



Wing plows extend a plow truck or grader's range by half a lane, but are oftentimes just used for curbs, banking and turn lanes. However, creating an effective lighting system, training operators, and communicating with the public can make wing plows significantly safer to use in travel lanes.



Superior Ideas for Winter Maintenance

Shaughn Kern – Technical Writer
Center for Technology & Training

Center for Technology & Training

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Michigan's
Local Technical
Assistance Program

If necessity is the mother of invention, it's difficult to imagine a better place to innovate winter operations than Michigan's Upper Peninsula. With an average annual snowfall of over 120 inches in many parts (compared to about 60 inches in the Lower Peninsula), the Upper Peninsula needs every tool available for winter maintenance. So, it should come as no surprise that garages in the Upper Peninsula are pioneering new approaches for combating snow and ice.

Wing plows mount on the right side of snow plow trucks or motor graders to extend the plowed area from one lane to one-and-a-half lanes. They can be used on plow trucks and graders to clear the pavement and shoulder; additionally, graders can be used for benching snow banks if they are too high for one-way plows to throw the snow over. Bob Lindbeck, Engineer/Manager at Alger County Road Commission (CRC), explained that Alger County equipped each of their graders with wing plows, and have used them successfully for many years. "We can bench snow banks when the snow gets too high, and also use the front plows, underbody blade, and wing to do very creative snow removal." They also use their wing plows to bench guardrails, as it's common for snow banks to grow to more than three feet high.

While wing plows speed up snow removal and get snow out of hard to reach places, one of their greatest advantages is that they remove the need for driving a plow truck on shoulders. Shoulders are one of the most fragile parts of the road, particularly during early snow (before the ground

has frozen) and late snow (once thawing begins). Once damaged, shoulders become expensive to repair and dangerous to drivers.

Using a wing plow in "float mode" keeps the weight of the truck off the shoulder and leaves more shoulder gravel in place. This is particularly useful for snowfall that happens in fall or spring when the shoulder's base is less stable. Lindbeck explains that, contrary to what most would think, this approach is not just for agencies that experience heavy snowfall. "Because of the massive amount of snow we get up here, we still have to use a snow plow on our shoulders to throw the snow over the banks a few times per year. However, an agency in an area of lower snowfall can get away with using a wing plow during the entire season, meaning they never have to drive a truck on the shoulder." Whether an area gets 50 or 250 inches of snow each year, wing plows are quite literally a huge weight off the shoulders.

The Lane Less Traveled

Unfortunately, the motoring public is largely unaware that the wing plow extension exists; this lack of awareness, coupled with the cloud of snow kicked up by the wing plow, creates the risk that a motorist may not see the wing plow and try to pass on the right. Consequently, winter operations personnel often avoid using wing plows in traveled lanes (passing lanes, multilanes, turn lanes, etc.) and often relegate the wing plow to clearing shoulders or benching banks, as

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mentioned above. Hence the wing plows at MDOT's L'Anse garage were not being used to their full potential. "Ultimately, we had an innovative attachment that we couldn't use. We needed something," MDOT Maintenance Coordinator John Dault recalled. Enter the Superior Stick, a lighting system bright enough to alert traffic to a wing plow's presence, enough so to get regional permission to use wing plows on travel lanes.

According to Dault, the Superior Stick is essentially a series of programmable LED lights installed on a portable sign post, made in-house using materials and tools that were laying around MDOT's L'Anse garage. Construction of the Superior Stick only requires two people working for a few hours. In addition to saving time and money, this simple design and lack of moving parts enables the Superior Stick to function in even the worst winter conditions. Dault explained that he and the L'Anse garage crew have "tried the Superior Stick out in the worst, harshest conditions we could find, and have had nothing but success."

The high visibility and resiliency of the Superior Stick qualified it to receive a regional exception from the MDOT maintenance advisory banning wing plows in turn lanes; in turn, being able to use wing plows in travel lanes has hastened the delivery of winter maintenance service to the public. "Drivers often finished their primary route 90 minutes earlier than previous years, meaning they can start on secondary routes that much sooner," says Dault. The garage

used wing plows mounted with Superior Sticks during the entire 2013-2014 winter, and experienced zero incidents relating to wing plow visibility. It is hoped that because of the success and safety associated with the Superior Stick, it will be easier to get similar provisions in other regions.

Now that the L'Anse garage has built Superior Sticks for every truck in its fleet (not just snow trucks), Dault says that they are no longer going to make them in house. "I'm not in the business of manufacturing, and don't have the time or manpower to manufacture more." The garage has given the Superior Stick blueprints to a local manufacturer, and intends on purchasing new ones from there. Meanwhile, MDOT is exploring the possibility of patenting the design.

Local Wing Plows in Traveled Lanes

Elsewhere in the Upper Peninsula, Marquette County Road Commission is in the unique situation of being a local agency that both experiences high snowfall and maintains four-lane roads for MDOT. Therefore, they potentially have the most to gain of any local agency when it comes to being able to operate their wing plows in traveled lanes. Marquette CRC applied for and received an exemption from MDOT to operate its wing plows in travel lanes; however, this exemption was not just based on adding lighting to make the plow more visible to the public. According to Mike Harrington, Director of Operations and Maintenance at Marquette CRC, they also added lighting



A wing plow using an MDOT "Superior Stick" has enough visibility to be used in a traveled lane. You can view a video of the Superior Stick in action at MichiganLTAP.org/bridge/292

to make the wing plow easier for operators to see, and created more visibility of wing plows by increasing public awareness.

Marquette manufactured hydraulically activated lighting bars that swing out horizontally above the wing plow (see below). The lights on this bar blink in sequence with the light on the wing plow itself, so that it creates a more definite and visible shape through the lighting. They then outfitted their vehicles with an indicator light (viewable by the operator) that automatically turns on when the wing is down, and wrote a document outlining Marquette CRC's internal policy on wing plows. As far as hydraulics working in cold temperatures, Harrington did confirm what anyone who has done winter maintenance might suspect. "Yes, the operation of the hydraulics do slow during cold temperatures... However, much like knowing where the wing plow is located, operators who use it on a regular basis get a feel for how long it takes, and are able to adjust accordingly."

Finally, recognizing that even the most successful wing plow operation in the world isn't enough to prevent an unaware motorist from passing on the right, Harrington and his team created public service announcements for local radio, TV, and billboards. This outreach has prepped the public to give wing plows a wider berth, and to operate with more patience during the winter months. While an approach like this is easy to overlook in the excitement over new technology, it is a great example of communicating effectively with those we serve. ■



On top of adding hydraulic bars to increase the visibility of their wing plows, Marquette County Road Commission contacted local media to increase the public's awareness of wing plow use. One of these communications, a video and interview done by a local news channel, can be watched at https://youtube.com/watch?v=9OW_qQx2kic

Marquette CRC's Wing Plow Operational Guidelines document is available at MichiganLTAP.org/bridge/292

Other Innovations: High-Speed Salting and Ice Fracking

High-speed Salting

Wing plow lighting is not the only winter maintenance technology MDOT's L'Anse garage has developed; they wanted a faster system of salting roads as well. But as with most areas of transportation, "faster" and "better" are usually mutually exclusive. The faster a salt truck travels, the more salt is lost due to bounce and scatter; if someone drives a truck 45 mph, about half of the salt is lost, meaning it's as much high-speed wasting as it is high-speed salting.¹

However, MDOT's L'Anse garage has found a way to salt at high speeds without losing effectiveness to salt bounce and scatter. Rather than using a common salt truck, where salt is distributed from the back of the truck, L'Anse garage trucks use "front unloaders", where the hopper chain runs from the back of the truck bed to the front. This system distributes salt (pre-wet with brine and put through a crusher) directly in front of a salt truck's tires so it is packed down before it gets the chance to bounce. This concentrates salt to the wheel

We didn't reinvent the wheel, we started using it.

path, so much so that Dault describes it, "like painting the road with salt." However, the salt's effects don't remain confined in the wheel path. Traffic alone is all that's needed to spread the salt around, since traffic frequents the same wheel paths as the salt truck. This means that salt is concentrated to the most important areas for faster results, and gradually spreads out as more traffic goes through.

"Originally, I thought it must not work, since no one else was doing it." But it turns out the idea isn't actually a new one. Front-discharging salt spreaders used to be more popular, but eventually discontinued because no one thought they were needed.

"It turns out, we hadn't reinvented the wheel... we had simply started to use the wheel," Dault joked.

Currently, there are about 15 front-discharging trucks left in Michigan, but Dault is talking with the MDOT build-up team to get more in the fleet, and expects that industry is going to pick up on the superiority of front-discharge salt spreaders in the next few years.

Ice Fracking

And in the case of sub-zero conditions when salt loses its effectiveness? The L'Anse garage has an answer for that too. Rather than using sand or shaving/blading the ice on the pavement, Dault uses a snow pack removal method he calls "ice fracking". The L'Anse garage overloads a motor grader, then drives it across the ice to fracture it down to the pavement surface. At 15 mph, ice fracking is a slow process. However, MDOT's L'Anse garage has measured that it removes between six and eight pounds of ice per linear foot of road.

Dault will be discussing the specifics and technique of ice fracking, as well as the Superior Stick and high-speed salting, at the 2015 Winter Operations Conference. His presentation will accompany others on innovative winter safety and maintenance technology.

The innovation presentations will take place in the Manager/Supervisor track on the second day (October 21) of the conference. For more information on this year's upcoming Winter Operations Conference, and to view slideshows from previous conferences, visit

<http://www.ctt.mtu.edu/WinterOps> ■

¹At 25mph, 35mph and 45mph, 9%, 32% and 45% of salt is wasted, respectively. See the article *Study Shows How Truck Speed and Distribution Method Influences Salt Bounce and Scatter* in Issue 27.3 (Winter 2013) of The Bridge.

Correction for Issue 29.1

In the Summer 2015 edition of The Bridge, we incorrectly listed Washtenaw County as the owner of the "A2 Fix It" app.

The app, which allows citizens to report everything from potholes to illegal dumping, was developed by and for the City of Ann Arbor, and is not used within the wider Washtenaw County.

We apologize for any confusion caused by our misprint, and have made corrected the digital edition of The Bridge at the Michigan LTAP website at MichiganLTAP.org.



Upcoming CRA Leadership Training

The Mastery Series: Road Funding 101

Tuesday, December 8, 2015 — 12:00-4:00 p.m.

Comfort Inn and Suites, 2424 S. Mission, Mt. Pleasant

Road Funding 101 is the first session in the "Mastery Series," and is hosted by the County Road Association (CRA) of Michigan Education Task Force. Highly-demanded by CRA members, the half-day session will cover the basics on Michigan road revenues, the Michigan Transportation Fund and formula, and Act 51 reporting.

Whether it's a refresh or the first time you've learned it, the information will be presented in a manner that ensures everyone will learn. Satisfactory completion of the four learning modules will earn participants a Certificate of Mastery.

Details and registration are available at

<http://tinyurl.com/RoadFunding101>

Replacing Whites Covered Bridge

Annie Dahlquist – Technical Writer
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Center for Technology & Training

Anyone interested in learning more about Whites Bridge can visit whitesbridgehistoricalsociety.org, or join the Facebook community at facebook.com/RebuildWhitesBridge

One recurring theme in the transportation community is the willingness of its professionals to donate their skills and expertise to endeavors outside of their immediate workplace. This can be seen not only in the higher-than-average number of first responders and volunteer firefighters we see at our workshops and conferences, but in the professional support and outreach done by those working in transportation. Recently, this was seen in civil engineers, citizens, and multiple transportation agencies working to rebuild a historic bridge. Through social media and fundraising events, they raised over \$450,000 for the project.

Michigan was once home to four Brown truss covered bridges. These bridges, which were only built in Michigan, were unique in that Josiah Brown used sawn timber to bring the members and chords together at the same place and connected them with iron bolts. The oldest, Whites Bridge over the Flat River, was 147 years old. The bridge's design featured a gable roof protecting the wooden superstructure and fieldstone foundations. Despite being engineered to stand the test of time, an arsonist burned down the bridge in July 2013.

Many have crossed Whites Bridge while visiting Fallasburg Park, including members of "Run GR", a Grand Rapids based running group. One runner from the group, Jennifer Byle, also happened to be a transportation engineer for AECOM's Grand Rapids office. After doing some research, Byle came across the "Rebuild Whites Bridge" page on Facebook. This Facebook page serves as a source of information and updates relating to the fundraising and volunteer opportunities available for restoring Whites Bridge, helping to mobilize individuals in the community while connecting supporters to the Whites Bridge Historical Society. Jennifer told her father Tom Byle, the Assistant Director

of Engineering for the Kent County Road Commission, about the movement to restore the bridge.

History Repeats Itself

Tom Byle eventually came into contact with Paul Phenix, who had founded the Whites Bridge Historical Society. The Whites Bridge Historical Society's role is to connect the dots between the technical and financial responsibilities for redesigning the bridge.

Tom had previously managed the construction of Kent County's Ada Covered Bridge, which was burned down in 1979. Eventually the bridge was rebuilt with a combination of engineering expertise and donations from businesses and community members. The Ada Bridge currently stretches across the Thornapple River once again, representing how a structure can be reclaimed if it is lost.

But as Tom Byle explains, the significance of Whites Bridge wasn't just in its structure. "There's a lot of history with the bridge and the community. For example, the bridge was covered with carvings of people's names, and people would often get their pictures taken there." Although these carvings can't be replaced, a replica could remind those of their past visits and provide a platform for future generations to enjoy.

Organizing Support

With members of the Whites Bridge Historical Society serving as a catalyst, transportation agencies, local businesses and citizens started to get involved. The Whites Bridge Historical Society worked together with the staff at the Ionia County Road Commission to obtain \$275,000 through the Michigan Department of Transportation's Local Bridge Fund. This funding includes the addition of steel tension rods similar to those installed on the Ada and Fallasburg

Covered Bridges. These rods will raise the weight load for the bridge, and therefore help the reconstructed Whites Bridge to last as long as its predecessor. Engineers from AECOM and the Ionia and Kent County Road Commissions are all contributing to the design and plan preparation for the project. Local businesses did their share as well, with Meijer donating \$200,000, and other businesses donating several thousand each. Eco Demolition Inc. also donated time and equipment to pull the bridge's debris out of the river.

The Whites Bridge Historical Society has also organized fundraising events so that individuals are able to get involved. In 2014 the society put on Ionia County's BridgeFest, which brought in Michigan bands like The Verve Pipe from Lansing, The Outer Vibe from Grand Rapids, and Dragon Wagon from Ann Arbor. Last summer the society held an event raffle, the grand prize being a tour for two of the Mackinac Bridge Tower (only available by random award to non-profit organizations in Michigan). Other prizes included a cruise tour of Pictured Rocks for two; golf on Mackinac Island for two; and a day at the Shipwreck Museum at Whitefish Point. By taking advantage of social media and piquing public interest, the society has raised additional capital for seasonal decorations, donor plaques, and other additions to the new Whites Bridge to establish its place in the community.

Thanks to caring professionals, a driven community, and powerful use of networking and social media, there are now enough resources to rebuild Whites Bridge, and construction is expected to begin in 2017. This successful fundraising effort reflects that private business and the public both value transportation infrastructure, and are willing to support their community when the need arises. ■

Increasing Clarity by Writing Concisely

Shaughn Kern – Technical Writer
Center for Technology & Training

Wikimedia Commons

Blaise Pascal once wrote in a letter, “I have made this longer than usual because I have not had time to make it shorter.” Great minds recognize the value of brevity, and that longer sentences can result in less understanding from the audience. This has become truer in the last several decades with the increase in multimedia like PowerPoint slides and social media. Space is limited, and so are attention spans.

There is certainly an art and effort in writing concisely, but there are also many advantages:

- Quicker understanding from the audience
- More room for visuals
- Easier to meet page/word limits in proposals, social media, etc.

Being concise is not just about reducing word count, but also choosing the words and sentence structure that will result in the strongest impact.

Remove Redundant Language

Complex thoughts often require complex sentences, and in complex sentences even one extra word can cause confusion. One place to start for making a sentence more concise is reducing “pleonasms,” or redundant words/phrases. For example, in the sentence “I never make predictions, especially about the future.” The phrase “especially about the future” can be removed, since a prediction can only be made about the future. This cuts the sentence’s word count in half, while keeping all the information.

Removing redundant language can also be done at a word level. “Quickly and efficiently” could simply be written “efficiently”; “shorter in length” can be “shorter”; and “on a daily basis” can be “daily.” This includes phrases where the pleonasms are as common as the standalone word: “close proximity,” “new innovations,” “mass exodus,” “completely destroyed.” While removing one word at a time seems minor, it is easy to do and results in a cleaner overall document. Additionally, it makes it easier to rearrange sentence structure to be more concise.

Use Active over Passive Voice

Improper sentence structure often limits how concise a writer can be. The main culprit here is using passive voice [Y is verbed by X] rather than active voice [X verbs Y]. Generally, passive voice adds words without adding meaning, and/or removes the doer of an action. Consider three sentences:

- Active voice: “John hit a car.”
- Passive voice: “A car was hit by John.”
- Passive voice: “A car was hit.”

The first case concisely explains who did what. In the second case, the subject and object have been swapped and two words have been added, but no understanding has been added. Finally, in the third example, there is the same number of words as in active voice, but understanding has been decreased.

Active voice will probably be the most appropriate and concise sentence structure in your daily communication, emails, presentations, instructions—really anything besides technical reports and memos. Adopting active voice as your default sentence structure primes you to reduce word count while ensuring no information is omitted.

Substitute Strong Words

Bringing out a thesaurus is a good way to add impact while reducing word count, since a more descriptive word can take the place of many words. For example, one could say “Jargon mostly serves to cloud the actual meaning of things”, but it is more concise to say “Jargon frequently obscures.”

One quick method is to look for weak adjective-noun or adverb-verb combinations and find a better word. A phrase like “strong supporter” becomes “advocate”, and “quickly ran” becomes “sprinted.” A great example, taken from the movie *Dead Poets Society*, is “Avoid using the word ‘very’ because it’s lazy. A man is not very tired, he is exhausted. Don’t use very sad, use morose.”

Similar to removing redundant language, substituting strong words individually are small edits, but also a significant improvement that accumulates over the length of a text.

On Conciseness

“Vigorous writing is concise... this requires not that the writer make all their sentences short, or that they avoid all detail and treat their subjects only in outline, but that every word tell.”

—Strunk and White
The Elements of Style

Choose Simple Words over Jargon

On the other hand, using a bigger word is not better if it does not clarify. Particularly, marketing and business buzzwords like “leverage,” “bleeding edge” and “robust” have the opposite effect of using powerful words: they add length but reduce understanding. For instance, the phrases “reach out” and “touch base” are longer, but much less specific, than “call”, “e-mail” or “fax”.

Consider the word “use.” It’s very short and not very descriptive, so many people substitute the word “utilize” in order to make the writing seem more impressive. The first problem is that when a communicator writes with the intent to impress, the audience usually gets the impression that the communicator is trying too hard. Secondly, even though it is popular to substitute “utilize” for “use”, they do not actually mean the same thing. Finally, the substitution itself only adds length, not meaning.

The real problem with the original word “use” is not that it’s boring; it’s that “use” is not particularly descriptive. The goal should be to find a more specific synonym (exploit, deploy, harness, apply) rather than a buzzword.

In communication, less is usually more. Unless you’re a novelist, marketer, or politician, your primary goal in writing should be to inform, not to impress. Plus, chances are if you inform with efficiency and clarity your audience will be impressed as a result.

For more information on any of these subjects, visit the Purdue Online Writing Lab at owl.english.purdue.edu. ■

The Road From Technician to Manager

Cassandra Matchinski – Technical Writing Intern
Center for Technology & Training

Growing up, Steve Defour always looked up to his father. “He started his own company and managed it for 17 years,” says Steve. Beginning his own career as an engineering technician, Steve’s desire to follow his father’s footsteps into leadership set him apart from many other engineers.

From the start, Steve knew that he wanted to manage a road commission. The transition from technician to manager comes with a vastly different set of responsibilities, including giving up the hands-on work many engineers enjoy. Steve knew, however, that his real passion lay in leadership, and he wanted the opportunity to work through the ranks, learning all he could along the way.

Beginning his career at the Roscommon County Road Commission, Steve worked in a small engineering department of four people. His responsibilities grew when his superintendent discovered he knew AutoCAD, and he was eventually made lead designer. Steve’s desire to learn and grow in his position helped him to form new relationships with the survey crew, and he eventually learned all of the equipment associated with their work as well.



Planning the Copper Harbor Overlook and its interpretive signs was Steve Defour’s favorite project, and it is now a popular stop for visitors to Michigan’s Keweenaw Peninsula.

The design experience and surveying knowledge Steve gained at Roscommon helped him to transition into his next position as an assistant engineer at Keweenaw County Road Commission. Working as the only person in the engineering department, he was responsible for all of the design and surveying. Steve says that his favorite aspect of working at Keweenaw CRC was the diversity of the projects he was assigned, including parking areas, rest areas, and roadside turnouts. “By far though,” he says, “the best project of my career to date was the Copper Harbor overlook. It’s something that will stand the test of time and I’m very proud to have worked on it.” The project included constructing the overlook, restoring the rock walls and fence along Brockway Mountain Drive, hard surfacing the turnouts along Brockway Mountain Drive, and installing interpretive signs along the drive.

With his experience working on the technical side of a road commission, Steve felt confident in his abilities when he was offered the opportunity to manage Oscoda County Road Commission. Steve feels that the knowledge he gained in each phase of his career has been invaluable in preparing for management. Although his work responsibilities have certainly shifted, Steve enjoys the challenges he faces, as well as the opportunity to serve the public. “My favorite thing about this position is being able to work with the townships to develop future road construction estimates and plans,” he says, “We’re here to serve the public, and the best way to do that is by keeping the roads in the county safe and improving the areas that need it most.”

Some of Steve’s biggest challenges include delegating authority and managing all of the responsibilities and commitments of management. Where his position as an engineer suited his task-oriented work style, Steve now finds himself constantly changing gears to meet all of the demands of communicating with his crew, office personnel, the public, local units of government, other engineers, and

contractors. While he must handle the political aspects of being part of a road commission, Steve also makes time to walk through the shop, talk with the mechanics, and ride along with the truck drivers. Maintaining this connection allows him to better understand his crew’s needs, and communicate what is needed of them; he feels that building strong relationships and lines of communication is an incredibly important skill for management.

For engineers interested in pursuing management positions, Steve says, “Be prepared to give up field work and design.” Because administrative duties take so much of his time, he emphasizes the ability to juggle projects and maintain communication with people in a variety of positions. This shift in responsibility does allow Steve the opportunity to work closely with representatives in Lansing to develop new strategies for future road funding, something he’s very passionate about. He also recommends making time for passions outside the office, and is looking forward to deer season. ■

In December 2015 the County Road Association of Michigan will offer training relevant to managers. For more details, see “Upcoming Leadership Training” on page 3.

The Bridge is published quarterly by the Center for Technology & Training (CTT) through Michigan's Local Technical Assistance Program at Michigan Technological University. Subscriptions are free of charge. To request a subscription, contact the CTT.

Great Ideas About



As demonstrated in the "Superior Ideas for Winter Maintenance" article, some of the most effective solutions come from inside a road commission. Michigan LTAP's Great Ideas Challenge has showcased these innovations for the last four years.

Last year's winner for the Great Ideas Challenge went on to tie for second place in the National LTAP Build a Better Mousetrap competition. The winning idea, pioneered by the Oakland County Road Commission, was collecting and mapping data on road-stream crossings for storm-water permit compliance (See The Bridge 29.1).

Michigan began submitting entries in 2012, and has placed in the top ten each year:

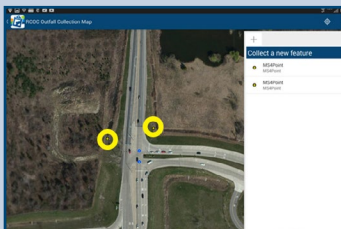
- 2012: 1st – Old tires for wing plow cutting edges (Ottawa)
- 2013: 1st – Dyed hydraulic fluid (City of Wyoming)
- 2014: 9th – Grader paver (Ottawa)
- 2015: 2nd – GIS data collection of environmental data (Oakland)

You can view booklets of creative solutions developed by local agencies in Michigan, or submit your own Great Idea for the 2016 competition at:

michiganltap.org/greatideas

Booklets of national contest winners are available at:

ltap.org/resources/mousetrap.php



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About LTAP

The Local Technical Assistance Program (LTAP) is a nationwide effort funded by the Federal Highway Administration and individual state departments of transportation. The goal of the LTAP effort is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.

Steering Committee

The LTAP Steering Committee makes recommendations on, and evaluations of, the activities of Michigan's LTAP.

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The Center for Technology & Training (CTT) is a part of the Department of Civil & Environmental Engineering at Michigan Technological University in Houghton, Michigan. The mission of the CTT is to develop technology and software, coordinate training and conduct research to support the agencies that manage public infrastructure. In support of this mission, the CTT houses Michigan's Local Technical Assistance Program, which is part of a national effort sponsored by the Federal Highway Administration to help local road agencies manage their roads and bridges. For more information, visit www.ctt.mtu.edu.

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The Bridge

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Upcoming Events

Register at ctt.mtu.edu/training

2015 Winter Operations Conference

Oct 20-21 – Bellaire

Advanced Topics in Bridge Load Rating (Part 2)

Oct 27 – Webinar

Transportation Asset Management Workshop

Oct 27 – Okemos

Introduction To MERL

Oct 27 – Webinar

Oct 28 – Webinar

Concrete Pavement Preservation Workshop

Oct 29 – Okemos

Oct 30 – Novi

Intermediate MERL

Nov 3 – Webinar (*Bid Utility*)

Nov 5 – Webinar (*Local Job Manager*)

2016 County Engineers' Workshop

Feb 2-4 – Manistee

2016 Michigan Bridge Conference

Mar 22-23 – Lansing

Michigan LTAP Intern Wins Logo Contest

Stephanie Hubble, a technical writing intern here at Michigan LTAP, recently won a logo design contest hosted by the National Local Technical Assistance Program Association (NLTAPA).

NLTAPA organized the contest to determine the new graphic identity of the association, and accepted entries from state LTAP and TTAP centers. They selected Stephanie's logo out of a pool of over twenty total submissions.

"I was very excited about the opportunity to participate in the NLTAPA logo contest and couldn't be happier about winning!" Stephanie explained. "I learned a lot about turning an organization's values into a graphic design, as well as learning about constructive criticism from my colleagues, who really helped me refine my creative process."

The new NLTAPA logo was unveiled in July at the 2015 National LTAP/TTAP Conference in Savannah, Georgia. John Velat, President of NLTAPA, explained that the organization is "very excited about the new logo, particularly because we had so many excellent submissions representing many different ideas. What's even more exciting is that the designer is a young and talented intern from Michigan's LTAP, one of the strongest LTAPs in the nation. Congratulations and thank you Stephanie!"

NLTAPA represents Michigan LTAP, 50 other state centers, and seven regional tribal centers.

