

Crossroads

Spring 2004



TRANSPORTATION Information Center—LTAP

University of Wisconsin—Madison

How safe are your roads at night?



In daylight and good weather drivers can use many clues to keep their vehicles safely on the road. At night, and in the rain, snow or fog, there may be only one—a sign or pavement marking shining in the headlights. It's important to keep those signs and markings in good shape and to replace the ones that are

no longer retroreflective.

You can't always tell from looking at a sign in daylight if drivers can see it at night. In addition, signs deteriorate at different rates. Age, location, sun exposure, and original sheeting type are all factors. For example, sheeting on a sign facing south deteriorates faster than one facing north. The *MUTCD* (Sec. 2A.23) recommends regular inspections, both day and night, to keep signs properly positioned, clean, legible, and adequately retroreflective. "Damaged or deteriorated signs should be replaced," it says.

There are several methods for inspecting and measuring retroreflectivity. One is to use a reflectometer and compare the readings with minimum guidelines. This gives measurable results, but it can be expensive in labor and equipment. Also, standards are not yet in place. The Federal Highway Administration is developing them as part of an effort to encourage highway agencies to implement sign and pavement marking management. A draft of retroreflectivity standards for public comment is expected this year.

The easiest and least expensive way to find failing signs is to go looking for them, preferably in the dark. A visual inspection system does not produce

precise measurements, but can pinpoint signs that have failed. When setting up a visual inspection system, here are some things to consider:

- Schedule and assign inspections to ensure they happen.
- Use a sign inventory system or maps so all signs are inspected.
- Set procedures so observers use consistent or comparable methods.
- Develop inspection guidelines that address:
 - Type of inspection vehicle used.
 - Type of headlamps in the inspection vehicle. (Use newer truck or SUV and low beam headlamps.)
 - Aiming of inspection vehicle headlamps.
 - Age and visual acuity of the inspector(s).
 - Type of personnel who conduct inspections. (Some agencies use non-transportation personnel such as secretaries or bookkeepers to have more representative drivers.)
- Keep written records.

Citizen complaints, law enforcement reports, and casual observations by municipal staff are also important ways of learning about poor quality signs. Be sure you have a method for collecting, recording, and following up on this kind of informal inspection. Also, give inspection priority to critical locations—stops, curves, and sites where crashes have occurred. Sign replacement priority should be as follows:

Critical signs — Stop signs and other red series signs such as DO NOT ENTER and WRONG WAY

Middle priority — Warning signs such as curve signs

Lower priority — Informational signs

If nighttime inspections are impossible, consider shining signs with a hand-held high-intensity spotlight during daytime inspections. Signs that don't reflect back need to be replaced. You might make this system more precise by fixing a sample of retroreflective sheeting to the sign and comparing the sample's brightness



to the sign's. You may also wish to schedule routine replacement at a certain age. This approach takes some careful recordkeeping and may result in untimely replacements, either before they deteriorate, or long after.

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Idea Exchange

Undercutting blade improves shoulders

Crews in the Clay County, South Dakota, highway shop have fabricated a mold-board extension that cleanly cuts away shoulder material. An old moldboard extension is modified and bolted to the



frog of a motor grader's moldboard. It is used to undercut and move existing vegetation and base/subgrade out onto the road's fore slope. It works best when following a lead grader equipped with a cutting wheel that creates a clean, straight edge to the pavement.

The process forms a bench approximately 8" deep and 36" wide with solid footing on which to add new base material. The next steps—filling the undercut area with properly graded aggregate, striking off, and compacting—produce a solid, well-shaped shoulder.

Adapted from SD LTAP Special Bulletin #47 "Shoulder Widening to Improve Roadway Safety." Copies available from the T.I.C. (See page 7).

Safety training makes seasonal workers more productive

Spring, when grass needs cutting and road projects begin, also marks the arrival of seasonal employees. For many supervisors, seasonals are a critical resource. Giving them appropriate safety and equipment training is one way to ensure good productivity. It can also help protect budgets from worker's comp costs and increased premiums.

"We started training them about five years ago because our seasonals are such a vital part of our work force," says Beloit Operations and Transit Director Chris Walsh. "We are really short-staffed and we need them to perform." They found that many safety rules and regulations were not being followed. Now, before seasonals can go to work, they spend at least a day in a classroom and up to several days learning on the job.

In the classroom, the City's Safety Coordinator walks the new workers through an employee handbook. It includes required forms, work rules and behavior expectations. They are introduced to employee values and workplace policies on violence, harassment and drugs. All are trained and tested in safety essentials like Lockout/Tagout, Confined

Space Entry, Hazard Communication/Right to Know, and Defensive Driving.

Next the seasonal employees go through on-site training. Some topics are general, like locating the First Aid kit, finding and using personal protective equipment, or what to do in case of fire or tornado. Others are specific to the job and equipment. "If they're on a sign crew, they learn how to set up a work zone. If they're on a lawn mower and weed whip, they learn how to operate them," says Walsh.

While they are employed, seasonals also sit in on the regular safety training programs required of full-time workers. Beloit does 70 safety trainings a year for its staff, each a half to two hours long.

Is it worth the effort? Last year there was only one accident among the 20 seasonal parks and operations workers in Beloit. "We have just about eliminated seasonal accidents and our Workers Comp costs are way down, too," says Walsh.

Getting started

Beloit's seasonal employee training is part of its comprehensive city-wide worker

safety program. It required considerable effort and commitment from supervisors and city leaders, and it has paid off.

In addition to fewer payments for injured workers, the City of Beloit is saving a lot of money in Workers Compensation Insurance premiums because of their good history. Premiums are 33% lower this year, says Rick Bayer, Manager of Loss Control for Cities and Villages Mutual Insurance Company (CVMIC), Beloit's insurer.

Any community could begin with a simplified program for their seasonal
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Roads at night

from page 1

Some communities have adopted computerized sign inventory systems. A variety of commercial programs are available. The University of New Hampshire LTAP program offers one for \$25. The Windows-compatible "Sign Inventory Management System—SIMS02" is designed for small to medium-sized county highway agencies. <http://www.t2.unh.edu/pwms/sims.html>

Whatever approach you take, it's your responsibility to make your roads safe at night. Don't let your signs go dark. Also, be sure to voice your opinions to the FHWA when it publishes the retro-reflectivity guidelines later this year.

*For information on signs and pavement markings see the T.I.C.'s newly revised bulletins: **Signing for Local Roads**, No. 7, and **Pavement Markings**, No. 9. See page 7 to request print copies or visit our Website: <http://tic.engr.wisc.edu/publications>.*

Crossroads

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Non-profit organizations are welcome to reproduce articles appearing here. Please contact us first for any updates or corrections.

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Shoulders shrinking?

When you plan to improve a section of roadway, think about the effect on shoulders and side slope, advises Don Walker, Director of the T.I.C. "It may not be a big deal for any one improvement, but it adds up," he says.

Take a gravel road for example. When you add 6" of new gravel, it can cut 12" off the width of each shoulder or a total decrease of 2 feet in road width if the side slope is 2 to 1. The loss would be even worse if the side slope is flatter, such as 3 to 1. Do this again and you have lost a significant amount of your shoulder width.

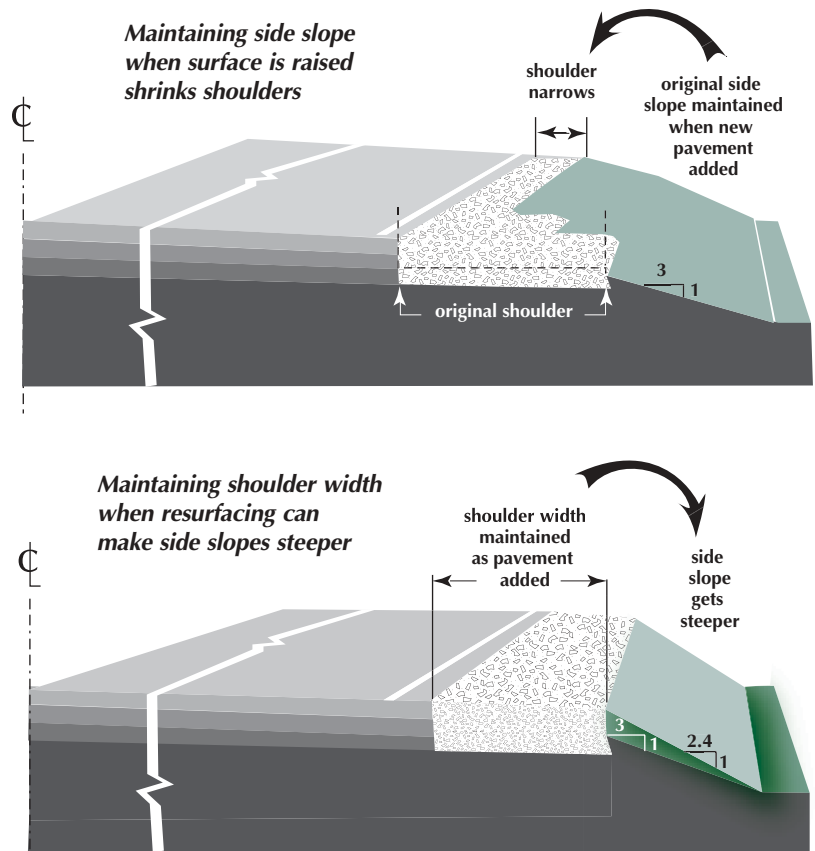
Similarly, if you pulverize an asphalt pavement, mix in new aggregate and lay a new 3" bituminous mat, you raise the road height enough to shrink each shoulder by 6" to a foot if the side slope is 2 to 1! This may make your road non-conforming to the standards for local roads.

"It's a geometry problem," says Walker. "It happens when the construction improvement finishes the shoulder by tapering it at the existing angle of the road side slope."

If you decide to push the shoulders out and retain the shoulder width, then you change the angle of the road side slope. Again, the effect is cumulative. Raise the road 6" and a 3:1 slope now becomes about 2.7:1. Do it twice and your slope is 2.4:1 on a 4' fill—an incline that can cause problems for mowing, erosion, and vehicles that run off the road.

The solution involves measuring shoulder width and calculating ditch slope as part of developing your improvement plans. During construction, operators can move the ditch bottom further away from the road if there is room on the right-of-way or raise the ditch bottom, if the ditch grade allows. "If these options don't work, you can also consider installing pipe along the ditch bottom to eliminate a steep slope, or putting in guardrail," Walker advises. "These are expensive options, so you want to solve the problem through proper grading whenever you can," he adds.

"For both safety and maintenance reasons, it's important to look at the cross-section as a whole—surface, shoulder and ditch—when you're planning an improvement," says Walker.



Height road raised	3"	6"	12"
Loss of shoulder width or ditch relocation (3:1 side slope)	9"	18"	36"
Change in 3:1 side slope (for a 4' high fill)	2.8:1	2.7:1	2.4:1



Measuring slopes is not hard if you have a little training and a couple of common tools. The T.I.C. offers a one-day on-site workshop—"Basic Surveying for Local Highway Departments"—that teaches highway workers and foremen how to do it using a tape and hand level. (See Calendar on page 5.)

Planning, contracts can preserve urban trees

It takes decades to grow the mature trees that enhance the quality, value and environment of city neighborhoods. Yet many contractors and city officials accept construction damage as regrettable, but inevitable.

Not so, says Jim Kringer, forestry inspector for the City of Milwaukee. "When this program started, the City of Milwaukee was losing up to 400 trees annually. Now, we lose as few as two a year," he says. "We save 99 percent of the trees involved with city construction."

The key is making trees a priority with contractors by

- designing specs for protection;
- inspecting before, during and after projects; and
- assessing substantial fines for damage.

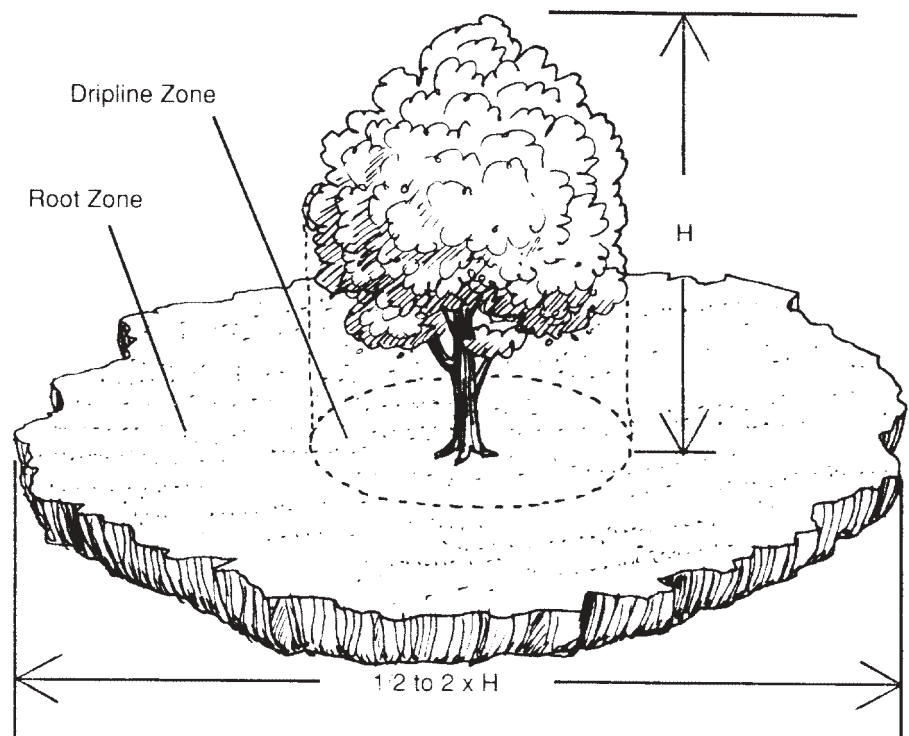
Milwaukee woke up the hard way in 1978 when contractors replaced sidewalks in a residential area with hundreds of mature trees. A storm came through that August and blew over 90 trees in the area because their support roots were cut. The aldermen demanded changes.



Construction practices killed this mature tree.

"They hired me in 1981 and told me to stop the trees from falling over," says Kringer. "We didn't know how, so for the first two years I just asked questions." He talked to contractors, and engineers, and equipment manufacturers. "Many didn't understand about trees and how they grow. They felt that trees could be hacked away or easily replaced to get the job done. We had to change that attitude," Kringer says. That was not easy.

Now, two decades later, the program successfully protects well over 300,000



Myths about trees cause problems. Most have shallow roots that spread well beyond the drip line.

trees using just two full-time employees. In fact, the sewerage district is proposing to double the number of trees in the city. It estimates that trees save \$21 million a year in runoff management by absorbing 15.5 million gallons of rainwater that would have to be processed through the storm sewer system.

How to save trees

Saving trees starts with the design phase. Kringer analyzes the site, its soils, and the tree types. He then works with designers and engineers to develop plans that protect the trees. "If a sidewalk is raised because a tree root grew under-

neath it, we will change the summit of the walk so it gradually rises and falls over the root instead of cutting it out," Kringer says. They may also design an arc or even narrow the sidewalk or the roadway by up to a foot.

When tree roots must be cut, Kringer prescribes precise cuts with hand tools that minimize tree damage. "We do not allow mechanical root cutting because they can tear roots apart. Throughout construction we closely monitor where roots are. Our goal is not to disturb roots," Kringer says.

Once they understood the problem, sidewalk contractors helped. One redesigned the slipform machine used to pour curb and gutter. Instead of needing a foot of curb clearance, requiring workers to cut into the terrace and the brace roots of healthy trees, they rearranged the rear track and the curb mule so it now requires zero clearance.

Other actions also affect tree roots. Parking vehicles in the shade of a tree compacts the soil, so the tree can't soak up water and nutrients. Staging building materials under trees can suffocate roots, causing damage or death.



Protecting tree by arcing sidewalk.

continued on next page

Kringer lists tree challenges and suggested construction methods in the *Special Provisions* section of a job's specifications. Some measures are as simple as trimming overhanging branches ahead of a project and putting a \$15 exhaust diverter on equipment stacks to protect trees from hot gasses.

This section details hefty penalties if the contractor damages trees during the job. Contractors must consider these provisions as they prepare their bids. The fines reflect the lost value and the cost for tree repair or replacement and are deducted from the contractor payment.

"We estimate the insured value of a 30" diameter elm tree at \$20,000," says Kringer. The Common Council authorizes a charge of \$100 per diameter inch be assessed to the contractor if the tree needs to be removed. In addition, they are charged for removal.

"Even though a new tree planting may only cost \$400, the total replacement cost charged to the contractor can be as high as \$8,000," he says. Penalties for excessive root damage cost \$50 for every 2 inches of root stock that's damaged. For other damage, city crews cut back branches and take other repair actions also at the contractor's expense.

Once contractors' employees got skilled at working carefully around trees, the requirements added minimal time to getting the job done, Kringer says. "Contractors are more than willing to work along with you. Most live in the community and they realize the value of the trees," he says.

As the Milwaukee tree program shows, there's no reason to accept tree loss and damage as the cost of fixing streets and sidewalks.

For assistance in starting an urban tree management program, contact Jim Kringer at 414/708-2428 or jdean45@juno.com. Also see Resources on page 6 for publications and websites.

Calendar

T.I.C. Workshops

Specific details, locations and registration forms are sent to all Crossroads recipients prior to each workshop. Registration begins after announcements are sent.

Road Maintenance This workshop presents maintenance, repair and reconstruction options for your local roads and streets. Best practices for maintaining and improving drainage and extending pavement life. Includes exercises to help you decide which maintenance techniques are best for a particular situation.

DATE	LOCATION
Mar 11	Barneveld
Mar 12	Brookfield
Mar 15	DePere
Mar 16	Rhineland
Mar 17	Hayward
Mar 18	Eau Claire
Mar 19	Tomah

Local Transportation Issues (WisLine)

The T.I.C. and UW Local Government Center present the following program at over 103 Wisconsin WisLine locations. Call 608/262-9960 or visit www.uwex.edu/lgc for more information.

Using Stone On Roadway Projects

March 4, 10:30 a.m.-12:20 p.m.

Stone—one of the most important and widespread building materials used in road construction and maintenance—is used as road base, as aggregate in asphaltic and Portland cement concrete, as shoulder surface material, as foundation and backfill for drainage pipes, and to fill undercuts in soft soils. Review the physical properties of stone, the tests used to classify it, and specifications for its many purposes.

On-site workshops

For fee information and to schedule an on-site training session call 800/442-4615, e-mail: tic@epd.engr.wisc.edu, or use the form on page 7.

Basic Surveying for Local Highway Departments



Learn to use a tape and hand level for fast and reliable measurements to lay out a building, set culvert and ditch grades, determine crown and slopes, and set construction stakes. This one-day workshop includes classroom instruction and outdoor field exercises. For highway workers and foreman with little or no surveying experience. *Maximum class of 20.*

Flagger Training This three-hour workshop provides solid flagger training for all your field personnel. It covers procedures approved for WisDOT construction, maintenance and utility flagging operations. All participants receive a flagger pocket guide and actually practice flagging.

Flagger Instructor Training For key staff who will be training new employees and temporary help, add this extra half-day workshop to the flagger training. Participants practice teaching the flagger training, and receive an instructor's manual, video, and a supply of flagger handbooks. *Class limited to 20.*

UW-Madison courses

Local government officials are eligible for a limited number of scholarships for the following Engineering Professional Development courses. Courses are in Madison unless otherwise noted.

Urban Street Design Mar 8-10

Bicycle and Pedestrian Facilities
Mar 10-11

Implementing a Sidewalk Management System Mar 15-16

Designing Best Management Practices for Stormwater Quality Improvement Mar 29-31

Using the Source Loading and Management Model for Stormwater Management Mar 31-Apr 2

Land Development Traffic Impact Analysis Apr 15-16

Geosynthetics for Beginners Apr 22-23

Municipal Engineering Fundamentals for Non-engineers Apr 22-23

Soil Engineering for Non-Soils Engineers and Technicians Apr 20-21

Effective Roadway Lighting Apr 26-28

Accessible Transportation May 3-5

Resources

Printed publications

The following publications are available free from the T.I.C. while supplies last.

Culverts—Proper Use and Installation, No. 15. T.I.C. 2004. Revised and expanded. Reviews culvert sizing, installation, and environmental considerations.

Shoulder Widening to Improve Roadway, SD LTAP Special Bulletin #47. Case study of low-cost widening project on rural highway.

Trenching & Tunneling Near Trees — A Field Pocket Guide for Qualified Utility Workers, Dr. James R. Fazio, The National Arbor Day Foundation. A practical, pocket-sized guide that shows how to minimize tree damage for projects that involve trenching or boring. If you dig around trees you should have this guide in your pocket.

The Reflective Sheeting Identification Guide by FHWA—a laminated sheet—shows the ASTM Sheeting Types with common names and manufacturers' trade names for different sheeting types. It also shows pictorially the sheeting patterns and watermark for each manufacturer for each sheeting type. The guide can be useful for visually verifying sheeting types for new signs or installed signs in the field. The guide can also be viewed and downloaded at http://safety.fhwa.dot.gov/fourthlevel/pro_res_retrore_report.htm

The **T.I.C. Sample Contract Bid Documents** are available in hard copy and CD formats. The documents are intended for local government projects such as crackfilling, surface treatments and resurfacing. The CD version includes the documents in Word format that you can modify for your use. The documents will also be available on the T.I.C. website at: <http://tic.engr.wisc.edu/publications.html>

Pavement Markings, No. 9, T.I.C. 2004.

NEW! Expanded and updated to reflect current *MUTCD* guidelines, this bulletin introduces basic concepts for pavement markings including materials, general principles, and considerations for various marking types.

Digital resources

For easy access to websites noted in **Crossroads**, go to the online version on the T.I.C. Web site—<http://tic.engr.wisc.edu/>—and click on the web address to go directly to the desired site.

The **Wisconsin Bicycle Facility Design Handbook** can be downloaded at <http://www.dot.wisconsin.gov/projects/bike.htm>.

This new handbook discusses bicycle considerations for street maintenance and improvement, and provides design guidance for bike lanes and shared use paths.

Safety training programs offered by CVMIC (Cities & Village Mutual Insurance Co.) are on their website: www.cvmic.com.

Newsletters and publications for managing the urban forest can be accessed from links on the DNR website's Community and Urban Forestry page: <http://www.dnr.state.wi.us/org/land/forestry/uf/index.htm>

The **Distress Identification Manual for the Long Term Pavement Performance Program** (4th ed.), FHWA-RD-03-031 can be downloaded at <http://www.tfhr.gov/pavement/tpp/reports/03031/index.htm>. A useful pictorial dictionary of pavement distresses and standardized pavement distress terminology. Printed copies are available from the FHWA Research and Technology Report Center, 9701 Philadelphia Court, Unit Q, Lanham, MD 20706. Ph: 301/577-0818. Fax: 301/577-1421. e-mail: report.center@fhwa.dot.gov

Videotapes

Videos are loaned free through county UW-Extension offices. Copies of the T.I.C. Video Lending Library Catalog are available on request (print) from the T.I.C. All the following videos are NEW!

Red Light—Green Light. FHWA, 7 min. Dec. 2003. #18624

General information for drivers. A light-hearted message about the serious issues of intersection safety.

One Step From Death. ISU, 1997, 11 min. #18625

Introductory video for a series of work zone safety instructional tapes by Iowa State University (ISU). This video shows five accident simulations to heighten awareness of work zone safety. Excellent video intended for work zone employees and supervisors.

Traffic Control Safety. ISU, 1997, 11 min. #18626

Examples of good practice in setting up traffic control in construction and maintenance zones. Basic ideas and sound safety for highway workers and supervisors.

Professional Flagging. ISU, 1997, 47 min. #18627

Covers basic principles, procedures and applications for effective and safe flagging in highway work zones. Typical situations in rural construction and maintenance

zones are covered. Stresses a professional approach and sound safety practices.

Moving Operations/Maintenance Safety. ISU, 1998, 13 min. #18634

Shows typical hazards of short-term highway maintenance operations. Applications include snow plowing, mowing, debris pick-up, patching, and crack sealing. Good for new employees.

Utility Safety in Work Zones. ISU, 1998, 14 min. #18631

Shows hazards with above and below ground telecommunications, electric, gas, water and sewer utilities. It emphasizes one call procedures. Good for new employees or as a refresher.

Grading Safety. ISU, 1997, 14 min. #18628

Shows typical safety problems on a highway grading project. Includes personal, equipment, utility, and operational safety issues. Covers details on earth moving, trenching, hauling and construction traffic. Good video for new construction equipment operators and a refresher on construction site safety.

Paving Safety. ISU, 1998, 11 min. #18633

Shows hazards with concrete and asphalt paving operations. Intended for construction personnel and equipment operators. Good for new employees and a refresher.

Loading, Transporting & Unloading Heavy Equipment. ISU, 1998, 12 min. #18635

Shows hazards and good practice in moving dozers, cranes, excavators, and pavers. Loading, chaining and transporting are covered. Good for new employees.

Surveying Safety. Iowa State University, 1998, 17 min. #18636

Describes typical hazards faced by surveyors. Includes information on personal equipment, being alert, traffic control, natural hazards, and hand tools. Good for new employees.

Removal/Demolition Safety. ISU, 1998, 11 min. #18632

Shows hazards with demolition and removal of buildings, pavements, and utilities. Emphasizes personal safety, planning and equipment.

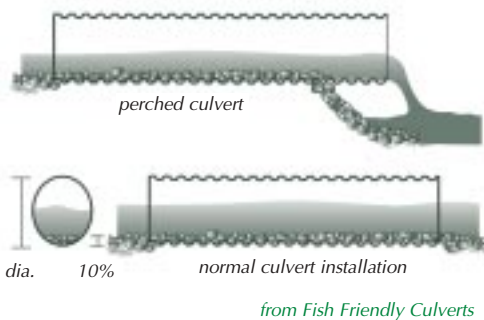
Structures Safety. ISU, 1997, 12 min. #18629

Typical hazards around construction of bridges, and culverts. Shows problems with utilities, falling workers, falling objects, and cranes. Good for new construction workers and also a refresher.

Funding offered for fish friendly culverts

Fishing is important to the quality of life and the economy of Wisconsin, but many fish populations have declined. One reason is culverts, crossings and dams that fragment habitat and prevent movement. The U.S. Fish & Wildlife Service (USFWS) has funds available through the Partners for Fish and Wildlife Program for replacing old culverts with new, fish friendly ones.

Some common problems for fish can also indicate culvert deterioration, installation problems, and potential road base damage. Perched culverts where one or both ends are above the stream bottom are an example. Not only do they totally prevent fish passage, but water action against the ends can undermine the culvert and saturate the road base.



"Sometimes the solution is burying the culvert deeper," says Bill Peterson of the USFWS at Necedah National Wildlife Refuge. "Bottomless culverts also work

very well when they have good support on the sides and ends." USFWS funded projects in the Great Lakes region have aided brook trout, sturgeon and paddlefish. Walleye, muskie, and endangered or threatened species like mussels would also be considered, he says.

For small projects—a few thousand dollars—funding is often easily available. Larger projects involve a grant application process. Funding is usually about 50% of the project cost. The first point of contact is your county's UW Extension Natural Resources agent.

"A lot of information can be provided to local officials on what it takes to improve or restore fish passage," says Peterson. "We also like to work with partners like Trout Unlimited and local angling groups. And the projects can be done on public and private lands."

Spring is a good time for reviewing your roadway drainage systems. Snow-melt flooding often reveals culverts that are too small or failing. It's also the season for repairs and reconstruction projects. If you have culverts that need improvement, consider asking for help.

Sizing and placing culverts correctly can be complicated. It is important to consider local stream history, watershed conditions, storm intensity and frequency, and the life cycle requirements of fish along with backwater elevations, maximum velocities, and road over-



topping frequency. Culverts on navigable streams require permits from DNR or other agency.

Hiring a professional engineer to coordinate the design may be money well spent. There are also many local sources of assistance including your County Land and Water Conservation Department, District Natural Resources Transportation Liaison, and County UW Extension Natural Resources agents. They can advise on Fish Friendly Culverts, and help put you on the road to financial assistance for your project.

Contact the T.I.C. for a copy of the pamphlet *Fish Friendly Culverts*, or view it on-line at: <http://clean-water.uwex.edu/pubs/culverts/fishfriendlyculverts.pdf>. The T.I.C. also offers copies of the *Drainage Manual* for help with evaluating roadway drainage, and the T.I.C. bulletin *Culverts—Proper Use and Installation*, No. 15. For more information on USFWS fish passage assistance, visit the Wisconsin Partners for Fish and Wildlife Program website at <http://midwest.fws.gov/WisconsinPartners> and the USFWS Fish Passage website at <http://midwest.fws.gov/Fisheries/topic-fishpass.htm>.

Reader Response

If you have a comment on a **Crossroads** story, a question about roadways or equipment, an item for the *Idea Exchange*, a request for workshop information or resources, or a name for our mailing list, fill in this form and mail *in an envelope* to:

Crossroads

Transportation Information Center
University of Wisconsin–Madison
432 North Lake Street
Madison, WI 53706

Call, fax, email or visit our website:

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☐ Please put me on your **Crossroads** mailing list.

☐ Please send me information on _____

☐ My idea, comment or question is _____

(We'll contact you to get more details or answer your question.)

Name _____ Title/Agency _____

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Phone () _____ fax () _____ email _____

Safety training

from page 2

workers. Reviewing a handbook like the one Beloit uses is a good start. Its topics can help you decide what kind of training your short-term workers need.

"It's helpful to distinguish between technical training like operating a lawn-mower and training on the standards required by the Department of Commerce," says Bayer. "If they handle various chemicals such as pesticides for example, then they need 'right-to-know' training."

Don't delay training until all the seasonals have come on board. If you do, some of them may work a month or more without training. One approach is to hire in blocks. Start workers every Monday in the end of May and beginning of June, Bayer suggests. Everyone reports for work that day, fills out forms, and attends classroom training, and you only have to run 3-4 training programs.

Having a written handbook also helps the newcomers. They can review the information later and will have a reference for forms, procedures and contact names. In addition to policies,

work rules and standards, it's nice to have other general information, says Bayer. A welcome letter from the mayor, information on the city, and general information on the department, for example, help establish a positive image.

Bayer, who previously worked in local government, offers workshops on the topic which are free to CVMIC members and open to others for a small fee. Other organizations, like the League of Municipalities and the Wisconsin Park and Recreation Association, also offer support to members in this area.

"In my experience, the better the orientation and training, the fewer seasonal employees are going to get hurt," says Bayer. "Unfortunately, a lot of cities and employers simply don't do much in this area." Now's the time to get started.

Contact the T.I.C. (page 7) for copies of Beloit's Seasonal Employee Handbook. Also, see Resources on page 6 for new safety training videotapes. CVMIC training programs are listed on their Web page: www.cvmic.com.

New MUTCD published

The FHWA has published the 2003 edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*. It is available for viewing and downloading at <http://mutcd.fhwa.dot.gov>.

You may wish to review it there. However, it does not take effect in Wisconsin until the state DOT revises and adopts the *Wisconsin Supplement*, probably by late 2004. Until that happens, the Millennium edition of the *MUTCD* and current Wisconsin Supplement remain in effect.

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