INSIDE:

HONORS
Thank you, Julie Skallman! ...................2
Build a Better Mousetrap awards ......2

LRRB UPDATE
OPERA project: back-up sensor ..........3
Recycled asphalt pavement ...............3

SIGNAGE
Top 5 sign tips ...........................................4
Sign life expectancy ................................4

COMMUNICATIONS
Facebook content ....................................5

INFORMATION SERVICES
The Shelf & search tools ..........................6
Social media policies .............................6
Videos ...........................................................6
Training tools and templates ...............6

WORKSHOPS AND TRAINING
Calendar ......................................................7
Help wanted: “retirees” ..........................7
Tear-off 2015 training poster ...............8

Focus of Traffic Signs

Traffic signs are intended to provide important information to drivers, so they have to be visible and readable both day and night. Key to this is what is called retroreflectivity—the ability for signs to bounce light back toward a driver’s eyes, making them appear brighter and easier to read. Because retroreflectivity deteriorates over time, transportation agencies need to actively maintain their signs.

While U.S. road signs have long been required to be retroreflective, until recently, no minimum values had been established. All highway agencies are required to establish a sign assessment or management method to assure retroreflectivity standards are met.

All highway agencies are required to establish a sign assessment or management method to assure retroreflectivity standards are met.

Signs continued on page 4

Farewell thoughts from our chair, Julie Skallman

Julie Skallman, chair of the Minnesota LTAP Steering Committee since 1999, retired in December. Skallman worked for the Minnesota Department of Transportation for more than 35 years, most recently as director of the State Aid Division. She served on many other committees, such as the Minnesota Local Road Research Board, and she was the founding co-chair of the Transportation Engineering and Road Research Alliance (TERRA).

She shares her thoughts and advice below.

What are some highlights from your time as state aid director?

Safety has always been important in the State Aid system, but over the years we’ve made some major shifts in our approach. We’re not just designing wider or flatter roadways, for example—we’re now being more proactive and systematic about safety. We work with counties to develop comprehensive highway safety plans, and we have a staff person in the State Aid office to consult with on safety issues for the State Aid system.

We’ve also modified Complete Streets standards to adapt to the changing needs of society. Before, we focused primarily on the road system and freight mobility, and we didn’t acknowledge other users—pedestrians, cyclists—with different needs. We need to find that balance.

Most recently, the public and policymakers are recognizing that transportation affects economic vitality. You can see it in some recent legislation and policies. Some lawmakers are starting to say that it matters to have good roads for business. Many businesses in outstate areas are very dependent on the county state aid highway system.

And as one of early chairs, I’m really proud of TERRA and the work we did to get it started. Its growth is a clear signal that collaboration is the way to get research done in the future.

Skallman continued on page 2

Demo Day in Rosemount May 13

The Minnesota Roadway Maintenance Training and Demo Day will be held this year on May 13 at the Dakota County Technical College in Rosemount.

The one-day event focuses on education and technology exchange through classroom sessions and outdoor demonstrations. Attendees learn about the latest practices, innovations, and research related to Minnesota’s roadway maintenance operations. The event will include a Roads Scholar graduation ceremony, and attendees will earn a Road Scholars credit.

Interested in learning more? Visit mnltap.umn.edu /training/roadway to register and view highlights from past events. LTAP

Julie Skallman continued on page 4

Signs continued on page 4
At the November Minnesota LTAP Steering Committee meeting, staff, committee members, and a surprise guest expressed their gratitude to retiring chair Julie Skallman.

Jim Grothaus, Minnesota LTAP director: “Julie was a mentor to me. I learned so much from her—from running meetings to maintaining relationships. She is a true leader and a leader in the field of LTAP, and a true voice for local agencies.”

Laurie McGinnis, CTS director: “I am so grateful for the tremendous support Julie has given the U, CTS, and LTAP. Julie has been an ambassador for research and training. Whether it was at a board meeting of the U’s civil engineering department, or a lunch in the LTAP office weighted table, she brought a valued perspective, and people listened and benefited from that. We’ll miss her greatly.”

Lee Gustafson, Minnetonka city engineer: “When I was a young engineer, going to MnDOT was intimidating. But then Julie came on, and the culture changed because Julie said ‘We work for you.’”

Steve Lillehaug, Brooklyn Center city engineer: “Julie has been a topnotch proponent for city engineers at MnDOT. We appreciate that.”

Goldy Gopher: “Two thumbs up and a big hug.” (Skallman is a Gopher alumna and a huge Gopher hockey fan.)

“Everything I do at the U is so fun,” Skallman said. “None of it is work. If I’ve made it easier for any of you, in any small way, it’s wonderful. I’m excited we have such a community where people can come and talk about how can we do things together. That’s why Minnesota does well—we all try to get to know each other, bring back ideas, and put them into place.”

What’s the first thing you’ll do at the cabin this spring?

Landscape. I’m a gardener, and last year we moved some rocks and began planning for a garden and some terracing. I have no idea what it will look like when the snow melts—it’s a bare canvas, starting fresh. That’s exciting to me. I love the challenge!”

LTAP

We’ll introduce our new chair in the next issue!

Build a Better Mousetrap Awards: mower flap, tube bender, and much more

The Build a Better Mousetrap National Competition highlights innovative solutions to everyday problems and issues that local and county transportation workers and other LTAP/TTAP clients encounter. The 2014 national entry book is online with all the entries: 10 from the national competition and 20 more from seven state competitions. Following are the top two national entries.

First Place—Discharge Control Door: Kentucky

Contact: Jeff T. Lashlee, City of Bowling Green

Problem: When mowing rights-of-way, it is hard to control discharge from mowers. The city experienced several problems with discharge hitting cars.

Solution: Bowling Green Public Works fleet division developed a flap to replace the plastic chute so we had to develop a method to bend the tubing. The flap has three positions: fully closed, half open, and fully open.

Labor/Materials/Cost: $25/unit

Savings/Benefits to the Community: The flap provides a safer means of mowing rights-of-way. This cost-efficient device reduces the agency’s liability. The unit is easy to operate.

Second Place—Truck Tire Changer/Roll Tube Bender: West Virginia

Contact: Jerry Arnold, City of Buckhannon

Problem Statement: We needed 1 1/4" pipe roll formed to add the arch supports for our farmers’ market structure in Jawbone Park. The shop we had used in the past could not get it for several weeks, so we had to develop a method to bend the tubing.

Solution: We couldn’t just bend the tubing with a pipe bender. It would just kink and we could not keep it consistent. I was mounting truck tires one day and I thought, “This machine has all of the functions I need to form the tubing. It rotates and can create down force.”

Labor/Materials/Cost: $100.00

Savings/Benefits to the Community: Immediate savings were about $1,200. It allowed us to complete a grant project on time. It also provides a state-of-the-art farmers’ market and a gathering place for the community with such events as Festival Fridays.

LTAP

Truck tire changer/roll tube bender

Goldy, Jim Grothaus, and other friends thanked Julie Skallman for her leadership and support.
The Local Road Research Board is a research organization that focuses on improving road construction and maintenance techniques. One of their projects involves the use of recycled asphalt pavement in cold climates. This project, funded by the Minnesota Department of Transportation (MnDOT), sought to test the performance of asphalt mixtures containing high percentages of recycled asphalt pavement (RAP). The goal was to establish the temperature range in which the material performs reasonably well and to develop better design guidelines for asphalt pavement mixtures prepared with RAP. The research team used three different test methods to assess the performance of asphalt mixtures with varying percentages of RAP. The study was conducted at two temperatures on two different grades of asphalt mixture with four levels of RAP (0, 25, 40, and 55 percent). The results showed that mixtures containing PG 58-32 and 25 percent RAP—where the glue is stiffer and more brittle—performed well in cold temperatures. The research recommends using a higher-grade binder to use a higher level of RAP. The project was funded by the MnDOT, and the report is available at mnltap.umn.edu/opera.
New report helps agencies set sign management policies

The Minnesota LRBB has published a report with best practices that local agencies can use to establish sign management protocols as mandated by the FHWA.

The final report includes a process for establishing sign management policies as well as sample policy language based on draft policies from entities such as the League of Minnesota Cities, Minnesota Association of Townships, and counties that have already adopted policies.

The final report—Traffic Sign Life Expectancy—and a technical summary are available at lrrb.org/LTAP.

Heads-up: online sign course coming soon!

A new online training course from Minnesota LTAP—Traffic Sign Maintenance and Management—will be open for registration early this year. Stay tuned to our website for updates.

Last fall Minnesota LTAP held its Best Practices for Traffic Sign Maintenance and Management workshops. The instructor, senior transportation engineer Howard Preston from CH2M HILL, shares his top-five to-do list below:

1. All road authorities are (as of June 13, 2014) required to have selected either an assessment or management method for maintaining their system of signs. Has your agency adopted a sign maintenance method?
2. The FHWA requires agencies to treat their system of signs as an asset that must be managed to an adopted set of retroreflectivity thresholds. This requirement suggests that agencies need to know the number of signs in their inventory and to adopt a maintenance budget that matches that inventory. Has your agency prepared a sign maintenance budget that matches the size of your inventory of signs?
3. A proven effective method for documenting an agency’s decisions about adopting a sign maintenance method and establishing repair and replacement priorities is the development of a signing policy. Has your agency developed a signing policy, and has it been officially adopted by your council or board?
4. An unofficial survey of agencies that participated in the recent workshops suggests that many have sign maintenance budgets that are too small to affirmatively maintain their sign inventories. A proven method of providing a better balance between resources and assets involves removing some signs, especially those that have not been proven to be effective at either improving safety or changing driver behavior. If your agency’s sign maintenance budget is not sufficient to manage your inventory of signs, have you considered removing unnecessary and ineffective signs?
5. Proven strategies for managing an agency’s risks associated with maintaining a system of signs include basing implementation decisions on established policy and conducting a complementary engineering investigation. The recently updated Minnesota’s Best Practices for Traffic Sign Maintenance/Management Handbook provides guidance and sample signing policies. Have you gotten a copy? LTAP

Top 5 Sign to-do list
Attracting and engaging an audience

Content is king when it comes to Facebook posts. The best way to build an audience is to post relevant, accessible content. For road agencies, relevant topics include recent and upcoming construction projects, road closures, weather advisories, and other roadway-related alerts. Unlike other forms of media, which only allow one-way communication, Facebook posts often become a launch pad for dialogue with the public. For example, posts about lane closures for pothole patching often prompt people to report additional potholes. Posts that provide updates about specific projects and activities typically generate long strings of user comments and responses.

As a public service, agencies often post information that is important to the community, but has nothing to do with infrastructure. Notifications of food drives, charity events, posts from emergency services, and local festivals are just some of the non-transportation topics that local agencies share online.

Posting pictures is another popular way to spark interest in a Facebook page, and can add spice to the monotony of text-only posts.

Responding to user posts

After a local agency has established consistent user traffic on its Facebook page, one thing is inevitable: the agency will receive questions, comments, and complaints. Obviously this is an integral part of public service. One challenge of social media is to increase interactivity; to that end, the best policy for a local agency is to allow the public to post content to the page. No matter the intention or tone of user posts, each one is an opportunity to educate.

Some posts are complaints masquerading as suggestions. In such cases, it’s usually pretty obvious that they are thinly veiled criticism, not sincere requests for information. These types of posts do not lead to productive, extended dialogue that can grow out of a sincere question. However, a savvy local agency will address them just as they would a real question, which transforms the negative content into a legitimate exchange from which the public can learn.

Even when a public post isn’t directly related to something the road commission deals with, it is good practice (and good publicity) to respond productively (see Before You Respond sidebar). For example, a user might post a complaint about the condition of a road that is outside of a road agency’s jurisdiction. When responding, it’s important to avoid simply “passing the buck.” A good response acknowledges the concern, explains the road ownership and funding issues that come into play, and either forwards the complaint to the appropriate agency or provides contact information so the user can resolve the issue on their own.

Responding to aggressive posts

The easiest posts that a local agency will encounter on its Facebook page contain colorful language, name-calling, and other forms of composition that result from anger. These are a rare but unavoidable side effect of having a Facebook page. Craig Bryson, public information officer for the Road Commission for Oakland County (RCOC), does not have a formal policy for responding to posts. Instead, he responds based on his own philosophy of remaining calm and not criticizing, which usually enables him to diffuse potentially volatile situations and transform negative posts into valuable educational opportunities.

Linnea Rader, moderator of the Van Buren County Road Commission’s Facebook page, ordinarily responds to user posts on her own, but when dealing with a difficult issue, she sends her response to hersuperiors to be reviewed before she posts it. Typically, a negative post reflects a problem in understanding the issue, and we can take that opportunity to explain the reasons, process, and other issues, and get that person on board with us,” Rader explained.

Criticism itself is not a bad thing. “It’s OK for people to question what we do and why we do things the way we do them,” says Bryson, “or the subject of critical posts. “If there aren’t good reasons to be doing things, we shouldn’t be doing them—and we ought to be able to explain these reasons publicly too.”

However, there is a fine line between complaining and insulting. Bryson has had to block two people from the RCOC Facebook page because their comments crossed the line from criticism of the agency to pointed attacks and name-calling laced with profanity. Such comments should be taken when it comes to banning users. Nonetheless, personal attacks, vulgar language, and similar inappropriate content reduces the value of the page and disrupts opportunities to educate the public.

Legal questions

Several gray areas currently exist regarding the significance of Facebook content as it relates to open meeting laws, official correspondence, public information, and other issues of public trust that road agencies have to deal with. For example, does a report of a roadway defect on Facebook carry the same legal weight as a defect reported through a phone call or e-mail, or through an agency’s website?

There are no simple answers to such questions. For this reason, Facebook is chiefly used by road agencies for informational purposes only and to solicit “unofficial” comments from the public.

Among the states grappling with issues of public trust that arise when using social media, California is perhaps the furthest along in addressing them. Road agencies and other local government entities in California look to the Institute for Local Government (ILG), a nonprofit research affiliate of the California State Association of Counties and the League of California Cities, for guidance. The ILG recommends that road agencies add a disclaimer to their social media pages to clarify that they are responding “as a form of public disclosure. For more information, see www.ca-ilg.org/document/legal-issues-associated-social-media.

LTAP (Written by Shaugn Kern, Center for Technology & Training)
Evaluation of the Flashing Yellow Arrow (FYA) Permissive Left-Turn in Shared Yellow Signal Sections (NCHRP, 2014) This report evaluates driver behavior and comprehension related to the flashing yellow arrow permissive left-turn indication when added to three- and five-section traffic signal displays.

Electronic Construction Collaboration System: Final Phase (Iowa State University Institute for Transportation, Sept. 2014) This report describes the development of a web-based project management system for bridge construction as part of the Iowa DOT’s construction administration system.

Evaluation of Durable Traffic Pavement Marking Tape (PMT) (Minnesota DOT, Oct. 2014) This report describes the installation of two types of pavement marking tapes designed to have longer lifespans than previously used pavement markings.

Local Government Funding and Financing of Roads: Virginia Case Studies and Examples from Other States (Virginia DOT, Oct. 2014) This report determines how local governments’ road projects use different funding and financing tools. In addition, the report identifies examples of locally generated funding sources in other states.

Flexible Pavement Narrow Widening Best Practices and Lessons Learned (Center for Transportation Research at the University of Texas at Austin, Sept. 2014) This report presents practices and lessons learned from flexible pavement narrow widening in order to improve construction quality on projects that widen lane width.

Safe and Effective Speed Reductions for Freeway Work Zones: Phase 2 (Oregon DOT, Sept. 2014) This report examines the impact of selected traffic control devices on vehicle speeds within highway paving project work zones.

The Use of Synthetic Blended Fibers to Reduce Cracking Risk in High Performance Concrete (PACTRAQ, Sept. 2014) This report investigates the use of blended-size polypropylene fibers in high-performance concrete mixtures, a new technique to control early-age cracking.

Methods for Estimating Annual Exceedance-Probability Discharges and Largest Recorded Floods for Unregulated Streams in Rural Missouri (USGS, 2014) This report uses regression analysis to estimate discharges at rural ungauged stream sites in order to assess the adequacy of existing bridge structures and properly design new bridge structures.

Empirically-Based Performance Assessment and Simulation of Pedestrian Behavior at Unsignalized Crossing (OSTERO, Sept. 2014) This report discusses pedestrian-vehicle interactions at mid-block pedestrian crossings and methods for use in traffic operational analysis and microsimulation packages.

The Rideability of a Deflected Bridge Approach Slab (Louisiana Transportation Research Center, Oct. 2014) This report describes efforts to develop a pavement roughness indexing system that supplements traditional roughness indexing systems to locate longitudinal positions of different types of bumps and localized roughness.

Evaluation of Current Centerline Rumble Strip Design(s) to Reduce Roadside Noise and Promote Safety (WaDOT, Sept. 2014) This report evaluates wayside noise levels from vehicles passing over various centerline rumble strips to determine overall sound levels and 1/3-octave band frequencies.

Regional Implementation of Warm-Mix Asphalt (Kentucky Transportation Research Center, Sept. 2014) This report summarizes research on warm-mix asphalt technology, estimates the costs and benefits associated with the different types of warm mix asphalt, and proposes acceptance criteria for the asphalt.

Social media resources for Minnesota public agencies

- Minnesota has an open meeting law. An informative brief explains the law: house.leg.state.mn.us/hrd/pubs/opentmg.pdf. In 2014, the state legislature added a provision relating to use of social media: “The use of social media by members of a public body does not violate this chapter so long as the social media use is limited to exchanges with all members of the general public. For purposes of this section, email is not considered a type of social media.”

- Statute 13.03 gives guidance about public access to government data: https://www.revisor.mn.gov/statutes/?id=13.03.

- For a list of statutes, see revisor.mn.gov/statutes/?id=13d.

- Many organizations/agencies/entities set a social media policy or guidelines. Having a policy will help enforce certain actions. One example is to “reserve the right to remove any content deemed inappropriate or not in keeping with these guidelines” to explain why profanity will be removed. Otherwise, deleting posts/comments is generally discouraged.

- MnDOT has a policy on website development and management (including social media as websites): dot.state.mn.us/policy/admin/ad002.html.

—Marilee Tuite, LTAP librarian


Minnesota 2050 (MN2050) is a coalition of partners in the public, private, and educational sectors striving to provide Minnesota citizens with acceptable infrastructure that meets the needs of the 21st century. To learn more and participate, see mn2050.org. LTAP

Training tools and templates available for supervisors

Minnesota LTAP has added training tools and templates for public works and local agency supervisors and training coordinators. The following resources are available:

- A training template that can be used to track required employee training courses (mnltap.umn.edu/training)
- Fleet and equipment management job aids, which can be used to enhance instruction when working with specific equipment and procedures (mnltap.umn.edu/training)
- Equipment safety videos offering training about bobcats, forklifts, dump trucks, bulldozers, and graders (mnltap.umn.edu/training)
HELP WANTED:
‘Retirees’ to teach LTAP classes

When Bruce Higgins decided to retire from his job as a motor grader operator with the Genesee County Road Commission in Michigan, he didn’t just quietly ride off into the sunset. Instead, he chose to share the knowledge collected from his years on the job by becoming an instructor for Michigan LTAP.

“More and more baby boomers retire in the next few years, it’s a path we hope workers will consider,” says Mindy Carlson, Minnesota LTAP’s program manager.

Higgins’s training career began after a Michigan LTAP training event where the attendees were asked if anyone in the room was close to retirement—Higgins volunteered.

To prepare for his new role, Higgins attended training sessions and then collaborated with staff from the Center for Technology and Training (CTT), which houses Michigan LTAP, to develop a program. Higgins has taught sessions across Michigan and Minnesota (also attracting operators from North and South Dakota) and in a six-week stint in Florida—more than 140 sessions in 16 years.

Higgins is an excellent example of a retiree with the commitment and drive to seek out new opportunities to remain involved in the transportation community.

“Would you like to be next? Please let me know if you’re interested,” Carlson says. “We have many training needs here in Minnesota, and we would love to bring your hands-on experience into our program.”

LTAP (Adapted from an article by Alex Slepak, Center for Technology & Training, March 2014.)

Calendar

If your professional organization meets on a regular basis, let us include the information here. Contact us at mnltap@umn.edu. For details and an up-to-date list of events in Minnesota, please see mnltap.umn.edu/training.

Road Salt Symposium (1 RS elective credit) LTAP
Feb. 5, Chaska

Pavement Rehabilitation: Products, Processes, and Strategies (1 RS required credit) LTAP
February 10, Deno Lakes
February 18, Blair
February 25, Mankato

TERRA Pavement Conference (1 elective credit) LTAP
February 12, St. Paul

59th Annual Asphalt Contractors’ Workshop/Quality Initiative Workshop
Feb. 19, Brooklyn Center

Minnesota’s Transportation Conference
March 3–5, Bloomington

Truck-Weight Compliance Training (1 RS elective credit) LTAP
Mar. 10, Alexandria
March 18, Bloomington
March 26, Detroit Lakes
Apr. 1, Marshall
Apr. 8, Rochester
Apr. 15, St. Cloud
Apr. 22, Duluth

Northland Chapter ATSSA Annual “How to” Safety Training Workshop (0.5 RS elective credit)
March 16–18, Fargo

ONLINE TRAINING: Anytime, anywhere!
Culvert Design and Maintenance (1 RS required credit) LTAP COMING SOON!
Traffic Sign Maintenance and Management (1 RS required credit) LTAP COMING SOON!
Gravel Road Maintenance and Design (1 RS required credit) LTAP
Work-Zone Safety Tutorial LTAP
Turfgrass Maintenance (1 RS elective credit) LTAP

Archived webinars:
• Gravel Roads: Drainage Maintenance and Design (1 RS elective credit) LTAP
• Local Concrete Flatwork Specifications (1 RS elective credit) LTAP
• ADA Transition Plan Requirements: A Model Plan for Local Agencies (1 RS elective credit) LTAP

Fun with apostrophes: answers

The second apostrophe—it’s—is correct. It’s a contraction of “it is” (or in other cases, “it has”).

“Each dog has its day.” A good rule of thumb: if you can replace “its” with his or her, don’t use the apostrophe.

The first apostrophe—day’s—is incorrect. The subject is more than one day, so the plural form should be used: days. No apostrophe is needed.

Check the web for details and to register online: mnltap.umn.edu/training. To be added to our print or electronic mailing lists, e-mail mnltap@umn.edu or call 612-625-1813.

CTAP workshops
Circuit Training and Assistance Program (CTAP) workshops bring LTAP services to your neck of the woods. CTAP uses a fully equipped van to provide on-site technical assistance and training. Each CTAP workshop counts as 0.5 RS elective credit. Current CTAP training courses and special presentations are:
• Asphalt Pavement Maintenance and Preservation
• Culvert Installation and Maintenance
• Gravel Road Maintenance / Dust Control
• Roadsides Vegetation Management and Erosion Control
• Snow and Ice-Control Material Application
• Snowplow Controller Hands-on Workshop
• Work-Zone Traffic Control and Flagger Training

For more information or to schedule classes, call the CTAP instructor, Kathy Schaefer, at 651-366-3575, or e-mail Kathleen.Schaefer@state.mn.us.

Roads Scholar credit
You can earn credits in Minnesota LTAP’s Roads Scholar (RS) program by attending LTAP and CTAP workshops and other cosponsored events. To graduate, you must earn eight credits from a combination of required and elective courses within a five-year period. To learn more or enroll in the program, visit mnltap.umn.edu/roadscholar.

LTAP workshops
LTAP workshops, along with events cosponsored by Minnesota CTS, are marked with an LTAP at left. Check the web for details and to register online: mnltap.umn.edu/training. For more information or to schedule classes, call the CTAP instructor, Kathy Schaefer, at 651-366-3575, or e-mail Kathleen.Schaefer@state.mn.us.
Workshops Around the State

Workshops are offered at convenient locations in these categories:

- Drainage and Erosion Control
- Equipment
- Information and Management Systems
- Roadway/Bridge Maintenance
- Traffic Control
- Workforce Development

See full course listing and schedules online.

CTAP at Your Shop

The Circuit Training and Assistance Program (CTAP) brings training, technical assistance, and technology transfer to your site. Choose from the following workshops:

- Asphalt Pavement Maintenance and Preservation
- Culvert Installation and Maintenance
- Gravel Road Maintenance/Dust Control
- Roadside Vegetation Management and Erosion Sediment Control
- Snow and Ice Control Material Application
- Snowplow Salt and Sander Controller Calibration Hands-on Workshop
- Work-Zone Traffic Control and Flagger Training

Online Training

- NEW IN 2015! Sign Maintenance and Management
- NEW IN 2015! Culvert Design and Maintenance
- Gravel Road Maintenance and Design
- Work-Zone Flagger Tutorial
- Turfgrass Maintenance

The Minnesota Local Technical Assistance Program can help you draw a winner!

Enroll in the Roads Scholar Program

- Sign Maintenance and Management 1 required credit
- Culvert Design and Maintenance 1 required credit
- Gravel Road Maintenance and Design 1 required credit
- Turfgrass Pathology 1 elective credit

Workshops Around the State

- Pavement Rehabilitation 1 required credit
- Line to Leadership 1 required credit
- Equipment Management 1 elective credit
- Bridge Maintenance 1 required credit

Roads Scholar Program

It’s no game! Graduates of the Roads Scholar Program earn a valuable professional development credential. Grad must earn eight credits within five years from a combination of required and elective courses. There is no enrollment fee.

Truck-Weight Education Program

The Minnesota Truck-Weight Education Program promotes voluntary compliance to reduce damage to public roads and highways from overweight vehicles. Workshop attendees learn how to haul the most legal weight without violating the truck weight laws.

Complete your Roads Scholar Certificate!