



Drug and alcohol testing required for CDL holders

One afternoon when Driver Joe was out in a secluded parking lot making his street sweeper do tricks, he turned it over instead. Joe had been drinking. Joe lost his job and the sweeper had \$20,000 in damage.

It happens. In Wisconsin. People drink and take drugs and drive big equipment.

New Federal rules adopted in March 1994 are designed to deter such behavior and to catch those who can't or won't stop on their own. The rules require municipalities and others who employ 50 or more Commercial Driver's License (CDL) holders to begin operating a drug and alcohol testing program as of

January 1, 1995. Employers with fewer than 50 CDL drivers must begin the testing January 1, 1996.

"The critical thing people need to know is that the law covers everybody with a CDL when they are on duty," says Joe Maassen, a WisDOT attorney who is developing the department's own testing program. "No one is exempt. Furthermore, there are non-compliance penalties of up to \$10,000 for each offense." CDL employers must do the following tests:

- Pre-employment testing
- Post-accident testing
- Random testing
- Reasonable suspicion testing
- Return to duty testing
- Follow-up testing

The state has solicited bids for a "turn-key" program, says Joe Maassen. "We want one vendor who is going to be responsible for all aspects of the operation, from deciding how the testing will be done to maintaining the chain of custody of results," he says. WisDOT has about 100 CDL drivers throughout the state.



Local municipalities can "piggy-back" on the state contract, once the state awards it, Maassen says. The state's bid specs may also be a useful resource. He expects the contract will be signed and the program implemented by the January 1st deadline. Maassen has also prepared a detailed outline of the law and its requirements which you may find helpful. Copies are available from the T.I.C. or from Maassen's office.

Counties, cities moving ahead

Putting such a complex program in place takes plenty of work. Brown County Highway Department started to negotiate drug

and alcohol policy and testing procedures with their Teamsters Union in the fall of 1993. "We finally completed negotiations in April of this year," says Highway Commissioner Roger Kolb.

Developing discipline procedures for positive tests was the most sensitive issue, Kolb says. Existing agree-

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Idea Exchange

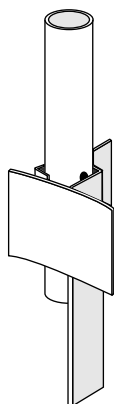
Breakaway post couplers



Replacing broken sign posts and mailbox supports is an expensive nuisance. Yet, to protect the motorist, they must break relatively easily. With new coupling devices, traffic signs and mailbox supports safely break away and are quick and easy to fix.

Couplers, like posts, must meet FHWA crash test criteria, breaking away on impact with an 1800 pound vehicle. Communities should beware of legal liability in using uncertified coupling systems.

Two coupler types available in Wisconsin are the Minute Man at about \$10 each used with U-channel posts only, and the V-Loc at about \$15 each which can be used with 2½ inch round, 2 inch square and U-Channel posts. Anchors for both can be installed in soil and asphalt. The V-Loc can also be placed directly in fresh concrete.



Both types create a permanent socket flush with the ground. The post is a separate piece which is wedged or spliced to the socket. Replacement is quick, inexpensive and usually needs only one person. Posts which are slightly bent can often be

straightened and reused. The socket system also simplifies winter sign replacements. For situations like the nose of a traffic island where you want to control the sign's fall, there are cables to tie post to base.

For more information on coupler systems, contact your supplier of traffic and parking signs. Thanks to Rick Bergholz of TAPCO for help with this idea. Brand names are for information; no endorsements are implied.

Stop sign warning study needs help



Sometimes drivers approaching a stop sign incorrectly assume that the cross street traffic also has a stop sign. They then pull out in front of oncoming traffic and get hit. To address this problem, some traffic control personnel have added a warning sign, like *Cross traffic does not stop*, either on the stop sign pole or ahead of the stop sign.

A University of Arkansas study of such signs needs your help. If you use them, they would like to know about

it, what colors and words you use, and if you've done any before-and-after studies of their effectiveness. Please contact J.L. Gattis, Civil Engineering Department at 501/575-7586 (phone), 501/575-7168 (FAX), or write at 4190 Bell Engineering Center, Fayetteville, AR 72701.

Hydraulic motor for shouldering machine



When their shouldering machine's gearbox wore out, Sawyer County, Wisconsin, Shop Foreman Jay Sands decided to replace it with a hydraulic motor. The gear system made it difficult to run the shouldering belt slowly at low speeds. The hydraulic replacement has smoothed out the problems. The system includes a hydraulic motor and pump to run the belt. Cost of parts to convert to the hydraulic system was \$2835 and installation took about 75 hours.

"We've used it for two construction seasons," says Shop Superintendent Barry Gobler. "It works well."

For information on this hydraulic motor contact Barry Gobler or Jay Sands, Sawyer County Highway Department, P.O. Box 348, Hayward, WI 54843, Phone: 715/634-3691. Thanks to Ron Evert, applications specialist, for passing along this idea.

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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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Idea Exchange*continued from page 2***Culvert pipe end reshaper**

When culvert pipe ends are crushed they can cause water backups which deteriorate the road base. An effective reshaping device developed in Oklahoma can be built for less than \$300 in materials. It's easy to use, almost indestructible, and works well.

The device consists of a welded hydraulic cylinder with a scissor-type jack attached to the actuating rod. The collapsed jack is placed in the end of the crushed pipe. When the cylinder is retracted the jack expands, reshaping the pipe end. The process only takes a couple of minutes.

Parts for the jack are "off the shelf." Making it requires a minimum amount of machining and welding.

Contact the T.I.C. for plans for the culvert pipe jack. (Call, FAX, or use the form on page 7.) Idea and plans are courtesy of the Oklahoma Local Roads program.

Anti-icing research promising

Most winter maintenance involves a de-icing operation: breaking the bond between the ice and the pavement after it has formed. A national research effort begun under the Federal Highway Administration's Strategic Highway Research Program (SHRP) is looking into the costs and effectiveness of *anti-icing* operations: keeping the ice/pavement bond from forming in the first place.

Fifteen states are evaluating the anti-icing strategy on pavements like Interstate highways where a high level of service is expected and provided. They are testing both liquid chemical applications and salt which is pre-wetted with various products.

Preliminary studies during actual storm conditions found that equal or better road conditions can be maintained using fewer chemicals. By cutting chemical and abrasive use, the anti-icing strategy should reduce both costs and environmental impacts. The study continues through the winter of 1994-95.

Calendar**T.I.C. Workshops**

Specific details and locations for workshops are in the announcements mailed to all Crossroads recipients. Don't forget the T.I.C.'s "Bring-a-Buddy" enrollment special.

Drainage Maintenance Review the importance of drainage maintenance and what poor drainage does to pavement life. Learn the maintenance management approach to caring for drainage facilities and review materials and methods for maintaining drainage facilities in a way that protects the environment. Includes WisDOT's recommended soil erosion and sediment control practices for street and highway construction projects.

December 6	Tomah	December 13	Stevens Point
December 7	Eau Claire	December 14	Green Bay
December 8	Cable	December 15	Barneveld
December 9	Rhineland		

Workzone Traffic Control (teleconference) Focus on new workzone traffic control information. Highlights include changes in the new MUTCD Part VI, new workzone traffic control devices being evaluated in the field by local highway and street departments, and a new interactive compact disc training course you can borrow from the T.I.C. to train your staff in workzone traffic control. This live TV conference will be delivered by satellite to many convenient locations around the state on **January 17 from 10:30-11:50 am.**

Traffic Studies Review the proper procedures and techniques for collecting commonly used traffic data, such as traffic counts, spot speeds, and crash data. Workshop includes examples of how such data is used to solve traffic and safety problems.

February 22	Green Bay	March 1	Madison
February 23	Brookfield	March 2	Eau Claire

Roadway Maintenance Here is your opportunity to improve your street and road maintenance operations. The workshop includes preventive maintenance techniques and investigating and repairing pavement failures.

March 21	Tomah	March 28	Green Bay
March 22	Eau Claire	March 29	Brookfield
March 23	Cable	March 30	Barneveld
March 24	Rhineland		

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.

Fleet Maintenance Management, Feb. 1-2

Maintaining Asphalt Pavements, Feb. 6-7

Civil Engineering Construction Specification Writing, Feb. 6-8

Sanitary Sewer Maintenance, Feb. 13-15

Improving Public Works Construction Inspection, Feb. 20-22

Improving Quality in Street and Highway Design and Construction, March 8-10

Other Training Opportunities

Controlling Erosion During Construction Ideal for local building inspectors, architects, engineers, developers, and building contractors, this workshop features changes to the state building code. In 1995 the code will require erosion control during the construction of apartments, retail, manufacturing and other commercial buildings. Course also includes how to install and maintain erosion controls and how to use new materials. Offered in three convenient locations, registration fee is \$40. For more information or to register call UW-CALS Conference Office at 608/263-1672.

February 7	Eau Claire	March 3	Brookfield
February 16	Green Bay		

New organization emerging at WisDOT

You won't find folks at WisDOT's Highway Engineering Bureau doing business as usual these days. And that's the way they want it, according to Bureau Director Dan Pritchard.

"We're revising the way we do business so we can become more flexible, efficient, and effective," says Pritchard. The Bureau, part of the Division of Highways, is itself relatively new, created in 1991 in the merger of the former bureaus of Operations and Development. Since then the Bureau and the Division have been involved in reevaluating their mission and planning their reorganization.

Demographics and program growth are pushing the effort. So are changes in technology, development processes and emphasis. The experienced people who helped build the Interstate system have mostly retired. At the same time the program has roughly tripled. Some changes have been mandated by ISTEA; others have evolved through introduction of new technologies and from new demands such as impact analysis requirements.

"We've reviewed and redefined all the activities that we should be doing," says Pritchard, "and we've rewritten every one of the Bureau's 290 position descriptions." While no employees lost their jobs, activities have been eliminated, consolidated, updated, and moved. All employees were asked to review the new position descriptions and accept the revised one for their job or apply for a different one.

"Twenty-five percent of our people are doing jobs that didn't exist before, or that are new to them," says Pritchard. "One hundred percent have had the opportunity to choose the job they want to be in." He is excited about the enthusiasm and opportunities the reorganization is beginning to generate.

A directory of Bureau employees by name and responsibility has just been completed and is being distributed. Copies are available from District offices.

Adding value, saving money

Adding value is a guiding principle for the reorganization. Some processes, many of them "policing" activities, were changed because they added nothing of value. Right-of-way plats, for example, no longer go to Madison from the District office for approval, saving two to six weeks' time. Approving construction change orders and final payment documents has also been delegated to the districts, saving weeks of processing time and many hours of work.

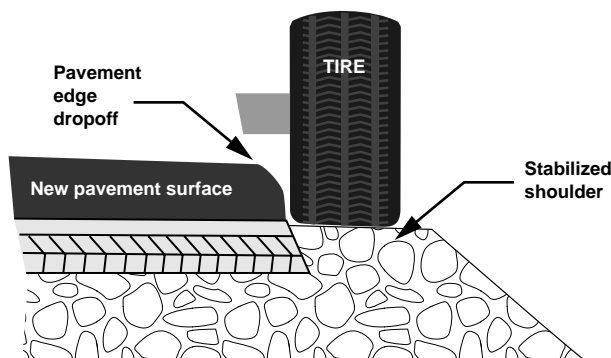
"We've gotten out of the business of policing," says Pritchard. "Our job is to make sure that we have clear policies in place, that the people who implement them know what they are trying to do, and to check that the policies are being implemented consistently statewide. This is a fundamental change from playing 'I got you.'"

Cutting costs is one of the Bureau's primary measures of success. They expect to reduce their contribution to project delivery costs by 10 percent. The Bureau charges Districts directly and indirectly for such things as project reviews, construction and design consulting, and appearing at public meetings. These charges add to total project costs.

Other improvement measures include cutting in half the average time it takes to complete an approval process and reducing total operating costs in 1995 five percent below 1993 levels. They also expect to improve bridge design productivity by 10 percent, cutting the cost per bridge.

Deadly pavement edge dropoffs are preventable

When gravel shoulders are not immediately pulled up after a road is paved, the result is vertical edges and dangerous drop-offs. These can cause serious vehicle crashes and leave a municipality legally liable.



Vertical pavement edge dropoffs of more than four inches can cause serious vehicle crashes.

"We do have some Wisconsin municipalities that contract for paving and exclude shoulder work," says Bill Bremer of the Federal Highway Administration's Wisconsin Office. Workload, scheduling and financial problems can delay pulling up the shoulders for days to weeks after the pavement is finished, creating a hazard.

The best approach? Do the shoulders right away. That is WisDOT's policy, according to Bill Bauer, manager of construction operations. "We require that when there is an edge dropoff of more than two inches, the shoulders must be pulled up before the road is opened to through traffic," he says.

A national study by the University of Tennessee Transportation Center agrees: "The most effective way of solving the problems associated with pavement edge dropoffs is to simply eliminate the issuance of contracts where shoulder work is excluded or not included in the resurfacing contract."

Districts also doing reviews

"The Districts are charged with doing their work on time, in budget, at a reasonable cost, and with customer satisfaction," says Lee Crook, director of the Bureau of Districts in the Division of Highways. "They are also expected to increase their productivity by five percent this year." All districts are doing reviews; District 2 in Waukesha has implemented a complete reorganization.

District 2 has set up geographically based teams which will provide "one-stop shopping" for projects, says Ralph Beiermeister, the District's deputy director. Before, responsibility would shift from person to person as the project progressed. A local municipality might work with six or seven different people or groups: planners, designers, real estate people, utility people, construction people, traffic people, et cetera. Now they will deal with a team which is responsible for everything in its section of the district.

"The reorganization was developed by District employees," says Beiermeister. "I think in the process they have developed a strong feeling of ownership, pride, and empowerment. That will help improve efficiency." District measures of success include cutting their operating budget and increasing productivity by 10 percent. Since they contract for \$120 to \$160 million of work a year, the savings can be considerable!

These are just a few of the changes at WisDOT. Others are in progress. And if you are waiting for things to "settle down" at WisDOT, you'll have quite a wait. The Department is committed to reviewing processes and improving quality as a lifelong mission. ●

If communities do let no-shoulder paving contracts, they should treat the condition as a hazard and use proper traffic controls. "Low shoulder" and other appropriate signs will warn drivers of the conditions and may help protect the community from liability should a crash occur.

Another approach is requiring the contractor to add a 45 degree fillet along the pavement edge when paving. The lay down and material costs for adding this fillet are minimal — one to two percent of the typical resurfacing contract, according to the University of Tennessee study which was funded by the AAA Foundation for Traffic Safety.

The fillet increases safety during construction and also later when shoulder material is worn or eroded away. It can also give drainage protection for the road's base and sub-base. However, installing a paved fillet may make it more difficult to keep gravel shoulders in place along the road's edge.

For a copy of the study, *The Elimination or Mitigation of Hazards Associated with Pavement Edge Dropoffs During Roadway Resurfacing*, contact the AAA Foundation for Traffic Safety, 1440 New York Ave., NW, Suite 201, Washington, DC 20005. Phone: 202/638-5944, FAX: 202/638-5943.

Use "Double fines" law to wake up drivers

By the 1995 construction season, the last of more than 100 signs will be in place around the state. The signs remind drivers that moving violations in work zones carry double fines.

"If there are workers there, the law applies to any work zone — highway reconstruction or maintenance, utility work, even crack sealing and patching — from the first work zone sign to the last," says Chuck Spang, of the WisDOT Traffic Section. "Double fine signs don't have to be set up at specific work zones for the law to apply," he says.

You can also use the new law to educate drivers about work zone safety. "Motorists need to realize what it's like to be a construction zone flagger or a worker bending over with cars whizzing by at 55 miles an hour," says Spang. "It's hard on your heart!"

Plan now for publicity efforts during the construction season. WisDOT has materials to help you with producing press releases, radio and TV public information announcements (PSAs), and print advertisements to make motorists aware of the problem and the consequences.

"We have media kits for local officials to help them educate drivers," says Dorothy Kapke of WisDOT's Public Affairs Office. Along with written materials that you can personalize to your own area, the kit has camera-ready ads in three sizes and printed brochures for motorists.

To get your media kit contact Dorothy Kapke, WisDOT Office of Public Affairs, P.O. Box 7910, Rm. 103B, Madison, WI 53707, Phone: 608/266-2405, FAX: 608/266-7186.



Drug and alcohol testing required for CDL holders

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ments worked out by the County Sheriff's Department and the Green Bay Transit System were helpful models. Drug and alcohol testing will be done at a local hospital.

The City of Milwaukee, which has nearly 1000 employees under the rules, has interviewed several providers and expects to award a "turn-key" type contract soon. Their union has seen a draft policy, but contract negotiations are not complete.

Defining "reasonable suspicion," choosing a medical officer to head the program, deciding where to refer abusers who test positive, and outlining stages and levels of treatment are issues of concern, says Bill Kappel, Milwaukee's municipal equipment superintendent. A joint labor/management forum is planned to explain the law and discuss its potential effects.

"We probably got our most useful information from providers, some of whom already are doing testing programs for over-the-road trucking firms," says Kappel. Providing adequate facilities for collecting urine samples is a problem he hopes the provider can solve.

"Confidentiality is also a big issue," Kappel says. "If a van pulls up in front, everybody is going to recognize it as the drug van. But if someone is called by a manager to go someplace, it could be for many reasons." For that reason and also to minimize lost productivity, he is hoping a program will use multiple off-site facilities.

Cost is another concern. To set up the program and randomly test half of their 1000 employees for drugs and a quarter for alcohol will cost between \$20,000 and \$30,000 a year, Kappel estimates. At a minimum of 30 minutes per individual tested, the city will lose between 250 and 500 hours of productive time a year. They may also have to pay overtime to do the testing.

The problem is real, however. Kappel guesses that five to seven percent of the city's CDL holders use alcohol or drugs and might test positive. He expects a number of people will refer themselves into the employee assistance program just before the testing begins.

"Managers have always been responsible for observing employee behavior and taking action if they see evidence of a problem," says Kappel. Manager training, employee education, and the random tests will help make supervision more effective, and perhaps prevent drug and alcohol related accidents.

*For copies of Joe Maassen's outline on **Controlled substance and alcohol use testing**, call, FAX or write the T.I.C. (use the form on page 7), or contact Maassen at 608/266-8810, FAX 608/267-6734. Copies of Brown County's policy are available from Roger Kolb, 414/492-4925, FAX 414/434-4576. For information on Milwaukee's Request for Proposals document contact Bill Kappel at 414/286-2261, FAX 414/286-2157.*

Resources

Publications listed here are available from the Wisconsin T.I.C. unless otherwise noted. To get your copy, call 800/4424615 or use the form on page 7.

NACE Action Guides Series, National Association of County Engineers, 1992.

Practical straight-forward explanations, methods, examples and further references which will help you effectively organize and manage street and highway maintenance activities and organizations. A limited number of the following action guides are available:

- Personnel, 44 pp.
- Road Programming, 72 pp.
- Road Surface Management, 92 pp.
- Safety Improvements, 44 pp.
- Drainage, 84 pp.
- Soil Erosion Prevention, 72 pp.
- Subsurface Soils Exploration, 44 pp.

Handbook on Successful Supervision for Local Road Supervisors, FHWA-RT-91-002, 1990, 130 pp.

Written specifically for local government road supervisors, this how-to approach includes chapters on *managing*, *motivating*, and *communicating*. Topics include delegating responsibilities; handling conflicts, grievances, and

complaints; performance appraisal and disciplining; face-to-face, group, and written communications; working with elected officials; and working with the public.

Highway/Utility Guide, FHWA-SA-93-049, 1993, 298 pp.

This guide assembles under one cover, state-of-the-art knowledge on the better practices being used to address issues arising from highways and utilities sharing a common right-of-way. Addresses permits, mapping, notification, legal issues, and relocation reimbursement.

Policy for the Accommodation of Utilities within Highway Right-of-Way, WisDOT, 1992, 72 pp.

A companion document to the FHWA Utility Guide (above) is Wisconsin's policy that includes in a single document all of the relevant policies related to the design, installation, maintenance, and abandonment of utilities in highway rights-of-way.

The Basics of a Good Road #17649, UW-Madison, 15 min. videotape.

An excellent presentation of the *Ten Commandments of a Good Road*. It's a good refresher and a great introduction for new employees and new town chairs. (Videotapes are loaned free through County Extension offices.)

LRIP up for renewal

The highly successful Local Roads Improvement Program (LRIP), which funnelled nearly \$43 million to municipalities for local roads since 1992, is up for renewal. Begun in the 1991-93 biennium, the program is unique for its "hands-off" approach to funding local roads. Project selection, lettings and administration are handled locally.

"LRIP is a good investment," says Doug Duckert, Director of WisDOT's Office of Local Highway Programs. "In fiscal '92 and '93, the state put 19.1 in million LRIP dollars into projects that totalled \$68.1 million. This boosts Wisconsin's economy and upgrades local roads at the same time."

Town road LRIP projects are selected by county-wide TRIP (Town Roads Improvement Program) committees. While some TRIP committees simply divide the money evenly, others are pooling the money to pay for larger projects. In Jefferson County for example, the TRIP committee approved 17 projects in the 92-93 biennium, at an average cost of \$3,855 each (matched locally by an equal or greater amount). In 94-95, they approved four projects ranging in cost from \$11,000 to \$22,000.

"In the first biennium of the program, I think the towns were concerned that the program would not last, so they

divided the money equally between them," says Jefferson County Highway Commissioner Ken Rolefson. "They found that they didn't get much of a job. This time they have more faith that the program would continue and the committee selected four projects." The county holds a biennial meeting of town chairs who select five to represent them on the TRIP committee.

LRIP in the next budget

The Governor is still working on his 1995-97 biennial budget proposal, so LRIP's future is not yet decided. WisDOT's Duckert expects that the program will continue with at least the same level of funding (\$21 million). Local decision-making is both popular and effective he says, and will change "over my dead body!" WisDOT's TRANSLINKS 21 draft plan identifies an additional \$1.5 billion for this program over the next 25 years.

Legislators will be considering LRIP as part of their budget deliberations beginning right after the first of the year. This is the time to express your opinion of LRIP to your state senator and representatives.

If you have questions about the LRIP program, contact Doug Duckert at 608/266-2963 or Mary Forlenza, Chief of Local Roads, at 608/264-8724.

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