, and help make them productive members of the workforce," says Bill Kappel, Milwaukee's municipal equipment superintendent. Some parts of Milwaukee's disciplinary policy have been modified since the program began, Kappel says. For example, repeat tests after a positive result are now being paid for by the employee.

In many municipalities, discipline policies have to be negotiated with employee unions. "It took months to develop our policy," says Roger Kolb, Brown County highway commissioner. They have decided that while cocaine use is grounds for instant termination, marijuana users may be referred for rehabilitation. Some false reports designed to "get" a co-worker caused them to soften their language on one worker reporting another for "reasonable suspicion" of drug or alcohol use.

Another reason not to wait too long involves the mistaken belief some alcohol and drug users have that they will not get caught. "I encourage small municipalities to **make sure** their employees know the program is coming," says Kappel. "A minimum of one to two months beforehand, they should get out there and preach to the troops. Let them know they won't slip through the cracks, so they can go get help on their own if they need it."

#### Take advantage of others' work

"Join a consortium where the policies have been tested in court," says Bill Vickery, FHWA state director of the Office of Motor Carriers. "Things are going pretty well where people used an outside vendor," says Joe Maassen, director of WisDOT's testing program.

"They should join a consortium where a clinic or hospital handles all the testing, policies, etc.," says Mike De Haan of WMCA. "But make sure that what you pay for covers everything in the regulations because *you*, not the supplier, are responsible for compliance."

"We're encouraging towns to find a provider like Health Net Plus or get together with a county consortium or pool so they don't have to do all the paper work, and if they just have a couple employees, they can be part of a bigger testing pool," says Rick Stadelman, director of the Wisconsin Towns Association. WTA has arranged with Health Net Plus, a Green Bay based provider, for a package testing program priced by the test. It also provides supervisor training, model drug and alcohol policies, and literature for training employees, along with meeting all the federal requirements.

Several larger clinics and hospitals around the state have created programs and established test sites. Bill Vickery at the FHWA who has an informal list of consortia has helped some smaller municipalities locate nearby testing sites.

Here are some additional points our sources made:

- The federal courts in June prohibited the provision requiring pre-employment testing for alcohol.
- Training should be done carefully and thoroughly, advises Joe Maassen. The program is very complicated and some parts, like "reasonable suspicion" can raise fears in employees and help establish a less honest "them vs. us" mentality.
- Don't count on using local police or sheriff office breath testing equipment for alcohol testing. It won't be permitted.
- Employees who test positive for drugs or alcohol in random testing and are fired are not entitled to unemployment compensation. There have been several cases decided this way.

For more information and advice, contact: Bill Vickery, FHWA, 608/264-5215; Mike De Haan, WMCA, 608/833-8200; Bill Kappel, Milwaukee, 414/286-2369; Joe Maassen, WisDOT, 608/266-8810; Roger Kolb, Brown County, 414/ 492-4925; Rick Stadelman, Wisconsin Towns Association, 715/526-3157.

A related story in the Winter 1995 issue of Crossroads may also be helpful. Copies are available from the T.I.C. Use the form on page 7 or call 800/442-4615.

## Newest Roadware easier to use

*Roadware*, the computer program that manages PASER, Pavement Surface Evaluation and Rating data, has been upgraded. It now runs faster, manages files better, offers new report formats, and uses WisDOT data more efficiently. In addition, we've expanded the on-line help system and documentation, fixed some bugs, and made the program compatible with Windows versions 3.1 and 3.11.

"So far the response from our test sites has been very positive," says Randy Reihbrandt, a programmer working with WisDot and the T.I.C. who added the new features. He is available to answer user questions at 608/246-5454.

Version 4.0 will be distributed in September after the T.I.C. sends questionnaires to all current *Roadware* users. Only those who respond will receive the new version.

"I really like it," says Walt Raith, transportation planner at the East Central Wisconsin Regional Planning Commission. He helped test the new version over the summer. "It really makes you think about what is going on out there. You put in your budget and the software will pick out the projects, spending down the budget and bringing up the overall condition rating.

"The program helps local elected officials and staff see how much they need to be spending to keep their roads in good condition and gets them to take a better look at what they're doing," Raith says. He is involved in a "2020" long-range transportation and land use planning project and now has all 22 jurisdictions in the RPC up and running on **Roadware**. The RPC offers training and technical assistance to locals who, for the most part, do their own pavement ratings.

**Reader Response** 

Mike Hemp, Jackson County Highway Commis-
sioner, is another long-term PASER and Roadware user.
He made his first PASER-based report to the County
Board in 1992. "It was a real eye-opener to the County
Board to see what condition our roads are in," he says.
"Right now about 50 percent of our roads need an
overlay or grind and overlay." Over the last three years
the Board has significantly increased the roads budget,
Hemp says, "But we need a lot more."

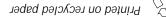
It was the PASER reports that gave County Board members their first comprehensive view of the county's road needs as a whole. A number of them rode along and assisted in rating the road conditions. The Board increased the budget 35% that first year.

PASER helped Hemp and the Highway Committee to set priorities on which road projects to do first. Some roads in very bad condition were passed over because they carried so little traffic while the money went to other roads with higher ADT counts. "It helped us document why when people asked," Hemp says. "We could show that we were trying to do the best we could with the dollars on hand for the most people."

Hemp and his staff rated all 234 miles of county trunk highways again last spring and they expect to have a new PASER report in September to begin planning the 1996 budget. *Roadware's* new report and projection capabilities should make that job a bit easier.

**PASER** rating system booklets for Asphalt, Concrete, and Gravel roads are available from the T.I.C. A companion training videotape is available through County Extension offices. Training and technical assistance are available in many places around the state. Copies of **Roadware** (which requires a IBM-compatible PC, 386 minimum, and uses d-Base files) are also available. For more information, please call Steve Pudloski, 800/442-4615 or mail or fax the form below.

If you have a comment on a <i>Crossroads</i> story, a question about roadways or equipment, an item for the <i>Idea Exchange</i> , a request for workshop information or resources, or a name for our mailing list, fill in this form and mail <i>in an envelope</i> to:	Please send me information on
Crossroads Transportation Information Center University of Wisconsin–Madison FAX 608/263-3160 432 North Lake Street Madison, WI 53706	Name
<ul> <li>Please put me on your <i>Crossroads</i> mailing list.</li> <li>My idea, comment or question is</li> </ul>	Title/Agency
(We'll call you to get more details or answer your question.)	City State Zip Phone ( )



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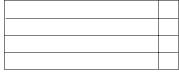
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#### 1910 TRANSPORTANION Information Center

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## km m mh

WisDOT has produced a new booklet, Getting Started in Metrics, to help with the process. It features conversion guidelines, tables of conversion factors and drafting standards, and summarizes writing conventions.

Wisconsin is still actively moving toward the International Standard by using metric units in all new road plans, says Ron Nohr, WisDOT metric coordinator. "We are still working toward the September 30, 1996, date," he says. According to Nohr probably 100 highway projects are in some stage of design and numerous others are in the planning stageall using metric units. Over 300 other projects begun in English units have been officially excepted from using metric because of the cost and labor of converting them to metric units.

## Metrication marches on

"Our Design Office pulled together the detail. through the T.I.C.'s Videotape Lending Library. The three tapes (#17710-17712, SI Metric for the Workplace) total 49 minutes and can be borrowed through your County Extension office.

information that is now in various places in the Facilities Development Manual and put it in one place. We wanted to give people a jump start on going metric," says Nohr. The booklet references sections of the Manual for further Metric training videotapes are available

> Copies of Getting Started in Metrics and of a slide rule that converts length, area,

> > pressure are available free from the

on page 7, or call 800/442-4615.

T.I.C. To get one, fax or mail the form

force, volume, temperature and