# Crossroads

The Quarterly Journal of the County Road Association of Michigan

Volume 2 | Issue 4 | Summer 2017



# Celebrating 100 years A look at CRA's history Of Innovation

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- → **Member Profile:** Bay County the oldest county road commission in Michigan
- Gogebic County surviving the flood of a millennium





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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 county road system including stewardship of the county road right-of-way in rural and urban Michigan.

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## **Next Publication**

The Fall 2017 issue of *Crossroads* will feature innovations and best practices in winter maintenance and operations.

Last winter saw temperatures run the gamut from sub-zero to balmy, forcing county road agencies to enact seasonal weight restrictions, lift, reenact and lift again all within a matter of weeks. What does winter 2018 hold for county road agencies?

*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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## PRESIDENT'S CORNER



As a proud member of the County Road Association for 28 years, I am honored to now serve as the organization's president. CRA has become an effective voice for our road agencies, which represent diverse geographies and populations. Together, however, we share a steadfast mission: To provide motorists with the safest, most efficient transportation networks possible.

When aligning objectives for the coming year, I am reminded that the challenges we face are not new; rather, their complexities have changed. When advocating for adequate funding, for instance, we must now address competing interests for General Fund dollars and work to remind legislators of the promise to allocate these funds to transportation beginning in 2019.

Our ongoing pledge to protect the integrity of public right-of-way for road purposes must now tackle growing demand for alternative uses. Appropriate regulation must be introduced for Distributive Antenna Systems and the telecommunication industry, and insurances must be established by other infrastructure within the ROW to accommodate improvements and maintenance of our road systems.

Safety is paramount. Currently, we must continue to work with legislators to change PA 452, insuring that employees possessing commercial driver's licenses are medically certified.

Finally, we must cultivate in Lansing a long-term perspective regarding transportation, one currently hampered by term limits. It is crucial that we maintain focus on how current issues impact our future objectives and continue to educate our representatives about these long-term needs.

While issues have become more complex, CRA is well prepared to deal with the challenges. Underscoring our collective strength is CRA's own outstanding staff, led by Denise Donohue and Ed Noyola. Their skills and knowledge help us deal with the complexities we face.

Therefore, I look forward to the year ahead, and I am eager to lead CRA's ongoing efforts to advance our collective mission.

Steven A. Warren CRA President

Managing Director

Kent County Road Commission

# CROSSROADS **EVENT** Calendar

### September 13-15

NMARC/ASMCRA "Northern/ Southern" 5th Joint Conference

Join county road agencies from across Michigan for three days of meetings, educational sessions and networking. At the Boyne Mountain Resort.

#### October 4-6

**Superintendents Seminar** 

2017 marks the 43rd annual Superintendents Seminar, featuring educational sessions, a banquet and heavy equipment trade-show at the Little River Casino & Resort in Manistee.

#### October 27

PR Workshop

Come to Mt. Pleasant for a day of learning! This year's workshop will cover innovative practices in public relations.

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

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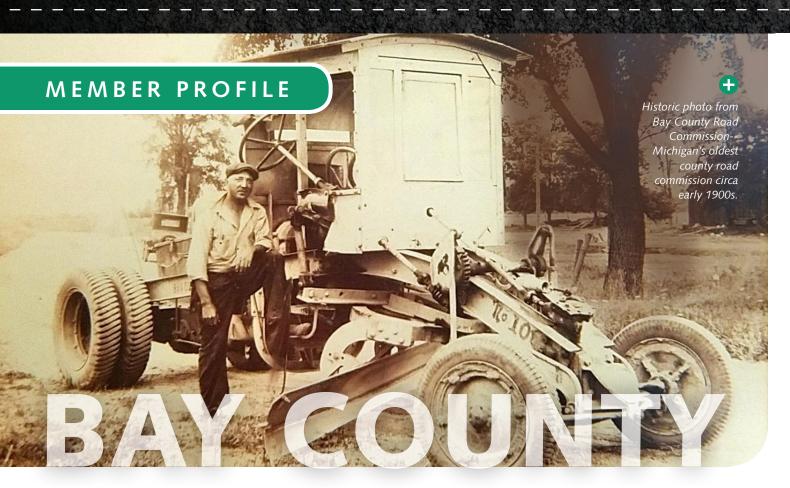








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## Michigan's Original Road Commission

## Michigan's first road commission paved way

While the County Road Association (CRA) of Michigan observes its 100th anniversary next year, many of the state's road commissions were founded well before 1918. In fact, the **Bay County Road Commission** (BCRC) was already 18 years old when CRA was established.

In 1883, the Michigan Legislature passed **PA 278** that created a Stone Road District in Bay County, representing eight townships. The law authorized a district road board to construct and maintain three stone or macademized roads. (See "Telling the Story," p. 16)

The district became the cornerstone for developing Michigan's primary and local secondary road system. Just 10 years later, the Legislature passed the County Road Act of 1893, allowing other counties to establish a county road commission and levy a road tax, upon a vote of residents.

## Bay County by definition - water

Aptly named, Bay County not only lies along the shores of the Saginaw Bay, but relies heavily on roadside ditches and county drains to transport rain and snow melt runoff to make the county suitable for residential, agricultural, commercial and industrial pursuits. Drainage is one of Bay's most significant challenges.

The Saginaw River splits Bay County in two, with the only crossings being one of four bascule bridges. This frequently causes logistical maintenance issues, especially during the shipping season.

"Bay County is one of the Great Lakes Bay region's geographic low points," explained **Cory Wale**, PE, BCRC assistant county engineer, citing frequent spring flooding and road closures. "With only 36 feet of fall from west to east over a 24-mile run across the county, Bay County is an extremely flat landscape, which results in drainage problems."

BCRC is using ESRI's® GIS Software to map all storm water assets including culverts, ditches, storm sewers and catch basins. The goal is to become more proactive and less reactive to drainage, Wale said.

Bay County is using a Stormwater, Asset Management, and Wastewater (SAW) Grant from the MDEQ to begin this effort. In 2017, data collection is being handled by seven college interns trained in GIS beginning a 10-year mapping endeavor.

## Asset management – good roads or gravel

BCRC has spent much time developing its road surface Asset Management Plan. Michigan Technological University reports over 85 percent of Michigan county road agencies are using asset management principles.

**Jim Lillo**, PE, BCRC engineer-manager is a big proponent of asset management. He and his engineering staff completed

## JUST THE **Facts:**

## **Bay County Road Commission**

Office headquarters: Kawkawlin, Michigan Staff: 53 full time; 20 seasonal

No. of commissioners: 3 (elected)

Miles of

paved roads: 875 = 367 primary + 508 local

unpaved roads: 161 = 0 primary + 161 local

**MDOT contract:** Yes (435 lane miles) No. of bridges: 83

**Annual budget:** \$7.6 million

(FY 2016-17)

41" average

Local revenue: \$2.1 million Annual snowfall:

**BCRC** established: 1899

No. of garages:

Office built: 1990

Also manages: Bay County Department of Water and Sewer.

FUN FACT: The Bay County Road Commission has found that very early gravel roads used a chalk-like stone to create a "light line" along the edge of the darker gravel to assist the driver in determining where the travel surface was during night driving. Essentially creating the first white or fog lines in Bay County.

Road under construction in Bay County.

the plan using Roadsoft's® pavement management strategy evaluation and optimization module. This module has allowed the BCRC to compare many different scenarios with regard to funding and treatment types.

Bay has been PASER rating its roads since the 1990s, said Burt Tomczak, BCRC's longtime civil engineering

technician, rating federal-aid roads every year, non-federal-aid primary roads every other year, and its local roads every three years.

BCRC finished inspecting all 10' to 20' diameter culverts last year with five identified as failing.

"To bring many of these failing culverts up to modern structural and environmental requirements, will be very costly," Wale said. "This year alone we may need to divert \$1.1 million from road projects to repair culverts, and the failures are going to keep coming."

Asset management data may indicate that bridges should be closed or that a failed pavement surface should be returned to gravel.

The first time BCRC returned roads to gravel, was in 2013, when four miles were pulverized in a rural community with few residential properties.

BCRC is utilizing many tons of cold patch and other resources to hold very poor roads together and provide a reasonably safe driving surface. There becomes a point when it is fiscally irresponsible to throw good public money at bad roads, Wale said.

Since 2014, BCRC returned another 31 miles to gravel and is likely to pulverize more failed pavement this year.

## Implementing new technologies

Recent technology innovations at the BCRC include the implementation of the use of Bid Express®.

BidExpress® makes the bid process paperless and more efficient, eliminating advertising, printing and copying tasks.

The BCRC also began using Leica GPS surveying equipment last summer, which has improved efficiency and accuracy on excavation sites, pipe installation, road construction and other projects.

This year alone we may need to divert \$1.1 million from road projects to repair culverts, and the failures are going to keep coming."

## BCRC, townships and \$\$

BCRC reports its primary roads and bridges that are not eligible for federal aid and not eligible for local township funds, are in the worst condition.

"Overall, the BCRC's primary roads rank a full point lower on the 10-point PASER rating system than the local secondary road system,"Lillo said. "This reflects the result of flat state funding over the last decade-plus."

BCRC will conduct capital preventive maintenance on 70 miles of the primary system this year, and is making \$20,000 of new road funds available to each of its 14 townships.

The BCRC is communicating new road funding projects via road signs, notices on its website, Facebook and Twitter accounts.

"From the day the Bay County Road Commission was established to the present, our mission has been the same," said Lillo. "Striving to maintain a county road system that is safe and convenient for public travel, our work being a cooperative effort between our employees, residents, townships and all other governmental and private entities." ---

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## LEGISLATOR PROFILE

## **REP. TRISTON COLE**

Chair of House Transportation and Infrastructure Committee, House of Representatives Assistant Majority Floor Leader

Rep. Triston Cole, serving the 105th district, connected with CRA's Deputy Director Ed Noyola to share his vision for the spending of additional transportation revenue, the proper use of right-of-ways and the challenges of building relationships and working with state departments in casting policy votes. As a former truck driver, Rep. Cole has a unique perspective on the roads.

CRA: How has connecting with road commissions helped you remain up-to-date on road and transportation issues?

REP. COLE: I have learned the accumulated effects of one project, replacing culverts for example, can generate an exponential increase in problems. If one issue is not addressed immediately, the scope of the problem may expand rapidly.

CRA: In your district, what are you hoping to see with the additional transportation revenues coming to your community?

**REP COLE:** I hope to see the additional revenues go straight to fixing our roads. I would also like to see a funding match ratio that is fairer to our townships.

CRA: The County Road
Association has recently
expanded its vision for county
road agencies to encompass
road right-of-ways and all
it entails, in addition to
the management of roads
and bridges. As the newly
appointed Chair of the House
Transportation Committee,
with your first-hand previous
experience as a professional
driver, what are your thoughts

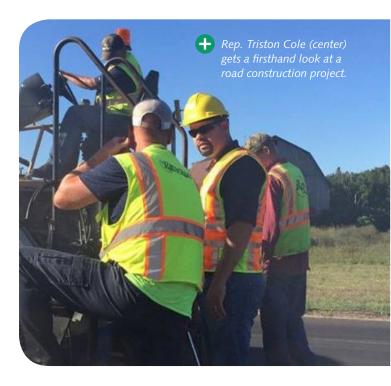
on this additional focus for the CRA?

REP COLE: I want to make sure the right-of-way is not reserved for the use of single-user groups. The road right-of-way is first and foremost for the safety of users. I would like to see a great collaboration of state, county and township officials. The local elected officials need to be advocates for the private property rights.

Additionally, I believe that we need to be considering future forms of transportation such as autonomous vehicles when planning out the right-of-ways, additionally conduit needs to be laid to provide access to future utilities such as cable lines. If the conduit is laid and access points provided, the right-of-way only needs to be torn up the one time.

CRA: Looking at the big picture across the state, what do you see as the biggest priorities and challenges for road projects this year?

**REP COLE:** I see the biggest priority as fixing our roads. I want to show people the increased revenue is actually going to asphalt and concrete.



Attending local Farm Bureau meetings as a student prompted Rep. Triston Cole's interest in public service. This involvement led him to become chair of the Antrim County Farm Bureau, where he served 12 years, and eventually chair of the county's Republican Party.

Following his passion for the outdoors, Rep. Cole spent 15 years in the hunting and guiding industry. In 2000, he and his wife started a family farm, becoming small-business owners providing fruits, vegetables and shiitake mushrooms for sale locally. Rep. Cole also spent time as a semi-truck driver and agriculture teacher.

In 2014, he was elected State Representative for the 105th district. Rep. Cole is particularly proud of being elected by his colleagues as Assistant Floor Leader and his appointment to chair the House Committee on Transportation and Infrastructure.

"Building relationships with 110 people from a variety of backgrounds is a challenge," said Rep. Cole. "Working with state departments is also demanding due to the need to absorb a large volume of information before casting a vote on a policy that may affect them."

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- Wayne (6)



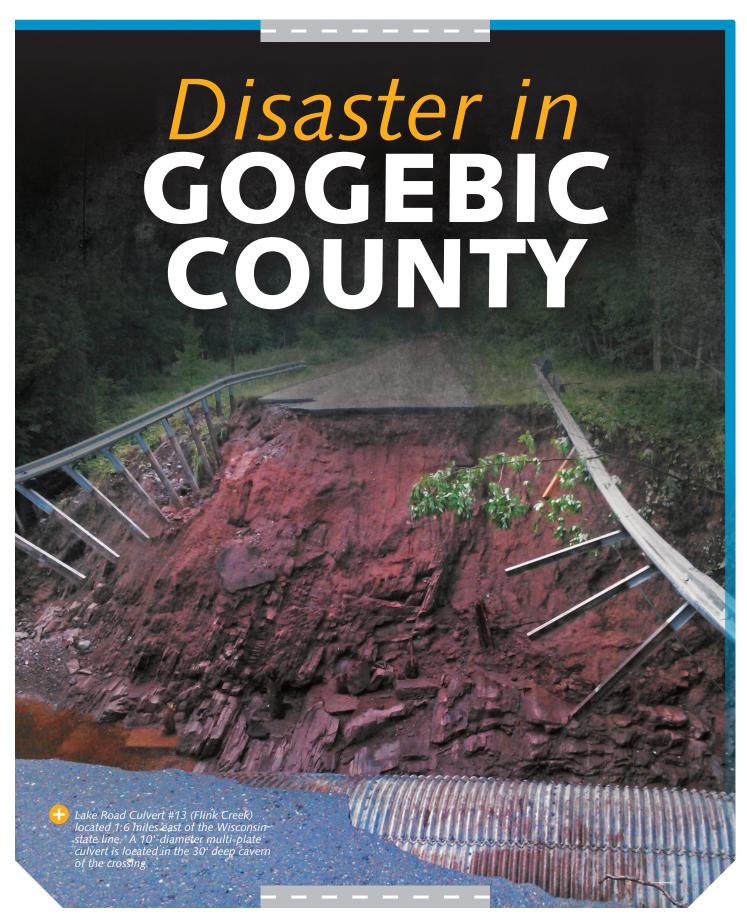
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## Recovering from a 1-in-1,000-year flood

The Monday of July 11, 2016, started out as a normal summer day. The afternoon **Gogebic County Road Commission** board meeting had wrapped up that sunny afternoon without event. The board was wrestling with the site location for its new garage, as well as other updates about the construction schedule for the summer. Manager **Darren Pionk**, PE, had gone home for the night when the predicted rainstorm moved in.

For the next four hours over 12 inches of rain fell on northern Gogebic County. A faster rate of rain than during Hurricane Katrina, Pionk later noted.

Calls began coming in from residents on Lake Road (County Road 505), which runs along Lake Superior, that parts of the road were washing out.

Gogebic's road foreman, **Scott Maki**, headed out toward Little Girl's Point, a scenic and popular county park along CR 505. Twenty minutes later Maki called Pionk and said, "You won't believe what's happening – we're losing the road." Maki had almost been swept out to Lake Superior, prompting Pionk to observe the damage himself.

Rain poured down, and as he neared CR 505 from the Wisconsin side Pionk saw water rushing over the top of the 24" tall guardrail. The land in this location slopes steeply down toward Lake Superior, with many ravines draining into the Great Lake.

Clearly, portions of scenic Lake Road – over an eight-mile stretch - were in jeopardy of washing away. Things quickly went from bad to worse.

Sheriff Pete Matonich, who was heading to the same location, called Pionk to determine the course of action for residents along the roadway. They planned to meet on higher ground on the roadway that connected to Wisconsin.

Pionk was following the sheriff when he noticed the patrol truck's lights disappear.

Jumping out of his truck in torrential rain, Pionk found Matonich's truck hood-down into a ravine after 30 feet of roadway caved in. There was no movement in the pick-up for a few long moments.

Then Sheriff Matonich opened the passenger side door as water poured in around the cab of the truck. With the stream turning into a river that was surging out to Lake Superior, Pionk dropped down in the ravine and grabbed onto the sheriff's arm to help pull him to safety.

"I don't know how I did it," said Pionk, who puts his own weight at 180 pounds. "It's one of those things you don't think about. You just do." He helped pull the sheriff up onto the intact pavement. About 20 minutes later, the patrol truck was washed away downstream.

A new problem dawned on the two men – they were now marooned on a stretch of road and could not turn back. Most certainly there were other washedout bridges and culverts in the road ahead. They had minimal cell service, no twoway radios, and were soaked by the torrential downpour.

They located an outbuilding and prepared to spend the night along with several other residents stranded in the area.

"The funny thing about this storm is there was no wind, no thunder or lightning and

Lake Superior wasn't particularly rough," Pionk said. "All the damage done was from the large volume of rain flowing off the mainland toward Lake Superior."

In eastern Gogebic County, another storm cell created a F-1 tornado that night.

### Disaster declaration

Damage to the area, as it turns out, was substantial. There were 30 washed-out bridges and culverts along Lake Road and other local roads in the area. Access was shut off to the area, which serves 80-100 residents, many of them in year-round homes.

"We had one large, three-year-old culvert, which had been sized to handle a 500-year flood event washed out by this storm," Pionk said. "It was a rain of biblical proportions, for sure."

In another area, the centerline pavement of the road was visible half a football field down the creek heading to Lake Superior. Pionk said biologists from the Michigan Department of Environmental Quality were astonished by the size of sediment transported down the streams and deposited. Some sediment was the size of boulders. The intensity and duration of the storm exceeded the 1,000-year storm event.



While the event didn't make much news in downstate Michigan, it captured the attention of Gov. Rick Snyder's office, which was asked to declare Gogebic County a disaster zone. This allowed the National Guard to come in and assist with rebuilding the transportation infrastructure.

## Rebuilding before winter

Pionk was nearly overwhelmed by the volume of work needed to restore the road system. He worked endless days for the next several months.

Over 30,000 yards of stone and gravel were dumped into the chasms and breaks in CR 505 to make some parts drivable within a two-week period. The rural setting of the disaster area was a logistical nightmare as only one access road was available for crews, material and equipment.

Pionk knew that winter in the western UP can begin by mid-October. The nearly-20 compromised stream crossings that were making Lake Road passable in summer would never hold up to winter plowing along Lake Superior.

Pionk figured he had 12 weeks to gain cooperation from several government entities, numerous homeowners, take bids, receive materials and construct as many as 30 new culverts and bridges.

And then there was the matter of funding. "This was a \$5.5 million catastrophe for Gogebic County. Simply to repair this one road would take all our discretionary road spending for the next 10 years," Pionk said.

He immediately cancelled all work planned for the rest of the summer, and began preparing estimates of the work needed.

One of the first jobs was getting MDOT and the Federal Highway Administration to Gogebic County to walk the road first-hand and see the damage. Assessing the damage and preparing detailed estimates of each site was needed to see if Emergency Relief Funding would be accessible.

Although 30 bridges and culverts were irreparably damaged, in the end only 18 qualified for federal aid. The other culverts were not federal aid-eligible because they

were on the local road system and the damage to them didn't meet the threshold of FEMA (although Wisconsin counties were approved by FEMA for the same storm).

## **MDOT** cooperation

Two factors really helped get the roads restored before winter – three, considering that soil-freezing temperatures held off until mid-November in 2016.

The first, was MDOT's willingness to allow a local bid – a very unusual situation. Pionk had identified qualified companies that had or could get the needed materials, equipment and manpower within a matter of weeks, allowing contractors to be working by early fall.

One other potential hang-up was the MDEQ permitting and Army Corp of Engineering requirements that needed permit issuance before the bids could be let.

"Permitting normally is a several-month process, but with the cooperation of MDEQ and the Corp, we received approvals for all culverts within a few weeks following their site visit," Pionk said.

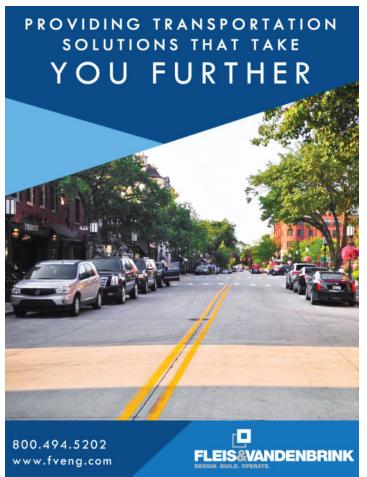
In the end, all landowners granted easement permission, FHWA approved the projects, the state agencies came together to issue the permits in a timely fashion, and 10 CR 505 sites were constructed in a permanent manner.

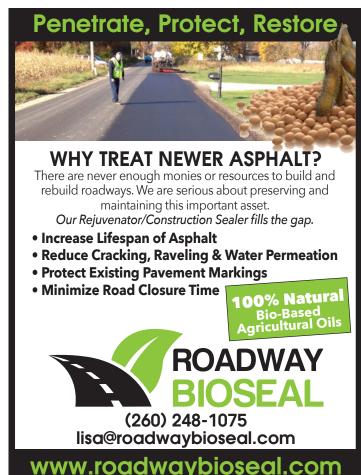
By press time in April, Pionk was beginning to work on 10 more sites, mostly culvert replacements, with final paving and restoration of all sites by October. The repairs have been funded by an emergency loan from the State Infrastructure Bank (SIB), and are being reimbursed as the federal grant dollars are paid for work completed.

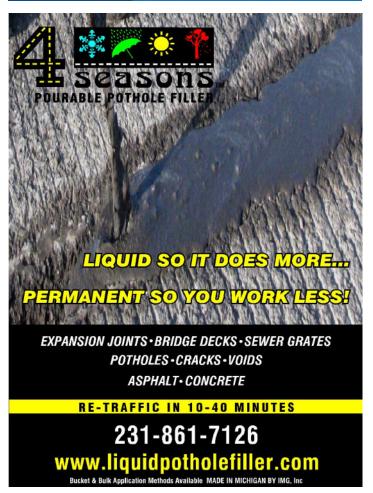
"I've never experienced anything like this in my career as a civil engineer, and I hope to never experience it again," Pionk said. "Nevertheless, it was a good exercise in pulling this community together and solving a crisis.

Lake Road Culvert #27 located 4 miles east of Wisconsin State Line. Construction of new box culvert with 15 feet high wing walls. Property owner reluctant to sell additional easement to GCRC therefore retaining walls placed at the property line.











## A Century of Innovation



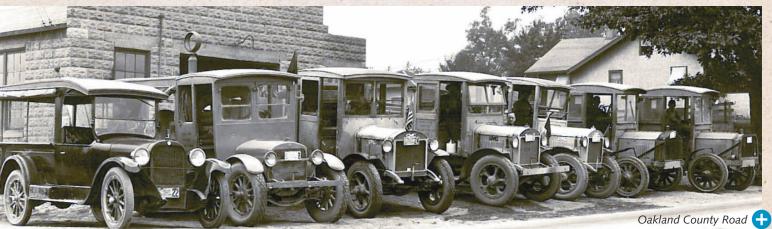








in Washtenaw County.



Commission garage in 1925.





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THE HISTORY OF MICHIGAN COUNTY ROAD AGENCIES:

# Telling the Story of How Far We've Come

Excerpted and rephrased from A History of Michigan Roads, co-authored by CRA board secretary-treasurer Dorothy Pohl, CPA, also managing director/clerk of the Ionia County Road commission.

One hundred and fourteen years ago this summer, the call went out. All able-bodied men were to set aside June 13 for the first statewide Road Bee Day. They were to bring their tools, come outside and work on the public roads near in their communities.

Filling ruts and washouts, tamping down the dirt, using stone in some places – these amateur "engineers" and manual labor were the backbone of Michigan's local road system in the early 20th century.

## The birthplace of county road commissions

Perhaps surprisingly, the state's first county road commission was developed in Bay County, in the harbor of Michigan's "thumb."

In PA 278 of 1883, the Bay County Act, the Michigan Legislature created the Stone Road District which was comprised of eight townships that were given authority to collect funds for and construct roads.

They built stone or macadamized roads to serve the vibrant lumbering and agriculture industries, with three main roads being their statutory mandate. (See Member Profile: Bay County, pages 6-8, in this issue.)

Administered by a three-member board, the Stone Road District provided several advantages over the previous structure of road oversight. Expanding the road district in size made it possible to create highway plans for larger areas, creating a more efficient road commission.

## Evolving success to statewide network of road commissions

The Stone Road District was such a success, that 10 years later in 1893 the County Road Act passed the Legislature, paving the way for a successful county-wide vote to form road commissions in other counties.

Progress was slow at first, but by 1916, there were 59 Michigan counties that had voted to create county

road commissions. Two years later, the **Michigan Association of Road Commissioners and Engineers**would be formed, under president W.P. Rosso, Highway
Commissioner for Macomb County. This association
would later become the **County Road Association of Michigan**.

By 1931, all 83 counties in the state of Michigan had adopted county road commissions. Facing economic hardship from the Great Depression, the Michigan Legislature passed the McNitt Act (PA 130, 1931) to provide property tax relief.

As a result, the McNitt Act shifted administration of local roads from townships to the 83 counties. In 1938, a constitutional amendment was approved by Michigan voters, requiring that motor vehicle tax funds be used exclusively for highway purposes.

PA 51 of 1951 further cemented the structure of a state, county and municipal road system, as established in 1931. Act 51 also created the Motor Vehicle Highway Fund, the precursor to the Michigan Transportation Fund.

As the County Road Association of Michigan celebrates its 100th anniversary, we can all rejoice that June 13 will be a regular Tuesday. And that the care of Michigan's 90,000 miles of local roads is in the hands of professional engineers, skilled road workers and full-time, dedicated financial and administrative professionals at Michigan's 83 county road commissions and departments.

## **Editor's Note:**

For more on the history of Michigan roads, read A History of Roads by Dorothy Pohl, Ionia County Road Commission, and Norman Brown, MDOT. The article may be found at michiganhighways.org/history.html.

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# IMPRESS AWARDS

County road agencies continue to roll out new ideas and creative communications, which were on display at the 2017 Highway Conference. Thought-provoking ideas from smartphone apps to new equipment for innovative chip-sealing techniques took home IMPRESS Awards.

Judging for the 2016 IMPRESS Awards was done by CRA's PR Committee, comprised of managers, communicators and engineers, giving each submission a thorough evaluation using a standardized set of criteria.

All nomination forms, narratives and supporting materials can once again be found in My CRA, the "membersonly" side of CRA's website, under "IMPRESS Corner."

CRA would like to thank everyone who nominated something from a county road agency, and for sharing best practices!

#### PEOPLE'S CHOICE

- → Roscommon County Road Commission – Regional Uniform Permit Fees
- → Roscommon County Road Commission – Regional Equipment Sharing

#### **COMMUNICATIONS**

- → Grand Traverse County Road Commission – Virtual Road Tour. Who needs a bus when you've got video?
- → Road Commission of Kalamazoo County – RCKC Connect. Using technology to connect and communicate with your community.
- Kalkaska County Road Commission

   "From Servants to Celebrities."

   Giving road agency employees the recognition they deserve.
- Midland County Road Commission

   "Honest, Open and Two-Way."

   Revamped communications to be more transparent.
- → Roscommon County Road Commission – Regional Uniform Permit Fees. Regionalization of permit fees creates a stronger, more cohesive service in northeast Michigan.
- → Washtenaw County Road Commission – Roundabout Education. Public education is key for acceptance of new and efficient construction practices.
- → Washtenaw County Road
  Commission Road Millage
  Outreach. Targeted communications
  helped pass an important road
  millage.
- → Washtenaw County Road Commission – "Pothole? There's an app for that." New service request and reporting tool for drivers.

#### **OPERATIONS**

- → Grand Traverse County Road
  Commission Rhino Lining Wash Bay
  Columns. A simple coating can save
  thousands in maintenance.
- Ingham County Road Department

   Chip-Sealing Emulsion Tail Drag

   System. Still improving on the chipseal process.
- → Road Commission of Kalamazoo County – Pneumatic Tire Roller. Innovations in equipment increase productivity.
- → Montcalm County Road Commission and Kent County Road Commission – Local Federal Aid Exchange Program. Mutually beneficial by "exchanging" federal aid for unrestricted funds.
- → Newaygo County Road Commission and Montcalm County Road Commission – "Getting Ahead of the Curve." Planning and executing ahead of the increase in road funding to get the best return on tax dollars.
- → Road Commission for Oakland County – Stormwater Permit Outfall Collection. Using interns and technology to save time and money.
- → Roscommon County Road

  Commission Regional Equipment

  Sharing. Working with neighbors to get the job done with less.
- → Washtenaw County Road Commission – Safety Committee Activities. Making safety engaging and interesting.























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# Timber bridges:

While many new road and bridge materials are described as ultra-thin or superpave, having carbon fibers or polymers, one of the "newest" trends in local bridges is plain, old-fashioned wood. More accurately, timber bridges made of treated Douglas fir.

Timber bridges, trimmed out with modern safety features including crash-tested guardrail and all modern AASHTO load requirements, are popular on many local roads due to lower costs and maintenance, and the fact that county road workers can assemble them with minimal outside help.

The **Emmet County Road Commission** (ECRC) is one of the leaders in installing the appealing timber bridges.

engineer-manager **Brian Gutowski**, PE, who has led the ECRC for 22 years, was approached by the Huron Pines Nature Conservancy in 2000. The regional conservancy, based in Gaylord, was studying the culverts and fish habitat throughout the Burt Lake Watershed, which included parts of Emmet County.

The conservancy was aware of ECRC planned work over Minnehaha Creek, which is a premier trout stream once touted by author Ernest Hemingway. The conservancy identified several funding sources so that an improperly-sized culvert could be replaced with a bridge, while ECRC was working on Mitchell Road.

Huron Pines had a particular interest in the timber bridges, which blend well in scenic or wooded areas.

"They came to us with a plan to supply \$280,000 to build the timber bridge," Gutowski said. "Their sources are grants from US Fish & Wildlife, the USDA Natural Resources Conservation Service and private grants from several foundations." The road commission's labor meets the 20 percent match required by the federal grants.

The Conservation Resource Alliance started studying the Maple River Watershed in 2007 and also was interested in timber bridges.



## The cost-effective retro-bridge?

ECRC had six workers learn how to put up the bridge from distributor Bob Krenn, Krenn Timber Bridges.

"We have to hire a contractor to drive the pilings," Gutowski said. "But from there it's like putting together a giant Tinker Toy® kit."

Emmet has a crew of six that has become proficient at installing timber bridges, having erected eight since 2006 as part of a regional plan to replace undersized culverts to improve fish passage. The bridges were entirely paid for by Huron Pines, Conservation Resource Alliance and Tip of the Mitt Watershed Council, less the road commission's 20 percent matching funds of labor.

Timber bridges have a lifespan of 50 years or longer, according to Krenn, with minimal maintenance and resistance to freeze-thaw cycles.

"They're also very cost effective," Gutowski said. A 45 to 60 foot threespan timber bridge will cost \$400,000 to \$500,000, he said. A standard concrete bridge over the same span is likely to be \$800,000 to \$1 million, he said

Savings are typically 25-50 percent over traditional bridge options, Krenn added, noting that timber bridges can be designed for roads with almost any average daily vehicle traffic. Comparing approximate costs to build a 45' to 60' bridge

**TIMBER** \$400,000 to \$500,000 STANDARD CONCRETE

\$800,000 to \$1 million

Response from the public has been mostly positive, Gutowski said, although there is some complaint about the petroleum-ish smell from the timber preservative. It fades over time, of course.

Krenn notes that the Douglas fir timbers used in this style of bridge are harvested in Oregon or Washington. The coastal climate is optimal for the firs, which produce more consistent growth rings leading to more consistent strength tolerances, Krenn said.

## **Erosion from undersized** culverts

When culverts beneath a road become clogged or deteriorate over time, or if the water flow changes upstream, the culvert may have become undersized for current needs.

The result is that water pushes through with more force, which can result in more erosion

on the downstream side of the culvert. Fast-moving water can also thwart the ability of trout and other fish to get upstream to spawn – which has significant implications for Michigan's recreational fishing and ecosystem.

"We are now having the Native American

Barry County Road Commission's 42-foot single span timber bridge. community approach the **Emmet County Road Commission** with funds and grants to install timber bridges in the area," Gutowski said.

## Installing its first timber bridge

Erosion and a deteriorating pair of 8-foot culverts under McKeown Road at Cedar Creek led the **Barry County Road Commission** (BCRC) to install the longest single-span timber bridge currently possible, stretching 42 feet across Cedar Creek in 2016.

BCRC was approached by the Barry Conservation District in 2015, which had obtained a grant from the US Fisheries & Wildlife Service to restore the bridge and improve trout migration up and down the river.

BCRC hired a contractor to drive pilings, and supplied its trucks and crews to install the bridge, said **Bradley Lamberg**, PE, BCRC managing director.

"It was a good deal for our road commission," Lamberg said. The bridge cost \$350,000, including removal of the culverts, site preparation and driving the pilings.

While staff learned how to assemble the timber bridge package, they also learned how to cure swimmer's itch, Lamberg chuckled. "The water wasn't the cleanest, but our workers stuck it out. Our work on this project has slowed down the flow of water, and improved the ecosystem for the fish. It was a winwin for us."



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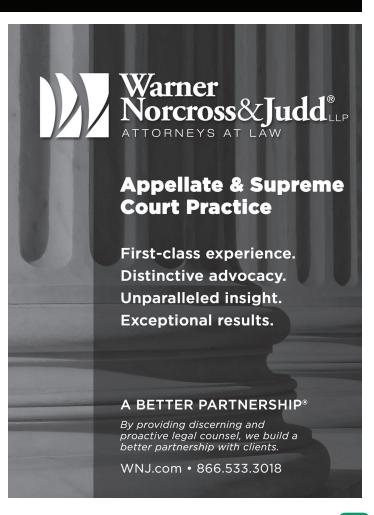


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## Key transitions at...

## Road Commissions and Departments

**Bryan Santo** is now serving as the director of roads at the **Macomb County Department of Roads**.

**Lawrence Young** is the deputy director of the **Wayne Department of Public Services**.

**Kate Gaiser** is the board secretary and administrative assistant at the **Saginaw County Road Commission**.

## The following commissioners were recently elected or appointed:

James Rybicki, Allegan County Road Commission

Thomas Spaulding, Alpena County Road Commission

Pete Hoogerhyde, Antrim County Road Commission

Phillip Hoyt, Benzie County Road Commission

Steve Weigt, Branch County Road Commission

Jake W. Smith, Calhoun County Road Department

Vic Potter and Gary Tompkins, Calhoun County Road Department

Sandra Seanor, Cass County Road Commission

**Dennis L. Way, Charlevoix County Road Commission** 

Henry Ginop and David Brandt, Cheboygan County Road Commission

Timothy C. Haskin, Clare County Road Commission

**Kevin Patrick Holt, Clinton County Road Commission** 

Jerry L. Frazier, Eaton County Road Commission

Steve Cameron, Gladwin County Road Commission

Kevin Havstein, Daniel Peterson and John Matonich, Gogebic County Road Commission

Jason Gillman, Grand Traverse County Road Commission

Gene Londo, Houghton County Road Commission

Mark Grebner and Ryan Sebolt, Ingham County Road Department

Robert Dunton, Ionia County Road Commission

Sue Clisch, Iron County Road Commission

Dr. Allan Tompkins, Jackson County Department of Transportation

David Medema, Kent County Road Commission

Gary Truxton, Lake County Road Commission

Les Nichols, Lapeer County Road Commission

Alan Kloha, Midland County Road Commission

**Greg W. Stewart, Monroe County Road Commission** 

Alan Johnson, Osceola County Road Commission

Troy Huff, Otsego County Road Commission

Gary Summers, Road Commission for Crawford County

David Pawloski and Larry Stehouwer, Road Commission of Kalamazoo County

Brian Vaughn and John Earley, Roscommon County Road Commission

Randy Lund and Keith
Rochefort, Schoolcraft County
Road Commission

Rodney Chupp, St. Joseph County Road Commission

Jim Leggett and Dean Jurik, Wexford County Road Commission

#### Mile Marker

**Bob Hoepfner**, PE, retired in January 2017 as director, after more than 42 years at the **Macomb County Department of Roads**.

Jennifer Brieske is retiring from the Saginaw County Road Commission after 16 years of service as administrative assistant/ board secretary.

**Joyce Randall** retired from the **Mecosta County Road Commission** after 20 years as managing director.

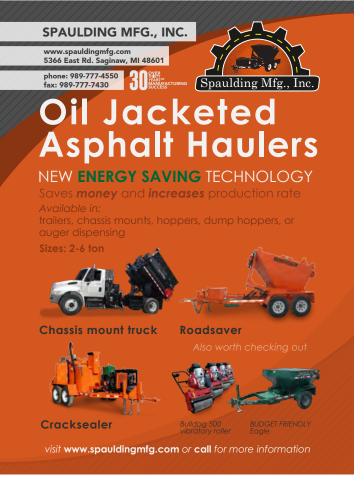
Louis Cscoksy retired from the Berrien County Road Commission after 3 years and seven months as managing director.

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## EDITOR'S NOTE



2017 is a special year for CRA. We begin observance of 100 years of the Association. The longevity of this organization speaks volumes about our members, and your ability to be adaptable, motivated and responsive over the last century.

Statistics show 96 percent of businesses fail within 10 years. While CRA isn't a traditional for-profit company, it has faced many obstacles over the years and has survived time and time again.

From nearly the beginning, CRA has been serving the residents of Michigan with commitment, passion and dedication.

We cannot forget to acknowledge and thank our Associate Members whether you have supported CRA for one year, five years or longer.

While we are looking back, we must also be looking ahead. In the 21st century, technology such as self-driving vehicles will continue to change our everyday lives. County road agencies must stay at the forefront of new developments and how their integration will affect the local transportation network.

May 2016 marks my first complete year at CRA. Over the past year, I have learned so much working in communications about local roads, but I know there is still so much more I can learn.

I look forward to working with our members in 2017 and beyond.

Christina Strong
Editor and Communication Manager

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## Highway Conference by the numbers

The 2017 Highway Conference has officially come and gone! It was the largest Highway Conference on record. By the numbers ....

**Total attendees:** 

780

"Road Show" Exhibitors:

123

**Breakout Sessions:** 

23

CEU credits earned:

77

**IMPRESS Awards made:** 

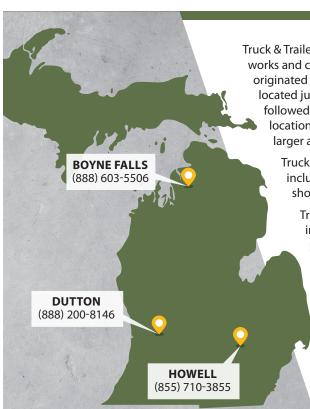
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Thanks to everyone who attended! See you in 2018!

> Save the date for the 2018 Highway Conference March 13-15, 2018!







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