Getting more out of signing upgrades

**BETTER SIGNING** improves road safety. Experts and studies agree on this, calculating that signing improvements and upgrades have benefit-to-cost ratios of 10:1, 50:1, 90:1, and more. There is less agreement, however, on how to choose the most effective changes.

Last summer, three counties in northwestern Wisconsin participated in a project designed to help pin down some answers. A team of experts conducted in-service safety reviews for Polk, Rusk, and St. Croix counties as part of a collaborative road safety research project sponsored by AAA Wisconsin and 3M. It began after WisDOT awarded Signing and Marking Enhancement grants to these counties in spring 2005.

The reviews were aimed at helping the counties identify the most effective and economical opportunities for improving safety on their road systems. The research project will use crash data to evaluate the benefits of these improvements over the next few years. A secondary objective was to introduce the safety review process to Wisconsin local agencies and assess its usefulness as a safety improvement tool. This article describes some of the team’s preliminary observations and recommendations.

“We were looking for safety risks that could be mitigated using low-cost safety improvements, primarily signing and marking,” says Jeff Bagdade, formerly with AAA Wisconsin, now a Senior Transportation Engineer with Opus Hamilton, a Michigan-based engineering consulting firm that specializes in road safety.

He was part of the multi-disciplinary review team, along with David Burns, Senior Highway Safety Specialist with 3M Traffic Safety Systems, and two other Opus Hamilton Road Safety Engineers.

The team made site visits to intersections and curve locations being considered for safety improvements. The sites were selected based on suggestions from county staff and from a review of the WisDOT electronic crash database. The team looked at existing signing and physical conditions from the driver’s perspective, especially regarding the needs and capabilities of older drivers, which was the focus of the WisDOT safety grants.

“Most of the specific recommendations ended up being tried-and-true engineering measures that aim for clear communication with drivers,” says David Burns of 3M. Recommendations included testing the reflectivity of existing signs to assess their level of night-time visibility, installing more signs, using larger and brighter signs, adding advance warning signs, and reducing visual clutter. “These are all ways to help older drivers see better, as described in the FHWA Older Driver Handbook,” says Burns.

The safety review team also made three general recommendations: look at safety enhancements on a system-wide basis, conduct regular safety reviews, and implement a sign and marking management system.

“The roadway information system—signing and pavement markings—is like a building. You can’t just put it up and then ignore it. You have to check it regularly, fix things as you go along, and make needed improvements over time” says Burns.

“Maintaining the information infrastructure is the most economical thing an agency can do, and it has been shown to have a significant impact over time on the safety of the roads.”
Green Bay leaf collector unit saves money, labor

ALONG WITH beautifying a city, urban trees save energy, intercept storm water runoff, help clear the air, and raise property values. One study says that trees help business; shoppers will stay longer, return more frequently, and spend more money in a tree-shaded retail district. The trees also have a cost, as city streets departments know well. Spring and fall leaf collections are a major budget item.

In the City of Green Bay, staff in the DPW’s Motor Equipment Section came up with a creative idea: convert a retired recycling truck into a one-person leaf collection unit. They fabricated the unit by modifying the recycling body, mounting a vacuum leaf collector onto the chassis, and changing the hydraulic system and controls. It was ready for the fall 2004 loose leaf collection.

“What this unit can actually do out on the street exceeded all our expectations.”

For specs on equipment and details on fabricating the leaf collector unit, contact the City of Green Bay Motor Equipment Public Works Superintendent T.J. Sorensen at: 920-492-3751, or tjso@ci.green-bay.wi.us

The Department will build two more units, in 2006 and 2007, and keep four in their yard waste fleet, along with two leaf balers, and the rear load garbage trucks that are used to collect brush, leaves, garden waste, and other debris. The two-person trailer mount units will be deployed last, and may be phased out.

It cost about $29,000 to build the first unit: $15,000 for the leaf vacuum and $14,000 in conversion costs, including the new hydraulic pump and other parts. The second unit cost about $8,000 to $10,000 less. “We knew more about what we were doing, and we made it a little smaller and used less material,” says Sorensen.

The retired recycling truck, which had minimal trade value, was a 1993 International Model 4600LP single axle chassis equipped with a 23 cu yd Leach Model RC23 recycling body, originally built as a right hand stand up drive conversion unit. The leaf vacuum unit was a diesel powered skid mount ODB Model SKB700. It was mounted behind the cab on the truck frame where the front of the recycle body was removed. They raised the roof of the remaining body about four feet and outfitted it with perforated sheet steel to allow the large volume of air to escape, and enclosed the remainder of the existing body and tailgate with sheet steel. The unit holds about 28 cu yds, (2.76 ton) when full.

Other modifications included changing the pivot point of the hydraulic hose boom, substituting a Force America hydraulic pump and valve assembly for the vacuum unit’s original hydraulic pump, and moving the pump’s operating tower into the cab. To help eliminate operator fatigue, the staff also fabricated a thumb control assembly to operate the hydraulic hose boom functions.

With more than 80,000 cubic yards of leaves and yard waste to pick up in the fall, and nearly 100,000 cubic yards of yard waste to manage each year, the savings will mount up fast. “As the City’s operating budget continues to shrink, it is necessary to come up with new and creative ideas to do more with less,” Sorensen says. “With this unit, the Motor Equipment staff has proven it can meet that challenge.”
reflectivity, making them nearly invisible at night. Bright and visible signing is very important because a road looks very different at night, even to drivers who are familiar with it.

“Municipalities will need to develop a system to guarantee that their signs are retroreflective at night. The best way is to have a sign management system and replace the signs at the end of their service life,” says Jeff Bagdade.

FHWA is now establishing a process for maintaining minimum retroreflectivity levels of signs, says Bagdade, who serves on the National Committee on Uniform Traffic Control Devices. In the next edition the MUTCD will mandate a management program for road signs to assure a minimum maintained level of nighttime visibility—either through regular reflectometer tests or by having a replacement system in place.

The safety review team also found many signs that were not installed in accordance with MUTCD standards. A sign mounted too low is difficult for a driver to see. Confusion over how to measure minimum height is the source of the problem. Crews make the mistake of measuring from the ground at the foot of the post. If a sign post is several feet to the right of the pavement edge, it can be several feet downhill. Height should be measured from the pavement surface.

Hidden warning signs were another common problem. Even when the sign is correctly placed for the prevailing speed, hills and curves may block it from the driver’s view. Just measuring the distance from the intersection won’t insure adequate visibility. The sign crew should move back and look to see if the sign will be visible to the driver in sufficient time to react. A location behind a tree or over the crest of a hill won’t work.

Agencies can improve safety at intersections with crash histories by putting in a larger Stop sign, using higher retroreflectivity signs, even installing Stop signs with flashing lights. Other commonly used tools are posting “Stop Ahead” advance warning signs, painting stop bars on the pavement, and cutting rumble strips into the pavement. (Rumble strips are effective but should not be installed where the noise will disturb nearby residents.) Where data shows a high number of nighttime crashes, they can also consider increasing the intersection’s general lighting.

**Improve intersection visibility**

Sight distance is always important. The driver needs to be able to see traffic coming on the crossing road to make safe decisions. Open up the vision triangle by clearing away brush, fences, and other obstructions. Also, install advance intersection warning signs on the through road in addition to the Stop advance warning sign.

Clutter around the Stop sign can distract the driver. “We see a lot of intersections with the Stop sign in a forest of street name and guidance signs. A Stop sign should stand alone. You want the driver to pay attention just to the Stop sign,” says Bagdade.

Route and street name signs should be located well away from the Stop sign. These and other informational signs can be posted in advance of the intersection or even across it. A recent change in the MUTCD permits adding the

“*We see a lot of intersections with the Stop sign in a forest of street name and guidance signs. A Stop sign should stand alone. You want the driver to pay attention just to the Stop sign.*”

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“A lot of town roads with low traffic volumes are highly overpopulated with severe crashes. By improving signs, rural communities can measurably improve safety for relatively little cost.”

Low cost help for low volume roads

“A lot of town roads with low traffic volumes are highly overpopulated with severe crashes,” says Bagdade. “The pavement conditions may be okay, but there is little room for error.” Roads are narrow. Bushes, trees and utility poles crowd close to the pavement. Shoulders can be steep, and there are no pavement markings.

By improving signs, rural communities can measurably improve safety for relatively little cost, Bagdade says. “These counties are not unique. They are fairly typical of other rural counties in the state in the types of roads and the people using the roads,” says Bagdade. “And, as the Mendicino County study shows us, signing improvements can make an impact on safety at relatively low cost.”

The key is to do the work.
• Use crash data to pinpoint “black spots”—sites with high crash numbers.
• Make regular safety reviews and use the results to develop a safety improvement plan.
• Spend the money to improve signing.

That’s what Mendicino County, California, did. At the end of six years, total crashes on roads with signing improvements had dropped by 40% while crashes on comparable untreated roads rose by 27%. Bagdade and Burns believe that Polk, Rusk, and St. Croix counties, whose county Highway Departments did their work in 2005, will see measurable safety improvements, too.

Sign projects 2005: what the counties did

THE 2005 SIGNING projects were very different in each of the counties involved. Polk County did a system-wide upgrade of stop-controlled intersections on town and county roads. St. Croix improved eight intersections. Rusk installed brighter stop signs on town roads intersecting with county highways and used longer-lasting epoxy paint for new pavement markings near lakefront development.

Money for the projects came from the state’s Traffic Signing and Marking Enhancement Grants Program (85.027 Wis. Stats.). The grant provides funds to local units of government for traffic signing and roadway marking enhancements to improve visibility to assist elderly drivers and pedestrians. About $3.8 million—requiring a 25% local match—was distributed for 2005 and 2006. (No funds have been appropriated for future years.)

Polk County had one of the highest crash rates in the state: 589 crashes in 2004, including 10 fatalities. Many are aging drivers that are navigating the same roads as a fast-growing population of commuters. Over 30% of the county’s workforce commutes to jobs in Minnesota.

“We were trying to be proactive in going after the signage,” says county Technical Support Manager Sara McCurdy who oversees the sign program. “We looked at the Mendicino County study, and that’s what we are hoping for. To show that low maintenance items like signs can really impact safety on the roads.”
All 24 towns participated in the county-administered project. A committee of local maintenance staff and town chairmen decided how to allocate the funds. The state-approved project totaled $230,000 including match. Town crews also installed signs on their roads, and the labor costs covered most of the required match. The signs were installed last October, November, and December.

“We placed 2400 signs,” says McCurdy. “It has a very visible impact.”

St. Croix County applied for $10,000 to improve eight intersections identified by the study and county traffic engineers. After looking at crash data for the whole system, the AAA-3M research team also suggested some additional Stop Ahead signs.

“I was pleasantly surprised,” says County Highway Commissioner Tim Ramberg. “The study had good comments about the signing program in St. Croix County, and they had the same recommendations as our professionals. It gives you a good solid confidence that you’re moving in the right direction.” The county has traffic engineers on staff and operates an aggressive sign management program.

The county will use the team recommendations in several ways. The report will be used in future grant requests. Regular maintenance will address clutter around Stop signs, and additional stop bars are planned as part of scheduled striping projects. Their expert opinion will add weight when landowners are approached about clearing brush and other obstructions from vision triangles.

The review was also informative for Ramberg. “I was excited to hear about some of the newer items in the Manual and having all of that information at my fingertips,” he says. They plan to pass that information along to towns at quarterly association meetings.

“The roadway information system—signing and pavement markings—is like a building. You can’t just put it up and then ignore it. You have to check it regularly, fix things as you go along, and make needed improvements over time.”
Rare roadside plants need your help

A no-mow area is often all it takes to keep these special plants safe, although an ecologist needs to make a plan for each site.

Why help preserve Wisconsin threatened and endangered plants?

- Promote biodiversity—a natural mix of many different species which provides for a healthy environment
- Protect historic plants and habitats for future generations
- Preserve plants important to butterflies and other insects
- Preserve plants which may be future sources for medicines, treatments, etc.
- Help maintain a varied and attractive landscape

What you can do:

- Contact your local DNR Transportation Liaison or Regional Ecologist to find out more
- Mark right-of-ways once a species is identified—Local citizens and groups may be available to help
- Protect by timed mowing or a no-mow area
- Alert crews that do brushing, digging, spraying, or utility work
- Comply with administrative rule (NR27) and state statute

LAST JULY Randy Roloff, Patrol Superintendent with the Outagamie County Highway Department, got some unexpected news. There were some rare, endangered plants growing on a roadside that his crews mow each summer.

An amateur botanist spotted pink flowers peeking through tall grass and recognized a rare prairie plant, the Hairy Wild Petunia (Ruellia humilis). Pat Robinson, the DNR ecologist for the region, was skeptical when contacted. The nearest known population of Wild Petunias is 100 miles further south. But there it was!

“I was surprised,” says Roloff. “The guy that mows out there has been mowing for over 20 years. He probably saw it, but didn’t know it was something special.”

The Wild Petunia is included on the state’s Threatened and Endangered Species List, and is protected on public lands under state statute (Section 29.604, Wis. Stats.) Fortunately, it is easy for Outagamie County to protect the plant there. Just don’t mow it. Robinson outlined an area and Roloff put up some signs and will alert mowing crews before they go out this summer.

“It was a pretty painless process,” says Roloff. “It’s not a big deal to protect an area. Come summer I’ll show it to the crews and tell them: if you see any other sights like this, let me know.”

A no-mow area is often all it takes to keep these special plants safe, although an ecologist needs to make a plan for each site. “We are hopeful that this [Outagamie County site] can serve as an example of a simple, cost-effective model that other municipalities can replicate to protect rare plants that occur in their right-of-ways,” said Robinson in a letter to Roloff.

With more acres of public land in road-sides than in all the parks in the state, the chances are good for finding protected species there. In fact, a roadside sometimes provides a plant’s preferred conditions.

The rare Dwarf Lake Iris (Iris lacustris) is an example. This state and federally endan-gered plant can only grow in special soils found on the northern shores of Lakes Michigan and Huron. It also does better with little competition from other plants.

“There are 44 current records of this iris in Wisconsin, all in Door and Brown counties; about 16 of these are at least partially in roadside ditches,” says Craig Anderson, a DNR state botanist. Occasional roadside mowing may actually help the Dwarf Lake Iris. On the other hand, a ditch dredging project could easily wipe out a big percentage of this tiny plant’s last stands.

About 25 protected plants in various parts of the state are known to grow on roadsides or prefer conditions often found there. Some locations are recorded, but there could be others. Local citizens and naturalist groups can help look for them, or may already know of populations. Your staff and mowing crews could spot others.

Cream Gentian or Yellowish Gentian (Gentiana alba)

BLOOMS August–September
FLOWER Cream-colored, 1 1/4”, tube shape with small opening at top, Clusters of many flowers
PLANT Upright – 1 to 3 feet tall with sturdy stems, usually not branched
GROWS IN Varied soil and moisture conditions Sometimes found in roadside ditches and railroad right-of-ways

Purple Milkweed (Asclepias purpurascens)

BLOOMS June–August
FLOWER Purple-red flower cluster—only 1-3 per plant; always at or near top of stem; often produces pods
PLANT 1 1/2 to 6 feet tall; looks like common milkweed
GROWS IN Ditches and more likely in dry soil

FOUNDED in Crawford, Dane, Grant, Iowa, Kenosha, Lafayette, Racine, Rock, Sauk, Walworth, Waushesa, and Waushara counties
HISTORICAL in Jefferson, Milwaukee, Washington, Winnebago

Rare plants along Wisconsin roadsides
Hairy Wild Petunia (Ruellia humilis)

- **BLOOMS**: May to October
- **FLOWER**: Looks like garden petunia 1 1/4" pink to purple, funnel shaped
- **PLANT**: Upright, short: 3"-18" Often less than 12"
- **GROWS**: Sandy, loamy soil in prairies, woods and roadsides
- **FOUND** in Crawford, Dane, Grant, Outagamie, Rock, and Winnebago counties
- **HISTORICAL** in Walworth

Hairy Wild Petunia discovered along an Outagamie County roadside in 2005.

About 25 protected plants in various parts of the state are known to grow on roadsides or prefer conditions often found there.

Other endangered or threatened roadside plants

- **Arrow-leaf Sweet Coltsfoot (Petasites sagittatus)**
  - **BLOOMS**: Peak late May, a few into July
  - **FLOWER**: Blue-purple flower (a few white), 3" diameter and 3" off the ground
  - **PLANT**: Leaves 6" long in fans like garden iris
  - **GROWS IN**: Partial or filtered sun; shallow soils (alkaline); near white cedars
  - **FOUND ONLY** on north shore of Lake Michigan in Door and Brown. Very rare.
  - **HISTORICAL**: in Milwaukee County

- **Axillary Goldenrod (Solidago caesia)**
  - **BLOOMS**: May to June
  - **FLOWER**: Small: 1/2"; white

- **Giant Yellow Hyssop (Agastache nepetoides)**
  - **BLOOMS**: July through October
  - **FLOWER**: Cream to yellow; 3-4 short clusters where leaf joins stem

- **Pink Milkwort (Polygala incarnata)**
  - **BLOOMS**: August to October
  - **FLOWER**: Tiny, white, star-shaped, 1/2" across, branched cluster of 9-18 flowers
  - **PLANT**: Leaves 6" long in fans like garden iris

- **Pale Purple Coneflower (Echinacea pallida)**
  - **BLOOMS**: June to August
  - **FLOWER**: Drooping, purple; one to a stem

- **Axillary Goldenrod**
  - **BLOOMS**: August to October
  - **FLOWER**: Cream to yellow; 3-4 short clusters where leaf joins stem

- **Pink Milkwort**
  - **BLOOMS**: July through October
  - **FLOWER**: Pink, small spiky cluster 1/2"-1 1/2" on single, distinct blush-green colored stems

The maps, images and descriptions here show some protected plants that may pop up on your roadsides. Maybe one of your sharp-eyed guys could become a hero for locating and reporting a rare species.

Color pictures and more details are available on the TIC Web site: [http://tic. engr. wisc. edu](http://tic. engr. wisc. edu) (pdf 2.3 MB) (ppt 4.4 MB).
**EDGE DROPOFFS** are a safety hazard for vehicles that leave the roadway and try to return. Nationally, they are implicated in about 11,000 injury crashes a year. In Wisconsin “low shoulders” were listed as a possible contributing cause to about 170 crashes in 2004.

Dropoffs of 2” to 5” occur when shoulder deterioration or a new asphalt overlay exposes the vertical outside edge of the pavement. One solution is to build up shoulders at the same time as overlays are applied during rehabilitation projects. Regular maintenance on existing roads to bring shoulder material back flush to the pavement surface also eliminates the hazard.

Another alternative is building a tapered “safety edge.” This is a wedge or fillet of asphalt applied along the pavement edge. It has a 30-35 degree slope which can serve as a ramp for vehicle wheels returning to the roadway. The edge can be created easily by the paver as the surface course is laid. No special equipment or extra labor is needed, so adding a safety edge raises the project cost about 1% to 3%—the price of the extra asphalt.

Several states built experimental safety edges as part of a FHWA project begun in 2004. Following successful performance in tests after a year of service, the Georgia Department of Transportation made the safety edge a routine part of their pavement design. The edge is being evaluated or planned in Indiana, New York, and Pennsylvania.

Paving contractors in Wisconsin have not yet built any safety edges on roadways, according to Scot Schwandt, Director of Engineering at the Wisconsin Asphalt Pavement Association. One contractor, Pitlik and Wick, recently included the edge on an airport runway.

“It’s a good idea for added safety where the roadway is wide enough,” says Brian Pitlik. “On narrow town roads where people are always running off the edge, it might keep the edge from breaking down so fast. But the shoulder gravel will peel away, sliding off the taper. You would always be out there adding gravel to the shoulders.” Pitlik suggests that the edge wedge is probably intended for pavements without constructed shoulders. It could also be a temporary safety measure on roadways where time and money prevent immediate rebuilding or resurfacing of shoulders.

Most asphalt paving contractors already make a taper for stronger centerline joints. The same equipment can be used for a safety edge. “It would not be a problem to do if they wanted it,” Pitlik says. “In fact, you could put in a one-inch notch before starting the taper like we do at the centerline. Then you would have an inch of gravel and it might not roll off so fast.”

Adding an edge wedge is a relatively low-cost option that can improve safety and strengthen pavement edges, but gravel shoulders will probably need frequent maintenance.
Retreads an option for truck tires

TIRE COSTS ARE GOING UP
along with petroleum prices, and the largest tire sizes are in short supply. Meanwhile, local budgets are squeezed so tight they squeak. Have you thought about your tire program lately? What about retreads?

Retreads can save money. Prices are as much as 50% less than new tires. Commercial truck fleets know the benefits. Almost half of the 37 million replacement tires purchased by fleets in 2004 were retreads, says a fact sheet from the Tire Retread Information Bureau (TRIB).

Municipal fleets can also realize cost savings, even over reduced government tire prices. “We use recaps on the rear axles of almost all of our single axle, tandems, and quad trucks,” says Dave Lyga, Shop Superintendent for the Trempealeau County Highway Department. Retreads of the type they use cost $116 to $130—about half of the $240 for a comparable new tire.

One reason the cost is lower: retreading uses only a third as much oil as a new tire. That means retreads are more environmentally friendly. In addition to conserving natural resources up-front, they also reduce the volume of worn out tires at the disposal end.

What about performance? These days quality retreads perform as well as new tires. The technology has improved significantly and major retread suppliers continue to invest heavily in research and development. Consolidation and competition are also pushing the industry to deliver high quality.

The industry recommends keeping new tires on the steering axles and using retreads on rear or trailer axles. Some municipalities save money by putting retreads right on new equipment. “They spec all steer tires on new school buses,” says Larry Lampe of Pomp’s Tire Service in Green Bay. “Then they buy retreads on our casings for the rear axles. They store the original equipment steer tires in the tire rack and in most cases never need to purchase new tires.”

How do you find a good retread tire? Deal only with reputable companies, advises the TRIB. You can use the TRIB’s Web site to locate dealers near you. Wisconsin municipalities can find out about suppliers, services, and contract prices for new and retread tires through the state Bureau of Procurement’s VendorNet System.

Get your own tire casings retreaded, if possible, says the TRIB. That way you know its use and maintenance history. This is also a way around the supply shortage of large tires for loaders and other heavy equipment. “My tire man says he can get a tire recapped three times off the original new tire,” says Dave Lyga of Trempealeau County. “Most major tire companies use an X-ray process to make sure the casing is in excellent shape for retreading. That guarantees the customer a better product with little or no chance of a failure.”

If you do buy a cap and casing from a reputable dealer remember you get what you pay for. Better quality retreads will be priced accordingly. Also, inspect the casing. Check the date. Look for marks that show how many times it has been retreaded. And look for signs of excess repairs. One nail hole is not a concern, but reconsider if you spot a lot of them.

The bottom line is: quality retreads can deliver safety and performance on your equipment along with savings for your bottom line.
CDL update and clarifications

The rules regarding traffic violations and CDLs became tougher as of October 2005. Although the rules about alcohol use for CDL holders have not changed, there is still some confusion. When driving a private vehicle, CDL holders have the same sobriety standards as any other driver. When operating a commercial vehicle (CMV), the standards are stricter. Drivers cannot drink alcohol four hours prior to operating a CMV or have any trace of alcohol on their breath, and they are legally drunk at a blood alcohol level of 0.04% or greater.

H endorsement changes
The hazardous materials (H) endorsement rules have changed recently. The good news is that governmental agencies transporting hazardous materials are not required to have a placard on their equipment, and their drivers are not required to obtain the “H” endorsement.

On the other hand, there are some new requirements and fees for obtaining a Hazardous Material endorsement. After passing the knowledge test and the vision test, a driver must also have a background check and prove citizenship or permanent resident status. Additional fees for the background checks total about $80, and the process can take 60 days or more. Finally, the “H” endorsement expires after four years, even though the CDL is good for eight years.

Wisconsin Highway Watch® numbers 8,000

Wisconsin now has over 8,000 volunteers trained to recognize potential safety and security threats on our nation’s roads by the American Trucking Association’s Highway Watch® program. More than 200,000 others across the country have joined in the last two years.

“Our staff had a very, very positive response to the training,” says Randy Scholz, Highway Commissioner in Lincoln County. After the training last October everyone in the crew and all the supervisors signed up to be watchers, about 48 in total. They were already on alert after pipe bombs were found last summer in the Hwy 17 right-of-way.

Lincoln is one of nearly two dozen Wisconsin counties and cities so far who have completed the free group training. Self-learning modules are also available in DVD, VHS, audio CD, or cassette tape formats.

“Highway Watch® is about being alert for the protection of your community,” says Bob Young, the instructor for Lincoln County.

“It’s similar to the neighborhood watch and crime stoppers programs. We train interested people who then keep a vigilant eye for suspicious activity, like those pipe bombs in Lincoln County.” Young works on Highway Watch® for the Wisconsin Motor Carriers Association (WMCA).

During the one-hour program, instructors talk with participants about local facilities and infrastructure and about what might be a threat to them. They cover other potential terrorist targets, like bridges, tunnels, and hazardous materials locations, along with safety topics and traffic issues like suspicious disabled vehicles, major debris on the roadway, reckless driving, road rage, erratic driving, and especially crashes.

After the training, participants receive a personal Highway Watch® Identification number, an ID card, and a certificate of completion. When they see suspicious activity or hazardous conditions, they are asked to call 911 and the toll-free Highway Watch® hotline. They identify themselves using their ID number and report the incident. Call center personnel will also immediately contact law enforcement for the incident area if the highway watch member has not called 911 first.

When a call involves a security issue, call center staff alert the Highway Information Sharing and Analysis Center. Transportation security professionals there analyze the report and will forward it to government intelligence officials and other law enforcement agencies if it seems to pose a threat to national security.

“It makes you feel a part of something bigger,” says Randy Scholz. “Our guys are always watching for something suspicious and we would call the sheriff anyway. Now we have a clear avenue for reporting these things.”

For more information and to request the Highway Watch® training call Bob Young or Sue Webb at the WMCA: 608-833-8200, ext. 18. The Web site www.highwaywatch.com has general information.

Renewing may take longer

Don’t wait until the last minute to renew your CDL. The Patriot Act requires state DOTs to validate your Social Security number with Social Security Administration records. Be sure you have your number with you when you apply, and double check that it is correct on the forms.

“Any minor mistake will cause a red flag and stop the process,” says Gary Krueger, instructor at the TIC Winter Maintenance Workshops. “It’s a good idea to leave time to deal with any problems.”
When renewing a CDL, the state checks with the national CDL registry to ensure there is no problem with the driver's CDL from any state.

**Tougher CDL standards and penalties**

The rules regarding traffic violations and CDLs became tougher as of October 2005. Several major offenses and serious traffic violations were added and consequences have been made more severe.

You can lose your CDL if convicted of a major traffic violation while operating any vehicle, commercial or other, and if either your private driver's license or your CDL is suspended, revoked, or cancelled.

“Basically they are saying that you have only one license and if you lose your personal driver’s license, your CDL goes too,” says Krueger. There are no more “occupational” CDLs, although you may still be able to get an “occupational” private license.

Also, at the first offense you lose your CDL for one year (three years if operating under the H endorsement). Conviction for any subsequent offense means you lose your CDL for life.

For more details on CDLs, contact the TIC for a copy of Gary Krueger’s handouts from the Winter Road Maintenance Workshop.

**Publications**

Transportation Information Center publications helpful for in-service signing safety reviews include:

- **Signing for Local Roads**, No. 7
- **Pavement Markings**, No. 9 (revised 2005)
- **SAFER Manual, Safety Evaluation for Roadways**

**Web sites**

- **Highway Watch®**
  - More information at: http://www.highwaywatch.com/
- **Plants**
  - See “Rare Plants in Wisconsin Right-of-Ways” on the TIC Web site for maps, photos, and details.
  - The official DNR list of Wisconsin endangered and threatened vascular plants is at [http://www.dnr.state.wi.us/org/land/er/](http://www.dnr.state.wi.us/org/land/er/)
  - Click on “Threatened and Endangered Species” and then on “Vascular Plants.” Click on the scientific name for details.
  - No search function.
  - For more information on endangered and threatened plants, including identifying information, photos and maps, see the UW–Stevens Point herbarium page.
  - Search for common or scientific plant name under “vascular plants”.

**Videotapes/Multimedia**

- **NEW Gravel Road Maintenance: Meeting the Challenge**, University of Minnesota Center for Transportation Studies, October 2005, one DVD and one CD #18802.

The DVD includes modules on Correct Roadway Shape, Shaping the Roadway, Good Surface Gravel and Dust control. On the CD are the instructor’s guide and the FHWA Gravel Roads Maintenance and Design Manual.

**RESOURCES**

Print copies of publications are available free from the TIC while supplies last. Electronic copies may be downloaded from the TIC Web site.

Videos and DVDs are loaned free through county UW–Extension offices.

The Web addresses listed here and elsewhere in this newsletter are live in the electronic version of Crossroads on the TIC Web page. Clicking them should take you directly to the indicated page. If you are not able to retrieve a document, contact us and we will get a print version to you.

TIC Web site
[http://tic.engr.wisc.edu/](http://tic.engr.wisc.edu/)
Specific details, locations and registration forms are sent to everyone on the CROSSROADS mailing list before each workshop. You can also get additional workshop information and register by calling 800-462-0876 or going online at http://tic.engr.wisc.edu/enroll.html.

Road Maintenance — New for 2006

The Tomah, Eau Claire, Hayward and Rhinelander workshops focus on gravel materials, base course, gravel road surfaces, road shaping, and drainage. DePere, Barneveld, and Waukesha workshops will focus on asphalt pavement maintenance, surface treatments, and using geotextiles in road repair and rehabilitation projects. Fee: $45

Gravel & Gravel Roads
Mar 27 Tomah  
Mar 28 Eau Claire  
Mar 29 Hayward  
Mar 30 Rhinelander

Asphalt Pavement & Geotextiles
Mar 31 DePere  
Apr 3 Barneveld  
Apr 4 Waukesha

On-site Workshops Save time and travel costs by bringing instruction to your shop or office. Schedule training for the time and place most convenient for you and ask the instructors to tailor content to your specific needs. On-site workshops let you train more people for the same or less cost, including staff from other municipal departments, nearby communities, and from businesses you contract with. The TIC offers the following on-site workshops. Contact us early to ensure you get the program you need on the date you want.

• Basic Surveying for Local Highway Departments
• Basic Work Zone Traffic Control
• Flagger Training

Pesticide Applicator Training Correction
The Winter CROSSROADS gave incorrect times for Right of Way PAT live training held in January. Also, no CD ROM is available for this training. For more information, to order a training manual, and to register for a training session go to http://ipcm.wisc.edu/pat/ and click on Register Online.