ELECTRIFYING QUARRIES
Test site gets underway

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When a deal seems to good to be true, it usually is.
That piece of advice was being buried into my brain by my parents even when I was a wee lad at a convenience store trying to decide which chocolate bar I should buy.
That’s not to say I always followed that advice.
I remember buying my first car on my own. At the time I worked beside a car park, and I spent three weeks worth of my lunch hours test driving cars and comparing costs. Having just graduated university and being near broke at the time, cost ended up winning over everything else. I purchased the cheapest option on the market. I won’t name the brand and model, but there was definitely a good reason it was priced $9,000 cheaper than the next cheapest option.
All I can say is thank the Gods for my warranty!
In the first three years I owned the vehicle, I needed to replace the gear shifter box three times; the starter, the carburetor; and the driver-side door lock and a manual window handle, both of which just fell off. Of course, the warranty didn’t cover the air conditioner breaking just after the three-year mark; the key constantly getting jammed; or any of the other various parts that failed within the first five years of ownership.
Imagine my surprise to learn that it was rated the second-most dangerous vehicle manufactured that year and that it held almost no resale value!
Low cost really isn’t any assurance of quality when it comes to a purchase, which brings me to the tendering process still used for the awarding of contracts today for many of Canada’s infrastructure projects.
I’ll be honest, I’ve never agreed with awarding contracts based almost entire-ly on low bids. It has always felt like an unfair squeeze on contractors who place quality work as their No. 1 priority, while potentially creating “savings” at the expense of quality.
So I was pleasantly surprised when I read about the bidding evaluation process changing in Alberta to a 60/40 split. Updating the evaluation process to a 60-per-cent emphasis on cost (obviously still very important) and 40 per cent towards performance measures makes far more sense to me. After all, if a contractor doesn’t work well with municipalities, or is known to poorly manage its maintenance activities (salting, sanding, pothole patching, vegetation control, etc.), that should be a strike against them when attempting to secure contracts.
Will this new process increase costs for road maintenance? Maybe, but maybe not.
After all, if a municipality needs to shell out extra dollars to ensure its roads are being properly maintained - after a contract has already been awarded - that will likely not come out to being a cheaper option.
This option should work in favour of the more reputable contractors across Alberta, allowing them to secure more contracts at fair rates. That’s not to say all the lowest bidders don’t create quality work, I’m sure some still consider quality a top priority, but forcing contractors to continuously undercut each other in a race to the bottom is not a sound plan for ensuring our infrastructure is properly built and maintained.
I imagine all of the provinces and territories still focused almost entirely on low bids, as well as the federal government and various municipalities, will be keeping a close eye on how this updated process works out for Alberta.
THE EVOLUTION OF INNOVATION.
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Aecon approved to rejoin Gordie Howe International Bridge project

Aecon Group has announced that it has received approval to rejoin Bridging North America, the team chosen to design, build, finance, operate and maintain the Gordie Howe International Bridge through a public-private partnership. The company will rejoin the members of the consortium: ACS Infrastructure Canada Inc., Dragados Canada Inc. and Fluor Canada.

The Windsor-Detroit Bridge Authority (WDBA) approved Aecon rejoining the consortium following a “thorough review” on their part, according to a recent statement from Aecon Group Inc.

Aecon had previously backed out of Bridging North America’s bidding for the project back in May, when the company was trying to obtain federal approval for a $1.5-billion takeover of the company by a Chinese state-owned company.

The Gordie Howe International Bridge will be a new six-lane, cable-stayed international bridge that will provide direct connectivity to existing highway networks in Windsor, Ont. and Detroit, Mich.

Low bid to no longer secure win in Alberta

The Government of Alberta has announced that a new bidding evaluation process will be used when reviewing proposed bids. The new bidding process was mentioned in a news release announcing that the province had issued requests for proposals for maintenance operations on Deerfoot Trail in Calgary – the current contract will expire on July 31, 2019. Going forward, bids will be evaluated “according to updated criteria with renewed focus on performance and outcomes.”

The Government of Alberta, when previously evaluating bids, had placed 95 per cent emphasis on cost and five per cent on technical components. The new evaluation model will be much closer to even split, with 60 per cent of the emphasis going towards cost, and 40 per cent towards performance measures, including the bidder’s ability to deliver on maintenance activities such as snowplowing, salting and sanding for snow and ice control; pothole patching; mowing and vegetation control in highway rights-of-way; and a bidder’s ability to work with municipalities.

In addition to the Deerfoot Trail maintenance contract, the Government of Alberta will be tendering 10 other highway maintenance contracts across Alberta in late 2018. The new highway maintenance contracts will also have a seven-year lifespan with a possible three-year extension if expectations for contractor performance have been met.

McCloskey acquires Lippmann – Milwaukee

McCloskey International has announced that it has acquired Lippmann-Milwaukee Inc., a privately held international company that manufacturers aggregate crushing equipment for processing applications. The products are sold across the aggregate, mining and recycling industries. Headquartered in Milwaukee, Wisc., Lippmann was established in 1923. Since its inception, Lippmann has become synonymous with highly productive and reliable heavy-duty jaw crushers. McCloskey’s complementary product offerings, including portable and mobile crushers, will allow market expansion for both companies, serving a broader base of customers worldwide.

McCloskey International has a dealer network that spans the globe, bringing the power of this distribution channel to the Lippmann product line. Both companies will be positioned for growth across customer bases, markets and geographies with the new entity.

“Lippman’s reputation for quality is legendary,” said Paschal McCloskey, president and CEO of McCloskey International. “We are excited at the opportunity to leverage the best practices of both companies while aligning the organization and operation for a customer driven model. Our success in the market has been built on quality products, along with dedicated employees. Looking at the similar values and culture between McCloskey and Lippmann, it’s an excellent fit.”

Headquarters for Lippmann will remain in Milwaukee, Wisc., and McCloskey International will continue to be headquartered in Keene, Ont.
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Ernest S. Matheson (Ernie) was a true entrepreneur, always adapting to his environment and circumstances. Shortly before The Second World War, Ernie started up his own trucking business, hauling whatever needed moving.

“He was working in the trucking business hauling gravel, molasses, potatoes, whatever he could get,” Ernie’s son, Steve, recalls during an interview with Rock to Road at his company’s Charlottetown headquarters.

When The Second World War started, Ernie signed up with the Air Force to work as a member of the military police (MP). Once the war ended and Ernie came home, he identified an opportunity within P.E.I.’s construction sector and decided to start up another business.

“My father, after he came out of the Air Force, ordered his first piece of equipment (a Lorain Crane) and used it to dig out the basement for the Charlottetown Hospital [in 1947],” Steve says.

In 1953, along with his brother-in-law, Stewart, Ernie formed another company, Matheson & MacMillan Ltd. Unfortunately,
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just two years later the company suffered a major loss with the loss of Ernie's brother-in-law and business partner. Despite the personal and business loss, Ernie continued on with the support of a dedicated staff and the company prospered.

In 1961 Ernie purchased controlling interest in Island Construction Ltd., which was founded in 1944 by entrepreneurs from Toronto. Matheson & MacMillan Ltd. continued to operate alongside Island Construction. In 1978, the firm purchased Mariner Towing, a tug and barge operation; and Morrison & MacRae, which was heavily involved in the road building, sewer and water, and wharf construction sectors.

“Like many small companies, the early days saw most of the office work done at the kitchen table, making it all a family-owned business,” says Steve, who, along with three siblings were by his father’s side for much of the growth of the business. “I started shovelling asphalt at 14 years old. You didn’t get to sit around on the couch at our house.”

Although Steve took over the company as president in 1983, when Ernie decided to step back a little, he still regularly talked business with his father. And Ernie never really retired, always being very interested and involved in all the company was doing. Over the years, the Matheson Group of Companies has been involved in a variety of high-profile projects across the province. In addition to the company’s first big contract with the Charlottetown Hospital, it has done work on both runways at the Charlottetown Airport; built the approach roads for the Hillsborough Bridge, the highway bypass project from New Haven to Bonshaw, the North River Causeway, and the Confederation Bridge. Large projects continue to this day with the company currently working on the TCH Cornwall Bypass contract with the province.

STAYING AGILE
Like all successful long-term companies, the Group has remained agile and adaptable to changing market conditions. Some 25 years ago, the Group restructured to separate its production and construction operations and the company now performs most of its work under the banner of Island Construction. Other brands operate behind the scenes in a support role. In a smaller market like Charlottetown, it pays to be agile and take on a wide variety of work as the opportunities present themselves, and that is something Steve has stressed with his staff at Island Construction.

“Whether it’s patching driveways or paving parking lots, highways or 10 kilometres of road, there’s no turning down work. It’s just a form of vertical integration,” Steve says. “If we’re patching someone’s driveway today, they’ll remember us for when they need a new driveway. And that philosophy has been implanted for all types of projects that make their way to our doorsteps.”

In addition to road and driveway projects, Island Construction is always searching for other types of work to keep its portfolio as diverse as possible, including aggregates hauling.

INNOVATION
When it came to the latest techniques and technologies, Ernie always stayed abreast of industry developments and endeavored to incorporate these into his operations when it made sense.

“He was never scared to try any of the new stuff,” Steve says. “We have always been early adopters of new developments in construction technology that benefits P.E.I. I think one of the key factors in the success of our business has always been in reinvesting in new equipment and processes.”

One example of the company’s willingness to invest in new technologies was its purchase of the first asphalt plant with recycling capabilities to be introduced to P.E.I.
back in 1980, according to Steve.

"As always, Ernie was a little ahead of the curve as it was several years before the technology became commonplace in P.E.I.," he says.

In 1997 the company significantly upgraded its asphalt recycling business with the purchase of a Gencor 300 skidded asphalt plant, and later, a Gencor 200 portable asphalt plant.

"The Gencor burners are an industry leader in efficiency and quality and, coupled with its baghouse technology, has enabled the Matheson Group to maintain its position as a preeminent, environmentally conscious producer in P.E.I.," says David Abbott, comptroller for Island Construction.

Island Construction was also the first P.E.I.-based contractor to bring Bomag MPH 100 mixers to the province; Wirtgen Group W2200 grinders to the province, for a section of the Charlottetown Airport the company was working on; and the first to use live-floor trailers in its operations. P.E.I.’s own Trout River Trailers also saw the potential of this technology that the Mathesons saw and is now a world leader in producing these trailers.

A company priority is to regularly upgrade its heavy equipment to ensure its fleet is running at an optimal capacity.

“I'd rather get the first few thousand hours of a machine than the last ones,” Steve says.

INDUSTRY INVOLVEMENT

Island Construction has always been very active with various industry associations over the years. In earlier years, the company was very active in TRIP Canada, a grassroots movement to help get industry concerns regarding infrastructure deficits heard by people across the country.

Closer to home, Island Construction is a Charter Member of the P.E.I. Road Builders & Heavy Construction Association. Before his death in 2003, Ernie was named a Life Member of the Association and Steve served as the association president on three separate occasions. Currently, Island Construction's operations manager, George Koke, is the president of the association.

Island Construction is also active with the Canadian Construction Association where Steve represented P.E.I. on the Board of Directors and its executive committee.

POWERED BY ITS PEOPLE

Island Construction currently employs about 125 people in peak season. The company, like many across the country, occasionally struggles to find enough skilled workers to fulfill its contracts. That said, one major advantage that Island Construction has going for it is that Steve isn't the only person following in their parent's footsteps, working hard to ensure the company's success through multiple generations.

"We have a lot of staff that are second- and third-generation," Steve says. "We've had employees that were here 50 years. One family has been with the company for 91 years total, between the father, son and grandfather… this business doesn’t operate because of one man or family."

As for the Matheson family, the company has been preparing its own succession plans for when the time comes that Steve, who is currently 62, decides to retire. His children, Laura and Steven, have been working hard to ensure they know all the ins and outs of the family business.

"The company is in good hands to lead it into a prosperous future," Steve says. "So it lives on for another generation."
Volvo Construction Equipment and Swedish-based project development and construction group Skanska Sweden are getting closer to making a green quarry a reality.

Both Volvo CE and Skanska Sweden offered an update on their SEK 203-million (or just over $30 million) electric site research project to members of the trade press from around the world as part of the Volvo Ocean Race event festivities held in Newport, R.I. this past May. The two companies confirmed that the project is still on pace to begin its 10-week field test this September at one of Skanska Sweden’s quarries in Western Sweden.

The electric site test project’s roots stem from Volvo CE and Skanska performing a pre-study in three different sites to understand all the stages within the complete quarry process. Based on these results, the company ended up partnering with its customer Skanska Sweden, the Swedish Energy Agency and two Swedish...
universities to create an electric site research project designed to electrify certain transport stages in quarry operations from excavation to primary crushing and transport to secondary crushing. Work on the project got underway in October 2015 and will be demonstrated at one of Skanska Sweden’s 100 quarries.

Volvo CE has predicted that this project could show the potential of reducing carbon emissions in these work steps by upwards of 95 per cent, and could show the potential of a 25 per cent reduction in total cost of operation.

“We looked at this industry and realized we’ve been working the same way for 50 to 100 years,” says Andreas Sunesson, project manager for Skanska Sweden. “We tried to see what would be the next big thing. What are the inefficiencies in this process?”

The inefficiencies found in the quarry operations included, but are not limited to, machine fuel consumption, inefficient machine usage (idling times, poor bucket filling, etc.), and in the total cost of site operation and processes.

One process identified as inefficient was the use of wheel loaders to handle materials coming out of the primary crusher. The materials were falling to the ground, only to be picked up moments later by wheel loader operators, creating an additional, unnecessary step for loading the material on the transporting vehicles to move them to the secondary crushing operations.

“With the fully autonomous haulers that are designed to line up behind each other with an overlap on the bucket, it enables a direct loading from the crusher deleting the loading step for the wheel loader,” explains Uwe Müller, Volvo CE’s chief project manager for the electric site project.

Volvo CE has been busy developing and testing the technologies, concept and proto-

“We looked at this industry and realized we’ve been working the same way for 50 to 100 years.”
types in-house for the site project, which include its prototype HX1 autonomous, battery electric, load carrier; the prototype LX1 hybrid wheel loader; and the 70-tonne, dual-powered, cable-connected EX1 excavator, which has been in development since the start of the electric site research project in October 2015.

The EX1 excavator will remain in a stationary position for most of its use, feeding blasted rock into a mobile crushe before it is transported to the secondary crusher and then processed. The two machines will work together, moving a few metres once or twice a day as the excavator works its way through the blasted rock, Müller explains.

“This has allowed us to make it a zero-emission excavator when it’s plugged into the grid,” he says. “However, we’ve designed it with flexibility in mind, so it’s been built as a dual-powered machine. Therefore, we have the option of using the diesel engine when it’s needed, for example, to reposition the machine or quickly move it prior to blasting.”

During the 10-week field test, the quarry will be operating at full production of 750 tph.

Both Skanska Sweden and Volvo CE plan on reviewing the results from the test to see if the electric site concept is commercially viable for the industry, not just in Sweden, but in North America as well. Volvo CE stated that this project is strictly a research project with no plans for industrialization for the time being. The research site project is expected to be complete in late 2018.

If the research project goes as planned, and is found commercially viable, it could offer a concrete example of how quarries throughout North America can find solutions to run greener, more efficient operations. This could not only play a vital role in the economic viability of existing pits and quarries, but also play a key role in the acquisition of new licenses for pits and quarries; as municipalities, provinces and federal governments continue to tighten up environmental restrictions and regulations. Only time will tell.
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Algoma has been a manufacturing staple in Sault Ste. Marie, Ont. for more than a century. The fully integrated steel producer of hot and cold rolled steel products is the largest employer in the area and builds steel for a wide variety of manufacturing, automotive, construction, mining, energy, ship, rail and military applications around the globe.

But with all of those steel products comes a large quantity of marketable by-products from the steel making process. Many of these by-products are placed on barges via a shiploader and shipped to various clients in the concrete, and metals industries.

When the company’s shiploader started failing back in September 2016, Algoma saw the problem as an opportunity to expand
its by-product shipping operations. To help find a new long-term solution for loading the barges, Algoma reached out to Assinck Limited in Scarborough, Ont. and asked them to travel to the loading site to evaluate and redesign the aged shiploader. The re-design needed to enhance the mill’s loading capabilities so that it could broaden its shipping market and get bigger loads to clients.

“A critical part of the design was to improve loading times,” explains Dean Glenn, vice-president of Assinck, adding that Algoma’s major concern was the cost associated with the amount of time a barge is at their dock. “We wanted to ensure not only the success of the finished product, but increased production and profitability of the new shiploader’s operation.”

The project took four months to complete from the conceptual stage to final design. In the end, Assinck provided a turnkey solution with the design and build of a radial stacking, telescoping loader. The new loader features a cable hung design with an average loading capacity of 2,935 short tons per hour (TPH) based on a density of 100 lb./cubic foot (2,662 metric TPH) and an impressive 228-foot reach. The gross weight of the new shiploader is 204,000 lb., which is more than 100 tons.

The biggest challenge over the course of the project was designing and building the machine around the existing machine’s footprint.

“They requested a larger machine with increased capacity, and that’s what we delivered,” Glenn explains, adding that the new shiploader has decreased Algoma’s loading times by about 30 per cent. “At Assinck, we don’t just build for the success of our client’s projects, we guarantee it”.

**STATE OF THE ART**

The shiploader is state-of-the-art and is equipped with PLC controls and built-in redundancies supplied by Allen Bradley; and has HMI touchscreen controls for ease of usability.

The shiploader features fixed controls at the head and tail; a pendant control from the ship deck; and wireless remotes for operational control from the ground.

When designing the shiploader, Assinck built redundancies into every aspect they could think of, including double motors and double gearboxes on every function. To ensure ultimate safety, emergency stops and belt stops were installed end to end.

With Algoma’s new shiploader up and running, loading rates are up and the company’s slag and other by-products are on their way to finding new uses at facilities across Canada, much of which will find its way into Canada’s various infrastructure projects in the form of cement.
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Clarke DeHart,
Production Manager, CR Jackson Inc.
Operating the V-Pac Stack Temperature Control System since 2011
Small rural communities across Canada offer many wonderful advantages from the hustle and bustle of large urban areas – amazing scenery, clean air, beautiful night skies and bountiful wildlife, to name a few. That said, employment opportunities that meet one’s needs can be a challenge to find in more remote areas, so it sometimes takes a hard-working entrepreneurial spirit to carve out a chosen career path. Just ask Rueben Wohlgemuth, owner of South Mountain Enterprises.

Wohlgemuth resides in Pine River, Man., a community with a total population of a little over 100 people within the Re-
gional Municipality of Mountain, located more than 400 kilometres northwest of Winnipeg and a little over an hour’s drive from the Saskatchewan border. A little over two years ago, Wohlgemuth was working as a grader operator for a local contractor that had won a tender to maintain and service roads within Mountain. The contractor decided they wanted to sell the contract and Wohlgemuth saw it as an opportunity to branch out on his own – he had been working for the contractor for about two-and-a-half years; and about 10 years total in the industry as an equipment operator and safety rep. This is his how South Mountain Enterprises became a player in the Mountain area for backhoe and motor grader work, as well as landscaping and drainage consultations.

“Armed with a John Deere 870G motor grader, a 310SK backhoe loader and an International single-axle truck for hauling gravel, Wohlgemuth services the southern region of Mountain, one of two regions within the municipality.

“The regional municipality doesn’t want to buy equipment, build a shop and get staff to maintain the equipment,” Wohlgemuth explains during an interview at his home office in Pine River. “For me it works out pretty well. They don’t have to hire anybody and I can run relatively cheap compared to them running their [operation].”

He uses a lease-to-own equipment program for his equipment through Lease Plus Financial out of Calgary, Alta.

“I have been buying equipment from Brandt Tractor. They’re closest dealership is in Swan River, Man.,” Wohlgemuth explains. “I get great service there. I don’t do much of the repair work myself, I don’t have the time for that. I call them and they send mechanics. I also use a local mechanic, Perih Heavy Duty – best mechanic in the country.”

Wohlgemuth’s maintenance and servicing of Mountain’s roads includes ploughing the roads in the winter, which can be a challenge.

“That can be a tough one, you never know how much snow you’ll get,” Wohlgemuth says, adding that it can take two-and-a-half long days to clean up a snowfall.

His role with the municipality also offers some unique challenges.

“We have a lot beaver activity out here – they plug the culverts. So to get the beaver dams out, I take in the backhoe to remove them. It sometimes takes innovative ways of trying to remove the beaver dam in the culverts,” Wohlgemuth says. “They can plug a culvert in just hours if you don’t use some kind of
deterrent."

Shifting from the role of employee to employer and owner of his own company has been a welcome change for Wohlgemuth. That said, he enjoyed working for his former employers. 

“As an employee I enjoyed learning new equipment and operating it efficiently,” he says. “I enjoyed being a safety rep. I got into COR Certification (The Certificate of Recognition program in Manitoba used as accreditation to verify companies have implemented a comprehensive health and safety program).”

As much as Wohlgemuth enjoyed his work, it required that he be on the road for long durations of time – not a practical scenario for a married man with five small children. “I was working away from home too much so I left to work back home. I really enjoy working for this municipality,” he says.

Wohlgemuth currently employs some part-time equipment operators, but is looking to add some full-time employees sometime in the future. He recently completed an on-site water and wastewater management course at Red River College and is looking to expand his business to offer services installing septic systems. His biggest challenges expanding his operation, like with many smaller operators, are time and money. That said, he doesn't plan on letting those challenges hold him back.

“I'm looking to specialize in work that the other guys aren't doing. There are also lots of other contractors that will shutting down in the next five years.” he says, adding that he wants to get involved in larger excavations, but says finding employees that will hold South Mountain Enterprises' standard will be a challenge. "It seems like in this business, like many other businesses, word of mouth is the best advertisement," he says. “I’m proud of what I do.”

With this one-man army already offering land levelling, driveway construction and repairs, private road construction and maintenance, drainage ditches, snow removal, landscaping services, basement excavations, and many other services, Wohlgemuth's hard work and perseverance will likely result in the continued successful growth of South Mountain Enterprises well into the future.
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FOR PRESENTATION CONSIDERATION/CONTRIBUTIONS CONTACT:
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emissions and decreased fuel consumption without compromising on power. Eco mode now comes as standard on the SD115B and can achieve up to a 40-per-cent reduction in fuel consumption by matching engine speed to operation mode. Furthermore, the new eccentric design provides quicker ramp-up speeds at lower pressure also for increased fuel efficiency.

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**www.bomag.com**

**HAMM**

With the HD+ 90i PH (power hybrid) tandem roller, Hamm is combining a conventional internal combustion engine with a hydraulic accumulator – the diesel engine covers the base load while the hydraulic accumulator meets peak loads. The underlying concept is based on the realization that although the maximum load is called for regularly while compacting, it is always just for a few seconds at a time. This typically occurs when starting up or activating the vibration or oscillation, for example. All other compaction tasks call for significantly less power. The hydraulic system works rather like a pumped storage power station – as soon as the power demand falls below the maximum load of the internal combustion engine, a pump fills the hydraulic accumulator. If a lot of power is called for, the hydraulic system functions as an auxiliary drive, able to supply a maximum short-term load of up to 20 kW. Following this, the cycle begins afresh with the refilling of the accumulator.

This technology allows the roller to deliver the same power while equipped with a smaller diesel engine. Two other components of the HD+ 90i PH also help to ease the load on the diesel engine: an efficiency-optimised electric fan drive and an efficient start-stop system. This means that for the HD+ 90i PH, a 55.4 kW output engine suffices – instead of the 85 kW unit in the conventional version.

The number of standard variants of the HD+ 90i PH power hybrid roller offered by Hamm has by now grown to six; with double vibration (VV), double vibration with split drum (VV-S), one oscillation and one vibrating drum (VO), one oscillation and one split vibrating drum (VO-S), as a combi roller (VT) and as a combi roller with split vibrating drum (VT-S).

**www.hamm.eu**

**VÖGELE**

With these new 10-ft. Highway Class pavers, Vögele also offers the right screed for every application. The Super 2000-3i and the Super 2003-3i can be combined with the VF 600, a screed with front-mounted extensions, as well as the VR 600 and AB 600, two screeds with rear-mounted extensions. The AB 600 extending screed is equipped with both a vibration system and tamper, meaning it can achieve higher compaction. It’s ideal for placing recycled materials as well as roller-compacted concrete (RCC). The driving force behind the two new Vögele Highway Class pavers is their powerful, six-cylinder Cummins diesel engine, rated at 250 hp (186 kW). Both low fuel consumption and low-noise operation are made possible by intelligent engine management with an ECO mode. ErgoPlus 3, the latest version of the Vögele operating system, has been enhanced with a number of new ergonomic and functional features. With its new mounting system, for example, the paver operator console can now be shifted conveniently and easily between the right and left sides of the operator stand during operation. In addition, it has a large colour display that ensures good readability even in poor lighting conditions. The screed consoles have been completely redesigned, making operation of these new Dash 3 machines even easier for the entire paving crew.

**www.voegele.info**

**ROADTEC**

Roadtec’s SP-100e Stealth paver is a simply designed, low maintenance, 10-ft. gravity-fed paver. The SP-100 provides consistent results, easy maintenance, and increased comfort, all while decreasing costs. The innovative design of the SP-100 Stealth contributes to its low cost of ownership. Designed specifically to work in tandem with the Roadtec Shuttle Buggy material transfer vehicle, the SP-100 harnesses gravity to feed material directly to the auger from the mass flow hopper, replacing the need for slat conveyors, hopper wings, and push rollers. Features of the SP-100 include: the industry’s only gravity-fed paver; the material fed steadily and dispersed evenly, resulting in improved mat density and consistent smoothness; it uses 25 per cent less fuel and reduces annual costs of ownership by 20 per cent compared to conventional pavers; maintenance and inspection areas easily accessed from doors on sides or top of the paver; revolutionary air curtain directs fumes and heat away from operator platform; and the platform swing out stations provide clear and wide sight lines.

**www.roadtec.com**

**CARLSON PAVING PRODUCTS**

Carlson Paving Products recently announced the full production of its newest platform: the EZR208. The 8-ft. EZR2 completes the manufacturer’s lineup of rear-mount highway-class screeds available for all cur-
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rent North American paver models. Featuring a standard paving width of 8 ft. to 15 ft. 6 in. and weighing 7,800 lb., the EZR208 achieves superb mat quality and ride uniformity with its class-leading 20-inch deep, single-piece screed plates. Providing more screening surface area than competitive screeds, the EZR2’s screed plates not only achieve higher mat quality but also produce longer component lifecycle. The EZR2’s screed plates are paired with state-of-the-art heating elements held in place by full length hold downs, providing even, efficient heat transfer to the upper surface of the plate. The EZR208 is engineered with Carlson’s exclusive extension support system that provides unequalled strength even at 22 ft. with bolt-ons. The EZR208 features Carlson’s exclusive extension support system with a high strength tubular frame to which the chrome rods are firmly fixed to. This means the chrome rods only act for fluid inboard and outboard motion, while the high strength frame provides leading extension rigidity and elimination of flex at wide widths.

Featuring deep telescoping walkways, the EZR208 creates a safer operating platform while the low profile extensions provide leading line of sight to the paver’s augers and head of material.

www.carlsonpavingproducts.com

CATERPILLAR

Caterpillar Inc. recently announced the addition of the new production-class Tandem Vibratory Rollers to its paving products family. The new models are the CB13, CB15, and CB16. New nomenclature corresponds to 13-ton, 15-ton, and 16-ton weight classes. These models can be equipped with an oscillatory vibration system for excellent application versatility, and offer refinements to the operator controls, water spray system, service access, and lighting packages.

Many technological enhancements are provided through the Cat Compaction Control option. Pass-count and temperature mapping systems combine infrared temperature sensors with GPS mapping to keep the operator informed of current mat temperatures, machine position, pass-count and pass coverage. This intuitive system greatly enhances nighttime rolling pattern performance, and records information for future process analysis and quality control documentation. When combined with drum edge and drum surface lighting, Cat Compaction Control helps extend the workday and increase daily production by optimizing job site awareness in low-light conditions. Machine-to-machine communication is another technological enhancement that improves job site efficiency. The system helps keep rolling patterns in sync by sharing mapped data such as CMV, temperature mapping, coverage area, and pass-count maps between the displays of multiple machines. The Cat C4.4 engine rated at 106 kW (142 hp) comes standard with Eco-mode and automatic speed control, leading to uniform compaction, fuel savings, and reduced sound levels to both operators and surrounding job site personnel.

www.cat.com
John Deere reveals first fully integrated, mastless grade control motor graders

Road building and site development contractors can now reap the benefits of John Deere SmartGrade in the G-Series motor grader line. SmartGrade technology delivers the first-of-its-kind mastless Topcon 3D integrated grade control as a factory option on new machines and field kit for equipment already on the job. The system is fully incorporated into the machine’s structures and software, delivering precise grading performance while eliminating vulnerable masts and cables from the mouldboard, preventing possible theft or damage. This also removes the need to climb on the machine every day and install blade-mounted sensors and components. By removing the masts and leveraging position sensing, the operator can now run without limitation, using all of the machine functions, like blade pitch, circle side-shift and circle rotate, without risking damage all while staying on grade. In the cab, the grade system interface is built into the Grade Pro (GP) controls available in the Deere exclusive fingertip or dual joystick design. An all-new Automation Suite is included with SmartGrade and is available as an option on all GP graders. The suite boasts auto-articulation, blade flip and operator-selectable machine presets.

www.JohnDeere.com

Doosan hydraulic breakers

Doosan Infracore North America offers hydraulic breakers in impact energy classes from 2,000 to 8,000 ft.-lb. They include the DXB100H, DXB130H, DXB170H, DXB190H and DXB260H. Doosan breakers are designed for use with select crawler and wheel excavators, and feature an energy recovery system that increases strike power for maximum productivity. The nitrogen-powered hydraulic breakers are equipped with an upper/lower suspension system that isolates the power unit from the housing, making them an ideal fit for in a variety of demanding applications. Tools include a moil (general purpose), blunt (concrete and block breaking), chisel (concrete) and pyramidal/nail (concrete/hard materials).

www.doosaninfracore.com

Geneq introduces Net20 Pro

Geneq Inc. recently introduced the Net20 Pro, a robust and easy to use system designed for CORS networks. This product will be useful to any user interested in the proximity and reliability of a reference station while eliminating RTK corrections service charges. The Net20 Pro uses multi-frequency, 555 channel technologies in a rugged casing that will deliver accurate and effective positioning data, even in a harsh environment. This product can be configured for correction data reception in client mode to calculate a fixed RTK position and to monitor the antenna position while continuing to work as a GNSS reference server. With its NTRIP Caster software, the Net20 Pro provides superior connectivity with an unlimited number of mount points. Users will appreciate the permanent transmission of RTK corrections with a simple local internet connection from your (LAN) working network. Equipped with an internal memory of 32GB with an additional 32GB external memory, the Net20 Pro provides enough storage space for permanent recording even for a 100Hz high data sampling rate. The Net20 Pro comes with an ergonomic and easy to manage Web UI that features software upgrade, status and settings management, data downloading, etc. via smart phone, tablet or other internet-enabled electronic devices.

www.geneq.com

Link-Belt announces new TCC-1200 and wireless remote control

Link-Belt Cranes has announced an upgrade to base rating of its 110-ton telecrawler to 120-ton. Shipments of the new TCC-1200 will begin fourth quarter 2018. The TCC-1200 offers an impressive capacity chart at radius that rivals even lattice crawler cranes with a similar base rating. The TCC-1200 is a full power boom, fabricated from ultra-high-strength steel and formed in Link-Belt’s own formed boom facility. The main boom height is 40 to 150 ft. (12.2 to 45.7 m) long and incorporates Teflon wear pucks to eliminate boom grease. It will come with three track widths – extended [18 ft. 2 in (5.5 m)], intermediate [15 ft. 8 in. (4.8 m)], and retracted [11 ft. 11 in. (3.6 m)]; which offers varying footprint capability in popular telecrawler sectors such as energy, industrial, and infrastructure. An optional wireless remote control system is now available for the new TCC-1200 and TCC-1400. The wireless remote provides a solution for industries and other operations where required, and allows the operator to be out of the cab and still have control of the crane.

www.linkbelt.com
During CONEXPO-CON/AGG 2017, John Deere announced it was entering a strategic alliance with Kespry designed to simplify drone integration on construction jobsites.

To learn more about the latest product and service offerings related to drone applications for earthmoving and grading, Rock to Road spoke with Andrew Kahler, product marketing manager for John Deere WorkSight. Kahler discussed how the Kespry Aerial Intelligence system is improving efficiencies on jobsites. Here’s what he had to say:

What are the main applications related to grading and other dirt moving applications that John Deere is focused on for drone applications? Can you describe how these drone applications will provide contractors time/cost savings?

John Deere promotes the Kespry Aerial Intelligence system in a number of applications spanning construction, mining, and aggregate. The survey-grade data captured by the Kespry system is useful for a number of jobsites. This system can provide near real-time data to optimize earthwork project planning and execution as
After the success of the Calgary event in February 2018, Rock to Road is bringing Quarry Tech coast to coast in 2019!

What is Quarry Tech?
This event, exclusively for quarry and pit owners and operators, will offer attendees case studies and panel sessions presented by industry experts covering a wide variety of topics such as:
• telematics
• drones
• automated vehicles
• crushers
• conveyors
• emissions-reduction technologies
• water conservation
• dust and noise control

Who should attend?
Quarry and pit operations managers and owners, process engineers, optimization staff, researchers, design consultants, fleet managers.

Call for presentations now open!
Rock to Road is now accepting presentation proposals for the upcoming Quarry Tech forums. To submit a proposal or for submission guidelines, contact:
Andrew Snook
Editor
asnook@annexbusinessmedia.com
289-221-8946

Limited sponsorship available.
Exclusive attendance restricted to quarry and pit owners and operators and sponsors ONLY. To book your spot, contact:
Laura Goodwin
National Accounts Manager
lgoodwin@annexbusinessmedia.com
289-928-8543
well as inventory management.

For earthmoving projects, the Kespry system drives value before a project begins by capturing topographical data used to create an accurate project estimation. This helps to reduce unplanned costs and rework throughout the course of the project. During the project, the Kespry system significantly increases the efficiency of jobsite management by providing a steady stream of jobsite progress data. The progress tracking enables jobsite managers to closely manage jobsite resources and better meet project milestones.

For quarry and aggregate customers, stockpile measurements can be completed in a fraction of the time, with error levels of one to three per cent. Flight information is transformed into three-dimensional volumetric visuals that allow users to easily view inventory changes over time. This data also generates reports that can automatically be shared with key stakeholders.

In summary, the primary benefit of the Kespry system lies in being able to quickly collect high-fidelity data that drives more accurate bidding, near real-time jobsite progress tracking, and accurate inventory tracking.

How is the data collected, organized and sent back to the contractor?

The data is collected and transformed into valuable insights with three easy steps. First, the flight is planned, next the flight is executed, and finally post process is completed to create a 3D model of the jobsite. Mission/flight planning is done using the Kespry mobile application on an iPad. The drone flies autonomously and while airborne, captures digital images and GPS location. The data is then wirelessly uploaded to the Kespry Cloud, where it is post processed to create a 3D model accurate to within 2 to 5 cm. Once post processed, the 3D model and analysis tools are accessible within the Kespry cloud or can be exported to a software package of the customer’s choosing. The system can also automatically generate stockpile inventory reports and email them to stakeholders after each flight.

Does the drone operator require any form of specialized training for these applications?

In order to operate a Kespry drone in commercial applications, an operator must first pass the FAA part 107 exam and obtain a Remote Pilot Certification. Kespry-specific training is also required but is quick and easy, as the system is designed to be user-friendly.
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Public information roadblocks must go

As any driver can attest, Manitoba needs to invest billions of dollars in its provincial roads and bridges, just to bring them to good condition. How many billions? The Manitoba government knows, but is refusing to say. We know that, because we asked.

That’s a problem.

In fact, it’s a huge risk to our province’s fiscal and economic health.

This government has worked out how large the gap is between what it does invest, and what it must invest, in our transportation system. So why won’t it share that dollar figure with taxpayers?

Until taxpayers know the facts, how can there be any informed discussion about how — and over what time frame — to fix the problem?

For years, the Manitoba Heavy Construction Association asked the previous governments and now this administration to release the number, referred to as the infrastructure investment deficit.

In April, the association submitted an access-to-information request for all records on the valuation of the investment deficit. This month, Manitoba refused to release the information, citing discretionary powers in the Freedom of Information and Protection of Privacy Act. (Under Sec. 23, a department may refuse to disclose information that could reveal advice, analyses or pending policy or budgetary decisions).

Well then, edit out any “advice” and just give Manitobans the facts: how many billions of dollars will it cost to bring the provincial transportation system up to good condition? It’s the public’s asset.

The public has paid for it and it will be asked to pay more for it.

But frankly, why should any Manitoban have to apply to its government to see this information? Such information is basic to any discussion of how the province sets investment priorities.

Recently, the association and eight other leading Manitoba organizations expressed support for a long-term, trade-enabling transportation infrastructure investment strategy, noting its key role in economic growth.

The organizations (representing mining, trucking, manufacturers and exporters, municipalities and small to the largest Manitoba businesses) stressed that efficient, seamless trade transportation routes are foundational to economic growth. Trade supports 53 per cent of Manitoba’s GDP; strategic investment in transportation infrastructure is basic to our provincial economic health.

A strategy would address the need to fix our roads and build the new transportation assets necessary for Manitoba to capitalize on shifting trade realities.

As protectionist sentiment rises in some countries, we cannot afford to miss opportunities appearing in new, rapidly emerging markets.

But first, we have to know what it will cost to ensure our trade corridors and arteries — the highways and roads — can move greater volumes of goods and commodities to their markets.

We know it’s in the billions: we understand the transportation infrastructure investment deficit is in the range of $6 billion. So it will take decades to address.

Taxpayers have shown they will accept necessary solutions when they are given the facts.

Winnipeg has published four successive reports about its own infrastructure investment deficit since 1998. In response, city council voted in 2013 and 2014 to levy an annual property tax (total two per cent) to dedicate revenues to its streets-renewal program. Taxpayers accepted this decision.

The city demonstrated leadership. It trusted the electorate, engaged it in an informed discussion and now is working on its transportation infrastructure deficit.

Manitobans need the province to begin the same discussion now, not later. Manitobans have first-hand experience with potholes and bumpy rides, but the discussion has to expand to demonstrate the clear link our roads have to trade and economic growth.

The process has to start with trusting taxpayers with information. The public is entitled to be informed, so it can weigh in on policy and investment decisions to ensure our highways system can safely move people to jobs, efficiently move products to market and help grow our economy.

It’s time the provincial government released its transportation investment deficit report so we can develop a long-term, multi-year strategy to build the transportation system our economy needs. Our future fiscal and economic health is riding on it.

Chris Lorenc is president of the Manitoba Heavy Construction Association.
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