Crossroads

The Quarterly Journal of the County Road Association of Michigan

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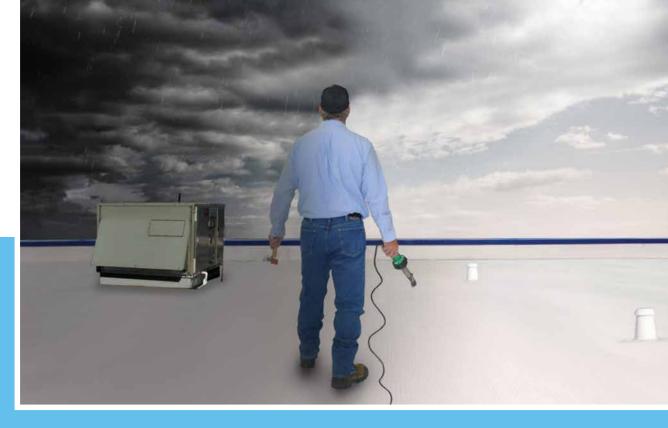
Weighmasters Our road protectors



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- → **Alcona County:** Communicate, Preserve, Rebuild
- → Legal Issues Corner: The rules for abandoning a road





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Crossroads

Crossroads is the quarterly publication of the County Road Association (CRA) of Michigan. The 83 county members of CRA represent the unified, credible and effective voice for a safe and efficient local road system in Michigan.

The Association, headquartered three blocks north of the State Capitol, is dedicated to helping members promote and maintain a safe, efficient local road system in rural and urban Michigan.

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Next Publication

The Summer 2017 issue of *Crossroads* will focus on the innovations and technology going into deployment for the 2017 construction season, and take a look back at 100 years of CRA's history.

Crossroads' editorial team wants to hear from you. Call CRA at 517.482.1189 and share your ideas for future issues!

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to micountyroads.org/Newsroom/ Crossroads-Magazine, and click download next to the issue you want to save to your computer.

PRESIDENT'S CORNER



As my time as President of the County Road Association draws to a close, I would like to take this opportunity to thank all of you for allowing me to serve as your CRA president.

Looking back over the past year, one of the biggest things I've learned while traveling around the state attending the council meetings and speaking with many

road commission people, is how we are all so very different in carrying out the same mission, which is to provide a safe and efficient county road system for our constituents.

Although local circumstances are very different around the state, what stood out to me was the dedication and genuine concern employees of every road agency had in providing the best services for the citizens within their budgetary restrictions.

With new road funding starting to arrive at each of our agencies, I ask you all to be just as frugal and efficient as you have been in the past. When you have an issue, don't just throw money at it, but rather continue to be innovative, thrifty and thoughtful in your solutions. Keep the mindset of "doing more with, well, nothing."

Additionally, with the distribution of Act 51 under scrutiny and retention of the promised \$600 million in

General Fund a concern for all road agencies, I encourage you to cultivate and build relationships that will reinforce our position both at the state and local levels.

I challenge you to get to know and build personal relationships with your state senators and representatives, develop a good rapport with your county commissioners and township officials, and engage with your local business communities in an effort to build and strengthen your ties with them.

It will be imperative that all of our partners support us in this upcoming fight to keep the promised general fund dollars as well as making sure that all road dollars are divided equitably.

It has truly been a pleasure to serve as your president. If I can help you or your road agency in the future, know that I welcome the opportunity and encourage you to reach out to me.

Jim Iwanicki, PE CRA President

Engineer-Manager of

Marquette County Road Commission

James M Lumich





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MEMBER PROFILE

ALCONA c o u n t y

In the beginning...

When you begin at the beginning (alphabetically, that is), the Alcona County Road Commission is where it all starts for county road agencies.

The Alcona County Road Commission

(ACRC) is located in Lincoln, a picturesque village with a population of 337 perched atop a hill between the twin lakes of Brownlee and Lincoln. The village is so situated that some of its homes and businesses stretch into four adjoining townships – urban sprawl up north style?

Lincoln was established in 1887 and originally served as the county seat of Alcona County, which quite possibly is the reason the road commission was located there.

Working with townships: Communication is the key

The ACRC works closely with its 11 townships, 10 of which have road millages. While many of Alcona township millages are long established, the most recent one was approved three years ago.

Alcona County has a 50:50 match of township dollars on primary road improvement projects, and a 25 percent match on local roads

Because of their millages, townships are very involved in selecting projects and the type of preservation they want performed, according to ACRC managing director **Jesse Campbell**, a 24-year veteran of the road commission. And they tend to want to focus on local road projects.

While the township millages and general fund dollars have been very helpful to the local roads, the downside has been less attention given to primary roads and federal aid routes.

Campbell says maintaining a good working relationship with townships is a priority because Alcona County roads would not be in the relatively decent condition they are without township support.

"Each township has a road committee that is focused on the roads within their respective boundaries," he said. "Annually, we drive the roads with the road committee looking for trouble spots and pavement conditions, which helps in determining project priorities.

Sealcoat over six inches of crushed limestone has historically been, and seems to continue to be, the townships' preferred treatment to improve conditions of local roads. They like it because it provides what motorist perceive as a paved surface, yet doesn't cost as much as asphalt.

"This is not our preferred treatment because it provides very little structural strength to the road, but it is popular with townships and residents," Campbell said. "You can paint lines and pavement markings on it and it stretches the available funds."

Convincing townships to do sealcoat and fogging as a preventive measure is a more difficult sell, Campbell added. The use of asset management principals has been helpful in changing attitudes toward fixing roads before they become major reconstruction projects. Asset management also helps rebalance the focus between primary and local roads priorities.

Can't get no: Gravel or asphalt

While Alcona County is a nature lover's paradise, getting the right resources at a good price for a road project can be challenging.

Campbell points out that there is a significant shortage of road material sources in northeast Michigan. The lack of availability of spec aggregate and local asphalt plants influences the types of road improvement solutions available to Alcona County.





Campbell says there are limestone quarries in the area that are the envy of road agencies where such material is not readily available, but limestone is considerably more expensive and is not always the best material, depending on the situation.

ACRC is responsible for 399 miles of unpaved roads, which are predominantly earth roads. "A gravel road can lose one-quarter inch of surface material a year depending on many factors including traffic, routine maintenance and

Alcona County Road Commission staff

JUST THE

Facts:

Alcona County Road Commission

Office headquarters: Lincoln

Staff: 25 full-time; 0 seasonal

No. of commissioners: 3 (elected)

Miles of

paved roads: 727 = 210 primary + 517 local

Miles of

unpaved roads: 399 = 17 primary + 382 local

MDOT contract: Yes (152 lane miles)

No. of bridges: 33

Annual budget: \$3.3 million

(FY 2016-17)

Local revenue: \$460,000

Annual snowfall: 85" average

ACRC established: June 1919

No. of garages:

Office built: 1950s

FUN FACT: "Sleeping Beauty." That was the name good-naturedly given to an old school bus that anyone with any history with the Alcona County Road Commission knows made several trips to Tiger Stadium over the years. Annually, most of the crew would load up and head to Detroit in this old bus for a day of baseball, comradery, and, well, old-fashioned fun.



weather," says Campbell. "Replacing gravel is generally costly, so over time, road surfaces deteriorate leaving motorists and our crews with the challenge of driving on and maintaining low quality roads."

Out of the ashes ...

Campbell had been ACRC managing director for five years, and the toughest challenge he faced – and will probably ever face – came about on Saturday night, September 28, 2013.

At about 10:25 p.m. he got a call from the Lincoln Fire Department that the truck garage was on fire. Campbell raced to the site – about three miles from his home – to see flames rising from the roof at a back corner of the garage.

The blaze spread quickly across the roof in windy conditions, ultimately causing a grass fire, damaging some adjacent properties and threatening the ACRC office building.

Despite the danger, Campbell and employees who appeared on site went into the 80-year-old garage to try to salvage vehicles, including a brand new Western Star plow truck worth \$193,000 that had been delivered just three days earlier.

"We rescued two trucks," Campbell said. "In hindsight, it probably wasn't the smartest thing to do, but it's only natural to want to save as much as possible."

It took several local fire departments working all night, to finally extinguish the blaze at 4:30 a.m. Virtually everything in the garage was lost, including the brandnew truck, four other plow trucks, four pickup trucks, two medium-duty trucks and a host of shop equipment and tools.

Thankfully, some trucks were spared as they were parked outdoors and hadn't yet been moved inside for the winter. Also, a good fortune was that the unattached office building was unscathed.

Ultimately, it was determined the fire caused over a \$4 million loss.

Alcona County Road Commission rebuilding after the fire that destroyed the truck garage.

The Aftermath

The following Monday morning, the staff and crew reported to duty as usual, uncertain what to do because there was no building, no time clock, no semblance of the order they were accustomed to.

"Wanting to carry on as best we could, we gathered the whole crew in our small office building" Campbell recalls. "The enormity of the calamity really set in as we assigned crews to their duties. For example, we sent a crew to go patching potholes."

"A few minutes later they came back in and said we didn't have any shovels to apply the patch with," Campbell said. "You never realize until you experience a fire, just how many pieces of equipment you have." Three years later, ACRC is still discovering things that were lost in the fire, he said.

At that point, Michigan was on the cusp of the epic winter of 2013-2014. And ACRC was down five plow trucks.

As word spread of the disaster, a half-dozen road commissions and the Michigan Department of Transportation loaned vehicles and created special purchase arrangements on used equipment, helping ACRC get through a winter that spewed out almost-daily snow, blowing conditions and single-digit temperatures.

The Michigan County Road Commission Self-Insurance Pool (MCRCSIP) was on the scene nearly immediately, investigating the cause of the fire. A contractor had been working on the roof, and fire was ultimately linked to that work.

A series of hurdles followed including lawsuits and countersuits, land use issues, and replacement cost uncertainties. It was three long years before ACRC could rebuild and restock its truck barn and repair facility.

Last December, ACRC moved into a new and improved building on the original site. "The new building is so much more efficient than the old building, and a 1000 percent improvement over our temporary facilities, which were off premise and where our trucks were stored outside," Campbell said.

Campbell credits the new facility for the "2016 Turn Around Award" received from County Road Association Self-Insurance Fund.

"Of course, our experience factor changed," Campbell said. "Our equipment is parked inside so no more slipping on snowy, icy truck steps. Our facility is designed specifically for our purposes so the things we use day-to-day are stored properly. And in getting back into a 'normal' routine, we have been able to reestablish our focus on safety, in general."

"The outpouring of support of our employees, the residents of Alcona County and our road commission peer group was phenomenal. They made the task of rebuilding much less daunting than it might otherwise have been," Campbell said.



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> WEIGHMASTERS HELP

It was a late summer morning, just before 10 a.m., when **Lenawee County Road Commission's** (LCRC) then-weighmaster **Robert Emery** received a call from a motor carrier officer saying something big was coming their way. "An officer working as a weighmaster in our area received a tip that someone was trying to illegally haul an overweight load from Lansing down to Ohio," said Emery.

Emery was first on the road, and on M-52, in a small town called Madison Center, he caught up to the truck carrying the illegal load before the Michigan State Police motor carrier officer arrived. The load itself was an auto press being transferred from one plant to another. After the officer arrived, and it was confirmed that the driver was missing the proper permits to transport a load of this size, Emery went to work.

The process of weighing a truck this large is challenging. Scales are placed under different tires, with boards placed under the tires not being weighed to keep the vehicle level. Using four sets of portable scales, it took Emery and the officer three hours in the summer sun to weigh the 200,000-pound vehicle.

The result was a ticket to the driver for \$49,000. At the time, it was the biggest ticket ever written for such an offense, and could have been avoided if the proper permits had been acquired. "Being a weighmaster is not really an exciting job," said Emery. "But sometimes you get to see some really interesting things."

The job of the weighmaster

There are many reasons why roads deteriorate prematurely, including weather, pavement design, subbase, subgrade, existing soil and age.

Commercial traffic and maximum weight loads can be particularly rough on deterioration rate. Many primary and local roads were not built to carry the weight loads of today's commercial truck

configurations or modern agricultural husbandry equipment.

An important tool in the county road agency's box for preserving roads against excessive weight, is the position of weighmaster.

The weighmaster is responsible for using scales to weigh trucks observed on local roads, to ensure they do not exceed weight limits. The number of certified weighmasters at a county road agency varies.

Weighmasters are usually seasonal jobs, used during the "frost laws" or seasonal weight restrictions timeframe in March to April or May. It's also not uncommon for weighmasters to patrol during the spring rush when companies may be looking to make up for lost time from the colder months.

Some weighmasters are county road agency staff, who have different jobs at other times of the year; and some are local police. Weighmasters can be deputized by the local sheriff.

When a weighmaster observes a truck on a local road or county primary road that could potentially be overweight, he or she is authorized by law to pull the truck over. Weighmasters can only issue citations for overweight and oversized vehicles, permit violations and unsecure loads.

Some weighmasters use portable scales that are placed beneath a truck's wheels out on the roadway, which can be

Enforcing weight restrictions is not meant to harm people. Our job is to protect our roads and make them safe for the people in our community."

- Robert Emery, retired weighmaster, Lenawee County Road Commission

> dangerous due to traffic conditions. Others will direct the truck to a nearby drive-through scale to get an accurate weight.

Weight violations – whether on a road or a local bridge – can cause serious road damage costing thousands of dollars to repair during the vulnerable spring frost break-up.

Citations issued by weighmasters for violation of weight restrictions are prescribed by statute and range from



PROTECT LOCAL ROADS

\$500 up to thousands of dollars, depending on the magnitude of the violation. Weighmasters can also impound vehicles for failure to pay a ticket.

Stories from the field

Weighmasters play an important role in the field as "road protectors."

John Posegay has served as weighmaster for the Washtenaw County Road Commission for 10 years.

"With all the trucks on the road, it's hard to keep up with," Posegay said. "If we catch three to five percent of trucks that are actually violating the weight restrictions, we're doing pretty well."

Michigan's economy is driven by manufacturing and transporting natural resources and agricultural products from rural areas, which depends on trucking. And trucking across Michigan's fragile roads, takes its toll.

A loaded truck with five axles, weighing 80,000 pounds (the maximum weight on

interstate roads) can result in more damage to a highway than 5,000 cars. An overloaded truck has the impact of nearly 10,000 cars.

"With enough axles and proper spacing of the axles, trucks can haul up to 164,000 pounds," said Posegay. "The weight allowance on most local roads in Michigan is under 70,000 pounds."

Michigan is an axle state

Unlike many other states, Michigan law has long relied on weight-per-axle to determine the size of trucks allowed on its roads. Engineers believe weight-per-axle is the best way to determine the potential for road damage.

"The amount of weight on each axle is critical to how much damage the load can have on the road," said Emery, chair of LCRC. Emery also worked for LCRC for 22 years as weighmaster.

While many argue for smaller trucks on Michigan roads to prevent damage, others say such a move would simply put more

trucks on the road because Michigan has a fixed amount of freight that must be hauled.



"Quad County"
Enforcement team
members, Dan
Judnich and former
Keweenaw Sheriff
Ron Lahti. They are
responsible for Baraga,
Houghton, Keweenaw
and Ontonagon cooperative programs
where costs are shared
between the four
counties.

Patrolling the roads and finding common ground

Policing roads to enforce weight restrictions is challenging, difficult and, at times, dangerous. But it's important to protect taxpayers' roads from additional damage during the fragile frost laws period. Building partnerships and collaborating with state police and local commercial entities helps road agencies take a proactive approach to weight restrictions.

"Enforcement of weight restrictions is not meant to harm people," said Emery. "We strive to educate and inform people of the rules and what they need to do to follow them. Our job is to protect our roads and make them safe for the people in our community."

Kevin Harju, PE, engineer-manager for the Houghton County Road Commission, helps oversee a quad-county weighmaster service with the Baraga County Road Commission, Keeweenaw County Road Commission and Ontonagon County Road Commission.

Harju says the four counties see few violations in the region, something attributed to the weighmaster's presence in the community and the road commission's proactive communication with local industries.

"We've been able to foster a great relationship with the timber industry in our area, where we regularly meet to discuss issues affecting each other and work together to come up with innovative, effective solutions," said Harju. "Finding a common ground on issues like weight restrictions has gone a long way towards keeping our relationships with local industries positive."



NEW ONLINE "BILL TRACKER" hits the CRA website!

CRA is proud to announce its new web-based "Bill Tracker!"

Throughout the year, CRA deputy director **Ed Noyola** works closely with the Legislative Review Committee and board of directors to identify relevant bills and take positions on legislation making its way through the Michigan House and Senate.



Now that information has been compiled in a hyper-linked, website-based table so CRA members, legislators and staffers, and other interested parties can see the information at a glance.

"Bill Tracker" gives a brief description of the bill or act, sponsoring legislator(s), date introduced and CRA's position on it. The tracker also links directly to the bill language posted on the House or Senate website.

To view the new bill tracking page, head to micountyroads.org/Taking-Care/Bill-tracker.

2017 Highway Conference Legislative Reception March 15, 5:30-7 p.m. Radisson Hotel Ballroom

"Bill Tracker" is a great way to familiarize yourself with pending legislation to discuss with your Legislator at CRA's 2017 Highway Conference's Legislative Reception.



Key transitions at...

Road Commissions and Departments

Donna Henke replaces **Suzette Michalski** as administrative assistant/
payroll clerk at the **Clare County Road Commission**.

Phillip Hoyt joins the Benzie County Road Commission as commissioner.

CRA

Dustin Earley has joined **CRA** full-time as engagement specialist.

Alexandra Risher has joined **CRA** full-time as administrative/event planning assistant.

Mile Marker

Merle Donbrock is retiring as commissioner from the Branch County Road Commission after 18 years.

John Nuske is retiring as commissioner from the **Benzie County Road Commission** after 18 years.

Stan Clingerman has retired from the **Hillsdale County Road Commission** for the second time, and will not be serving as project engineer for 2017.

John Avery is retiring as commissioner from the **Lake County Road Commission** after 18 years.

Donald Sisung has retired as commissioner from the **Clinton County Road Commission** after 30 years.





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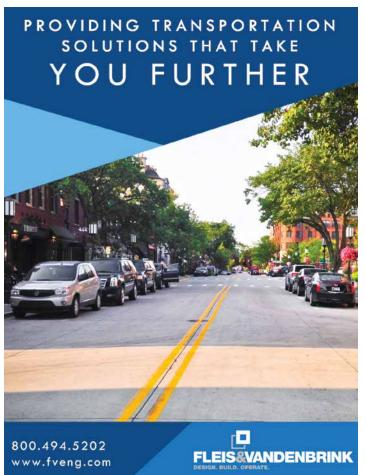




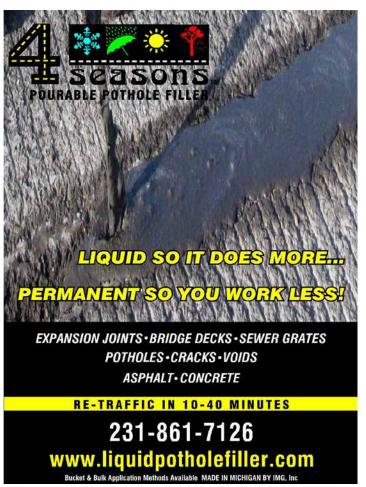
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CRA has released a new Guidance Document on using the Listserv™ with instructions on how to subscribe, how to send emails to Listserv™ subscribers and more. If you haven't already received a copy, call Dustin at the CRA office: 517.482.1189.

Listserv[™] Breakout Session 2017 HIGHWAY CONFERENCE

March 15, 1:30 and 4:15 p.m. (repeat sessions)

CRA accounting and administrative manager **Cindie Dulaney**, and engagement specialist **Dustin Earley** will host a breakout session at the 2017 Highway Conference detailing the updated Listserv and answering your questions on how to best use it.

CROSSROADS **EVENT** Calendar

March 14

New Commissioners Workshop

Held on the first day of the 2017 Highway Conference at the Radisson Hotel, the New Commissioners Workshop is a free event covering the ins and outs of being a successful county road commissioner. The event runs from 8 a.m. to 4 p.m. and includes lunch.

March 14-16

2017 CRA Highway Conference

This year's Highway Conference will kick off CRA's "Century of Innovation" 100-year anniversary observance. Registration is now open at micountyroads.org.

April 9-11

Commissioners Seminar

Held at the DoubleTree by Hilton in Bay City, all commissioners are encouraged to attend, learn and network with peers and experts in their field.

May 16-18

Finance and Human Resources Seminar

This year's Finance and Human Resources Seminar will be held at the Boyne Highlands Resort in Harbor Springs, and will feature sessions and presentations with the latest on the field of human resources and management for county road agencies.

For additional details on CRA events, visit **micountyroads.org/Events**

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Ask FHWA

What do the numbers say? Using refined data analysis to create safer Michigan roads

"Safety is number one." You've probably heard that phrase before.

In Michigan, improving road safety for motorists, pedestrians and bicyclists is important to federal, state and local agencies. And all agree that data drives the safety bus.

Data-driven safety analysis uses tools to analyze crash and roadway data to predict the safety impacts of highway projects. It allows agencies to target investments with more confidence and reduce severe crashes on the roadways.

Data-driven safety analysis can either be hotspot, systemic or predictive.

Systemic analysis is an examination of a roadway system to identify high-risk features correlated with severe crash types.

"Michigan county road agencies have been doing systemic analysis measurements. One basic example is a guard rail. An agency will apply for safety money and their application may say we have areas where we want to add guard rail," said David Morena, highway safety specialist for the Federal Highway Administration (FHWA) Michigan Division.

"That is a systemic approach. They're not saying they had a crash at every area, they just recognize there is an issue in their county and there is a systemic way to address it," Morena said.

Predictive analysis uses crash, roadway and traffic volume data to provide reliable estimates of an existing or proposed roadway's expected safety performance in terms of crash frequency and severity.



From left to right: David Morena, FHWA Michigan highway safety specialist and Theodore G. Burch, P.E., FHWA Michigan assistant division administrator

"An agency could look at adding shoulder widths of five feet and examine the number of crashes that would be reduced based on that five feet. They could also look at eight foot shoulders and examine the number of crashes that would be reduced," according to Morena.

"It could be \$5 million to do one plan and \$8 million to do another. With predictive analysis an agency is able to figure out the highest safety benefit cost of each choice before it is built," Morena said.

Predictive analysis is the newest data kid on the block. For years, **hotspot data** was customary

and used to improve conditions at one particular location instead of looking at the road system overall.

Systemic analysis was introduced after hotspot data, and more recently predictive analysis was added to the mix.

"The reason we are promoting the predictive and systemic analysis is because for years road agencies have used hotspot data — data about a

specific location where you have already experienced fatalities or crashes. The agency would then focus their money there," according to Ted Burch, assistant division administrator for FHWA Michigan.

"Hotspot is still being done, but data-driven safety analysis is taking it to the next step of not waiting for high crash locations to occur but preventing them in the first place," Burch said.

Data-driven decisions also maximize the use of limited safety funds and materials. More data allows agencies to focus limited resources on larger problem areas or spots such as fixing a safety issue at the expense of resurfacing a road.

"It's a better use of tax dollars, said Russell Jorgenson, division administrator for FHWA Michigan. "Ultimately though, lives are saved and injuries are prevented."

The Road Commission for Oakland County (RCOC) employs the use of hotspot data, and predictive and systemic analysis.

"We use crash data for every road decision we make. Once a year various departments sit down and review top intersections," said RCOC managing director and secretary-clerk **Dennis Kolar**, PE. "There is a program that ranks intersections by crash severity and number. We look at where our issues are and we talk about each of these locations and whether there is something simple we can do to fix it."

"Maybe it's ... a signal and timing. If we can do the safety fixes, we'll go out and do them, we won't wait," Kolar said. "If it's a major issue we will apply for federal dollars."

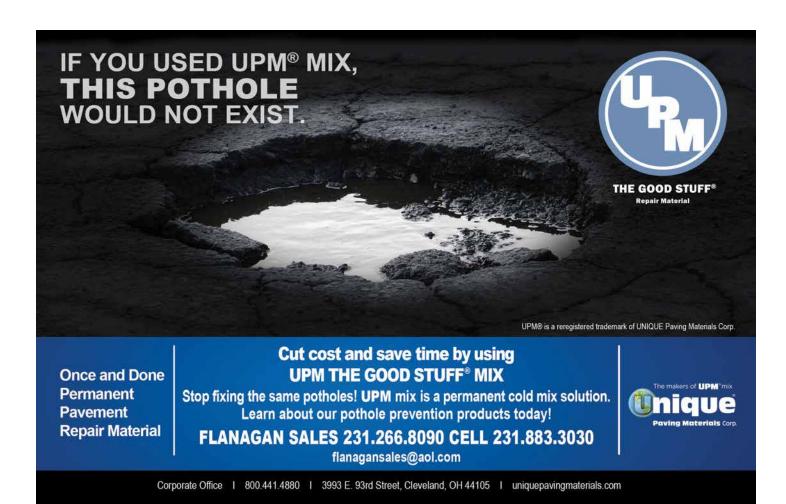
Putting these innovative safety practices into action can also be paid for with safety grants. Funds are provided by the Federal Highway Safety Improvement Program (HSIP) and High Risk Rural Roads (HRRR) through MDOT.

Requests for HSIP and HRRR funds require a county road agency's application to include a data-driven safety analysis.

LEARN MORE

County road agencies can learn more about the MDOT Safety Program and how to apply online at Michigan.gov/MDOT.

County road agencies can also learn more about data-driven safety analysis and innovative road safety practices from around the country by visiting www.fhwa.dot.gov/everydaycounts.



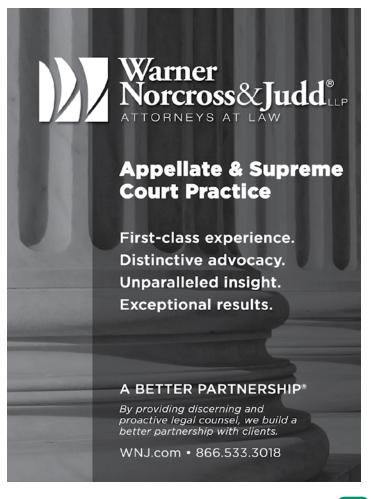


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WHAT'S NEV FOR LOCAL BRIDGES



While most of the dialogue about Michigan's local road system focuses on the roadbeds, foot-for-foot bridges are probably the most expensive segment of a local road.

Michigan's county road system has 5,724 bridges, of the state's total 11,061 bridges. Bridges are inspected frequently by the agencies that own them in accordance with the National Bridge Inspection Standards.

The standards call for most bridges to be inspected every two years, although some are inspected more frequently due to condition or unique structural details.

Recent data shows that nearly one in 10 Michigan bridges are structurally deficient – not necessarily unsafe, but having a main component in poor condition needing attention.

A NOTE ON CULVERTS. Maintaining a road system in the Great Lakes State, with its unique drainage and topography, requires thousands of drainage culverts, ranging from small diameter under-the-road pipes up to 20-foot spans.

Unlike Michigan's well-documented bridge inventory, the total number and condition of culverts is not well catalogued. Inventorying Michigan's culverts and bringing them into the age of asset management is on the radar screen for all transportation agencies in the state.

In many situations, an agency that needs to replace a large culvert discovers that environmental regulations require the replacement to be longer than 20 feet – which automatically defines it as a bridge. And there is no state or federal funding program to replace or upgrade culverts as there is with bridges. (See sidebar article, What's a Bridge?)

Michigan's county road agencies repair and replace dozens of bridges and hundreds of culverts each year, and are adopting innovations to make bridges safer, more durable, less costly and less disruptive to the traveling public.

Driving the "LowSpan" in Baraga

The spring of 2013 came quickly in the Upper Peninsula. A quick jump in temperature led to rapid snowmelt, and the rushing streams and rivers compromised numerous older and marginal culverts and bridges.

In Baraga County, a large but undersized, aged metal culvert on Beaufort Lake Road over Spurr River failed during the 2013 flood. The road was closed by the **Baraga County Road Commission** (BCRC).

The detour route funneled traffic onto the state trunkline system, according to BCRC engineer-manager **Doug Mills**, PE. This was inconvenient for residents, and a concern for emergency response.

Although the road had a low daily traffic count, replacing the crossing was an important priority for the township, its residents and for recreational access to the state campground and Beaufort Lake. In addition, a new bridge needed to handle modern structural loads for all commercial users, including loggers.

→ WHAT'S A BRIDGE?

Sounds like a silly question, but it's not as simple as you think.

Technically, a bridge is a structure that is 20 feet or more in length.

Even a side-by-side pair of culverts beneath a county road can qualify as a 20-foot-long bridge, triggering federal and state rules, but also qualifying the site for bridge funding.

→ THE LOCAL BRIDGE PROGRAM

Michigan's Local Bridge Program (LBP) funding is limited to work on locations where there is already an existing bridge greater than 20 feet.

Michigan has seven Regional Bridge Councils that help prioritize and recommend projects for state LBP funding; each includes two county road agency voting members plus city and village representatives.

The statewide Local Bridge Advisory Board (LBAB) makes final decisions about which projects are funded statewide. It includes representatives from MDOT, cities, villages and CRA. CRA's three LBAB voting members are Doug Mills, PE (Baraga County Road Commission); Wayne Harrall, PE (Kent County Road Commission); and Mark Craft, PE (Gratiot County Road Commission).

SURE, WE CAN DO THAT. BCRC and its consultant, UP Engineers and Architects of Houghton, worked closely with the Michigan Department of Environmental Quality, to create a design that met permit requirements. As the previous structure was determined to be extremely undersized, a longer span was needed without raising the road grade. In this case, it would mean replacing a culvert with a full-fledged bridge and a natural channel bottom.

The bridge design for the site had many constraints including: Maintaining the existing grade, spanning the channel with a natural bottom, keeping a low profile, minimizing the top thickness of the structure, withstanding modern loading and providing a long service life.

PRESTRESSING: WHAT IT IS. The new Spurr River bridge used precast concrete and prestressing to construct an innovative three-sided box culvert rather than traditional reinforced concrete construction.

"In simple terms, very high strength prestressing strands are placed in the form, pulled to "pre-tension" and then the concrete is cast while holding the strands in tension," Mills said. "These strands then provide a high degree of strength and allow thinner deck sections, while maintaining a very high load-carrying capacity."

While MDOT had constructed a similar bridge in Delta County in 2015, the Baraga County Road Commission's Spurr River bridge is the first prestressed, three-sided box culvert constructed on the county road system in Michigan.

COSTING IT OUT. The bridge was a \$595,000 project, compared to BCRC's annual Act 51 operational budget of \$2.1 million, to maintain 500 road miles and 56 bridges.

The Keweenaw Bay Indian Community helped to secure some funding.

The one-time culvert is now officially a bridge, and was added to the National Bridge Inventory.

Bricks-and-no-Mortar

When faced with three bridges needing replacement in the summer of 2016, the **Midland County Road Commission** (MCRC) took a newer-to-Michigan approach that was quicker and less costly. GRS-IBS (Geotextile Reinforced Structure



in an Integrated Bridge System), nonengineers may be surprised to learn these bridges are made of precisely-stacked blocks with no mortar and include a Styrofoam layer.

MCRC managing director **Terry Palmer**, PE, had learned of the GRS bridges from a 2015 presentation by **Wayne Schoonover**, PE, then of the **Ionia County Road Commission** (ICRC). In 2014, ICRC built the first GRS bridge in Michigan.

In researching the novel bridge construction method, Palmer learned it was developed in Ohio and scheduled a visit there to inspect several such bridges.

He decided to try the project in Midland on three 36-foot wide, 22-foot long bridges, including one that posed a 20-mile detour for residents.

MCRC contracted work for the first GRS bridge on West River Road over Black Creek, which had a pre-cast concrete deck surface. Its walls are wide enough to accommodate a future walking path.

Midland's second two GRS bridges were constructed by the road commission workers on Jefferson Road over the Herner drain and on Castor Road over Carroll Creek.

Whether contractor-built or MCRC-built, the GRS-IBS bridges proved less expensive and quicker to construct than conventional bridges, Palmer said.

"While the spans were obviously not identical, we had a bridge replaced using traditional construction in 2015," Palmer said. "It cost us \$1.2 million and required 18 weeks of the road being closed."

"With the GRS approach, the contractor completed the job in 18 days for 23 percent less cost than conventional construction," he said. "Our own workers took somewhat longer due to other demands on our time, and because we were learning the process, but for 63 percent less cost."

In a GRS bridge, the base of the abutments are protected from water current by a relatively wide wedge of heavy rip-rap (mid-sized boulders). The cement blocks are stacked by hand and reinforced with layers of heavy geotextile fabric and small stones to the desired level of the roadbed.

At the top of the stacked block abutments sits styrofoam to keep the load of the deck off the wall. The deck for West River Road is made of precast concrete slabs bolted together.

The MCRC-constructed GRS bridges are the same except they have glu-lam timbers bolted together. The railing is made up of heavy timbers and normal guardrail.

"These bridges are a great way to save money," Palmer said. "If you're building it with road commission staff, you can save even more in your capital outlay budget." •••

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Award Winners SPOTLIGHT

2016 APAM and MDOT Asphalt Paving Awards

The 40th Annual Asphalt Paving Awards hosted by the Michigan Department of Transportation (MDOT) and the Asphalt Pavement Association of Michigan (APAM) were held in East Lansing this past December.

Five county road agencies took home honors for awards in various categories:

PROJECTS 2,500 TO 10,000 TONS

- → Award of Excellence: Baraga County Road Commission, for its Bellaire Road project.
- → Award of Merit: Otsego County Road Commission, for its Mt. Jack Road project.

PROJECTS 10,000 TO 30,000 TONS

→ Award of Merit: Kent County Road Commission, for its Cascade Road Resurfacing project.

URBAN STREET PROJECTS

→ Award of Excellence: Macomb County Department of Roads, for its 19 Mile Road project.

LOCAL AGENCY PROJECTS

→ Award of Merit: Charlevoix County Road Commission, for its Camp Daggett & Stolt Roads project.



Pictured left to right: Scott Swanson, Baraga County Road Commission, and Craig VanBeek, Payne & Dolan, Inc.



Pictured left to right: Ed Schmidt, Otsego County Road Commission, and Matt Miller, Payne & Dolan, Inc.

CEW Awards

Three outstanding county engineers were honored in early February at CRA's County Engineers Workshop.

URBAN ENGINEER OF THE YEAR

Ryan Minkus, PE, PTOE, Road Commission of Kalamazoo County (RCKC).

Ryan Minkus has served with RCKC since 2013, and has over 14 years experience as an engineer in the private sector. At RCKC, he oversees the stormwater program and manages the RCKC non-motorized facilities program including design and construction.

Minkus is an active member of the Kalamazoo Area Transportation Study

Technical Committee, Safety Sub-Committee and Congestion Mitigation Air Quality Sub-Committee. He also assists in the Capstone Student Design Projects at Western Michigan University.

Minkus holds a BS in Civil Engineering from MSU.



Gary Osminski, PE, Huron County Road Commission (HCRC).

Gary Osminski has been working for HCRC for 16 years, specializing in the design of sanitary of storm sewers, streets, county drains, water supply, site design and land development.

Prior to joining HCRC, Osminski worked for a small design firm before opening his own business, Ominski and Associates.

Osminski is a graduate of Michigan State University with a degree in Civil Engineering.

The American dept. The Am

PROJECT MANAGER OF THE YEAR

Roger Saxton, Roscommon County Road Commission (RCRC).

Roger Saxton is a senior engineering technician with RCRC, where he has served for 18 years.

Saxton started at RCRC as an entry-level engineering technician, and now oversees its engineering department.

He recently supervised the development of several RCRC local jobs, including a five-year project utilizing \$2 million in sewer infrastructure funding to improve roads with sanitary sewers under the pavement.





Road abandonment requirements have changed over the years

When it comes to abandoning roads in Michigan, the law has changed and may be different than current practices at some county road agencies. This topic generated several follow-up questions from the 2016 CRA Law Symposium.

During the 1960s, Michigan law allowed county road agencies to abandon and discontinue use of any county road, or part thereof, by mere resolution.

A 1961 case, *Hagel v. Ostrander* upheld that decision.

However, the law has since changed and the process for abandonment is considerably more rigorous. If uncertain, a county road agency should check with its legal counsel to ensure the agency's policies and procedures for right-of-way and road abandonment are in compliance with current law.

ROAD ABANDONMENT IN THE 21ST CENTURY

The abandonment statute changed in the mid-1990s. The law now requires county road agencies that intend to

abandon a road and rightof-way must first receive signatures from at least seven "freeholders" before the petition can be considered in a circuit court.

A "freeholder" must own the actual land on the road. A homeowner's signature would not be sufficient if he or she does not own the land that his or her property occupies.

The governing statue reads, "The board of county road commissioners shall not absolutely abandon and discontinue any highway, or part of a highway, except as provided in this section, upon the written petition of 7 or more freeholders of the township in which the road is sought to be absolutely abandoned and discontinued."

"The petition for absolutely abandoning and discontinuing a highway shall describe the road in general terms or by any name by which it is known, and if the

absolute abandonment and discontinuance of only a portion of a road is asked for, that portion shall be specified."

"The petition shall be accompanied by a true and correct list of the names and mailing addresses of the occupants of each parcel of land abutting the highway, or portion of the highway, sought to be absolutely abandoned and discontinued, which list shall be certified to under oath by 1 of the persons making or presenting the petition." – MCL 22.18 (4)

This requirement was tested and upheld in the 2013 court case, Huron Mountain Club v. Marquette County Road Commission.

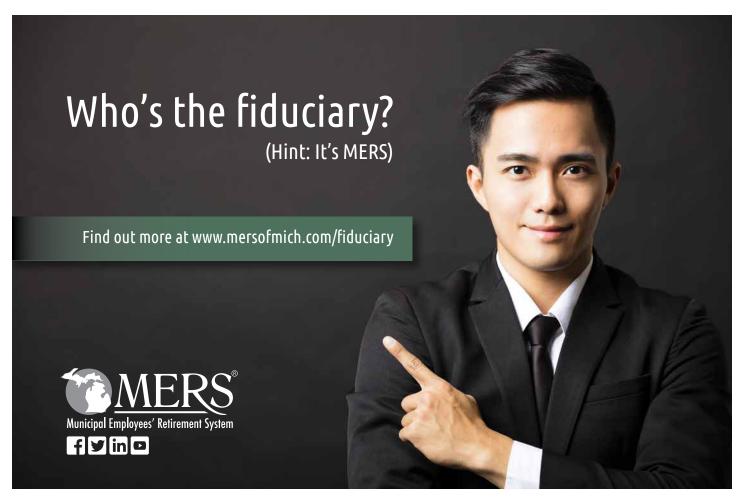
A county road agency has 20 days after receiving an abandonment petition to take action as required by the statute. If a petition contains the signatures of all of the owners of record and occupants of land abutting the road to be abandoned, except when it is

adjacent to or ends at a lake or stream, the county road agency must either grant or deny the petition without further proceedings within 20 days after receiving the petition, which it may do without conducting a public hearing.

For all other petitions the road agency must issue a written notice for a hearing on the petition stating the object of the petition and the date, time and place of the hearing.

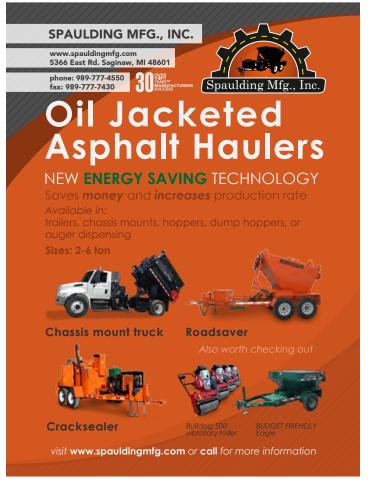
Once a road has been declared abandoned, the township in which the road is located will have first priority and MDNR has second priority to keep the property as an "ingress and egress point." If a township does not claim ownership to the road, it is divided among the land owners and becomes a private road in no way maintained by a county road agency.

More detailed questions about this process should be directed to a county road agency's legal counsel.















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LEGISLATOR PROFILE

REP. TOM LEONARDSpeaker of the House

Rep. Tom Leonard, serving the 93rd district, spent time with CRA's Deputy Director Ed Noyola talking about the challenges of OPEB liabilities, frost law compliance and what he's learned while having breakfast with his road commission.

CRA: What do you see as the biggest challenge in the current legislative session?

REP. LEONARD: The most pressing issue facing our state, and in need of fixing, is OPEB liabilities. Many local governments, road commissions and a lot of folks are facing extreme debt. These liabilities are something we have to come together on and find a way to resolve this issue. It's not going to be easy.

CRA: As Speaker of the House do you intend to continue attending breakfast meetings with your road commission?

REP. LEONARD: I tell everyone I'm representing throughout the county, the most effective form of lobbying is taking time to sit down with legislators in the district for coffee, breakfast or lunch to talk about issues. During these breakfast sessions

I learned a lot. I found out my local road commission was suffering from OPEB liabilities. We need to address OPEB issues, I intend to do that. I will do my best to attend breakfast meetings going forward.

CRA: Can you identify a few issues you learned in meeting with your road commission?

REP. LEONARD: I did not realize how quickly the prices have gone up on necessary items. Finding out how the costs of gravel, salt and equipment have increased was an eye-opener. It was a learning experience sitting down with road commissioners.

CRA: Your district is basically rural and agricultural, what are you hoping to see with the additional transportation revenues coming to your community?

REP. LEONARD: I'm happy that at least half of the new money is going to go into the three buckets of the PA51 formula. I heard loud and clear from my constituents, they do not want the funding to go to parks, mass transit or trails. They want it to go into fixing our roads. It's my hope that as much money as possible go to local roads in my district.

CRA: The County Road
Association has rebranded
itself. We are managers of
the road right-of-way. How
do you suggest the message
be delivered?

REP. LEONARD: As I mentioned earlier, there is no more effective lobbying than getting your road commission to sit down with legislators and talk. Road commissions have to take their legislators out in the district, discuss issues with them.

through an annual frost/ thaw cycle every spring. How do we get the farming community to respect the frost law and reduce their loads?

REP. LEONARD: Farmers have a unique situation. It starts with partnering among the local road commissions and farmers. The agriculture community has worked well with the environmental community; look at the MAEAP Program (Michigan Agriculture **Environmental Assurance** Program) implemented a few years ago. Maybe a similar program can be created. Enforcement is also important. There are good actors and there are a few bad ones. Those not cooperating with restrictions should be punished, and we should try working with the good actors.

While pursuing his undergraduate degree at University of Michigan, Rep. Tom Leonard knew he wanted to go to law school, but he did not plan on a career in politics.

He spent six months working as an intern for Congressman Mike Rogers and he got the bug. He became involved in grassroots efforts at the local level while interning. Working in the Attorney General's office, he was approached by Sen. Alan Cropsey and Clinton County Sheriff Wayne Kangas to run for state representative of District 93. It's his first elected position.

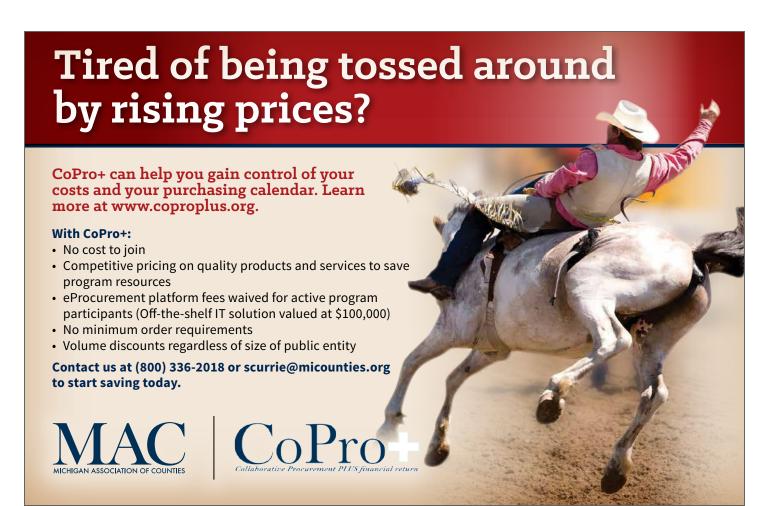
As a prosecutor, part of the criminal justice system Leonard believed needed fixing were preliminary examinations. He found this first step in the criminal justice process to have redundancies, costing the public millions of dollars in overtime pay to officers and re-victimizing the victims by having them testify again.

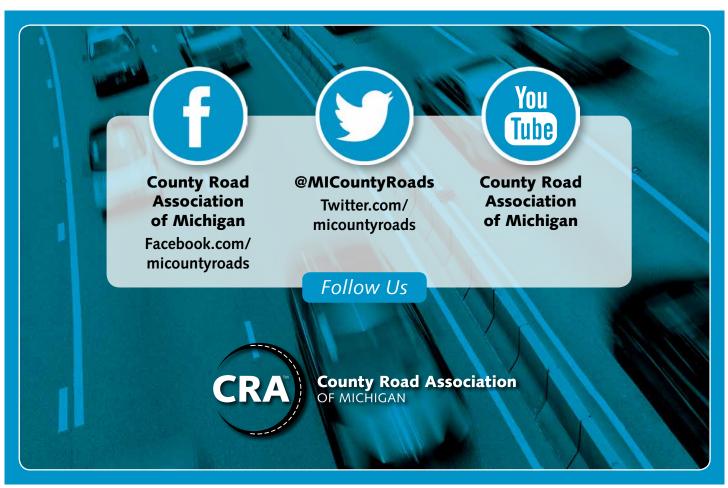
"We had victims crying in the courtroom saying 'please dismiss the case, I can't continue to be dragged into it again,'" said Leonard.

Leonard planned to fix this system when elected. He was told it would never happen. Taking the bull by the horns, Leonard brought prosecutors and judges together to talk about this issue and they reached a consensus.

"I'm a coalition builder, bringing people to the table to work on difficult issues," said Leonard.

"That's probably my proudest accomplishment so far."













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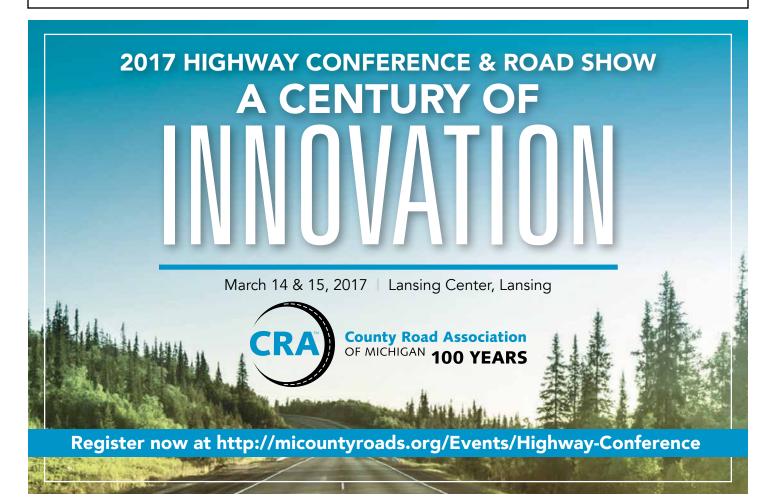
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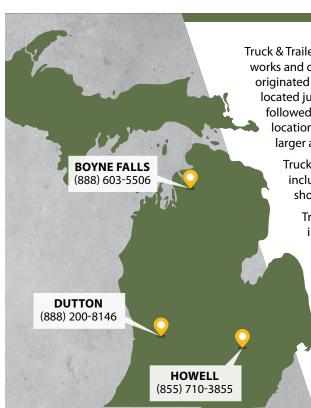












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