

STRONG FOUNDATIONS.
STRONG FUTURE.



A CRH COMPANY

The **NET-ZERO** Challenge

Committed to a clean future



DISPATCH

THE MAGAZINE FOR
ASH GROVE NORTH CUSTOMERS

Number 7 | September 2022

A Message from Monica



I am excited to be taking the helm of Ash Grove North and have enjoyed getting to know our operations and, most importantly, our Ash Grove North team. I look forward to meeting even more of you in the coming months and

working together to achieve our aspirations for our business, our employees, our customers, and our stakeholders.

This year, we have focused our efforts around four strategic areas: people, sustainability, performance, and customer experience.

Our people, starting with their safety and well-being, must be our top priority. We want to make sure we have an inclusive and diverse team that welcomes everyone's opinions, ideas and professionalism so they can be their true selves while at work. We also must make sure we are giving our people the opportunities to grow, develop and achieve their personal and career aspirations as we achieve those of our business and our customers.

Our sustainability is about meeting our obligations to our stakeholders, including our customers. We are lowering the amount of clinker it takes to make our cementitious products, using more alternative fuels in place of traditional fossil fuels and exploring how we can do more to reduce the carbon footprint of our customers and their customers. While we must achieve these goals while still delivering value to our shareholders, we have shown time and again

that this is possible in the North, by leading the innovation efforts around carbon reduction for the entire Ash Grove platform.

Our performance continues to be what we deliver day in and day out. We are in a time of great demand for our products. Our Sales, Technical, Operations and Logistics teams throughout the region have found a way to make things happen for our customers time and again. For instance, when we had a temporary setback with our largest finish mill at Mississauga, all our teams worked together to make sure we kept product flowing to our customers by coming up with new and innovative ways to use our existing assets to keep making cement. This is one of many examples of how our teams at all our locations deliver on our promises.

Our customer experience must be a priority as we enter a period of technological advancement and change. Our customers expect more, and they should. We also expect more from our suppliers and the entire value chain will look very different tomorrow than it does today. Our obligation is to keep up with change and make sure we are providing our customers with what they need to do business efficiently and keep pace with a changing world.

Thank you for all you do and my best wishes for a great rest of the year!

Monica Manolas
Regional Vice President,
Ash Grove East



Welcoming New Technical Services Representative **Rob Richer**

Rob Richer has joined the Cement Technical Services team as a Technical Services Representative for Ontario and

Western Canada. Rob has more than 15 years of cement manufacturing experience working in different roles, on various projects and for several of the departments at the Mississauga Cement Plant. Most recently, he was the Yard Supervisor. Rob's knowledge of the business and products will be an invaluable asset to our team. Please join us in welcoming him to the commercial family!



Atif Asif Promoted to Business Development Manager, Sustainable Fuels and Materials

Congratulations are in order for Atif Asif who has been promoted to the position of Sustainable Fuels and Materials Business

Development Manager. Atif joined the company in early in 2021 and previously occupied the position of Technical Service Representative. Prior to working at Ash Grove, Atif was a Cementing Project Engineer, with Halliburton. In his new role, Atif will continue to support Ontario and Western Canada customers with Technical Services, as well as take on primary responsibility for the sustainable fuels and raw materials program at the Mississauga Cement Plant.

Cement Industry First to Join Canada's Net-Zero Challenge

Ash Grove is leading the way in the fight to tackle climate change by joining the Cement Association of Canada in the **Net-Zero Challenge**. The Net-Zero Challenge is a voluntary initiative led by the Government of Canada that encourages businesses to develop and implement credible and effective plans to transition their facilities and operations to net-zero emissions by 2050.

Adam Auer, President and CEO of the Cement Association of Canada joined the Hon. Steven Guilbeault, Minister of Environment and Climate Change, on Friday, August 26, 2022, to announce the first participants of the Net-Zero Challenge, including cement as the first industry-wide participant.

Concrete is found in virtually every class of infrastructure – from bridges to buildings, watermains to hydro-dams, hospitals to schools, sidewalks to subways. Its strength, durability, and resilience will play a critical role in ensuring our infrastructure stands up to extreme weather – heat, flooding, wildfires, and wind. Set to be released later this fall, the cement and concrete industry's action plan to produce net-zero concrete by 2050 will include significant milestones, including cutting carbon emissions by up to 40% by 2030.

Marie Glenn, CRH plc Vice President, Enterprise Strategy, and Chair of the Board for the Cement Association of Canada, said the following on the Net-Zero Challenge: "Canada's cement industry welcomes the opportunity to reiterate its commitment to tackling climate change by joining the Net-Zero Challenge as the first industry-wide participant. Concrete is the most used building material on the planet, second only to water. It is an essential element of construction, with no other material equalling its resilience, strength, and durability. The continued support of the Government of Canada of the cement and concrete industry is invaluable. We look forward to continuing working together as we chart a path to net-zero for the world's most important building material."

Adam Auer was equally excited by the opportunity to participate: "Climate change is our industry's most significant challenge. It is also our greatest opportunity. By charting a credible, transparent path to net-zero emissions, our industry continues its history of

leadership in building the sustainable world of tomorrow. We are proud to be a founding participant in the Net-Zero Challenge as just one example of our pursuit of proactive partnerships with governments, the construction sector and civil society groups to support the ambitious and science-based imperative of reducing carbon emissions to net-zero by 2050."

FACTS

- Carbon emissions from the production of cement is approximately 7% globally and 1.5% of Canada's annual GHG emissions.
- Canada's cement and concrete industry has committed to reduce over 15 megatonnes of GHGs cumulatively by 2030, and net-zero by 2050 (without the use of offsets).
- Canada's cement and concrete industry action plan will show how net-zero concrete is achievable with the right combination of technologies, incentives, and regulatory policies.
- Decarbonization pathways for the cement industry include low-carbon fuels, performance-based codes, standards and procurement policies, material efficiency, and carbon capture, utilization, and storage.
- Participation in the Net Zero Challenge requires public transparency and disclosure, including a comprehensive net-zero plan, two interim emissions reduction targets consistent with achieving net-zero emissions by 2050 or earlier, and annual progress updates.



Dear Atif,

Last fall, I had my driveway completed but it is already starting to show signs of wear. My contractor is willing to fix it, but I want to complete the backyard patio this fall. How can I avoid these same issues with my backyard?

Kurious Minde

Ask Atif

Have a question?
Atif has the answer!

Here to address all your cement-related questions, don't hesitate to reach out to him at atif.asif@ashgrove.com and read his answer in the next edition.



There are several ways you can ensure your concrete is durable. Once it is delivered is within the required municipal specification limits, the placing process can start. You must check the delivery ticket, prior to placing a load, to confirm that what was ordered is what was received. Concrete should be placed on the subgrade or a subbase as per municipality requirements. Make sure the steps below are followed as you go along.

Placing

Continuously spread concrete to its final position. Do not add additional water to improve the flowability. The mix design has a specified water-cement ratio to meet required properties. Use proper tools to consolidate the concrete to avoid segregation and voids.

Finishing

Here are some finishing tools and what they should be used for:

- Levelling – screed and bull float and darby
- Smoothing – hand float and finishing trowel
- Crack prevention – edger and groover
- Final touches – concrete broom and concrete stamps

Ensure that all specifications have been followed during placing and finishing.

Curing

Improper and/or no curing is one of the main reasons for concrete failures. The importance of keeping the concrete moist and at the right temperature cannot be stressed enough. Proper curing will result in increased durability, strength, abrasion resistance and resistance to freeze/thaw and de-icers.

The process of curing shall commence as soon as possible and not more than 30 minutes after surface finishing. You must ensure to use the right product for the given environment temperature. For each method, consult the product provider, but general guidelines are listed below for some curing methods.

- Burlap and water – use up to 28°C, pre-soak for at least six hours. Cover all parts of finished concrete. The burlap must be kept wet for at least seven days, the longer the better.
- Geotextile fabric and water – for temperatures up to and over 28°C, pre-soak for at least six hours. Cover all parts of finished concrete. Fabric should be synthetic.
- Membrane compound – ensure homogenous mixture, apply immediately after finishing. Uniform application to cover all concrete. Leave for at least seven days.

Sealing

Keeping concrete sealed will help prevent water from soaking it, where it can do damage either by freezing or by corroding the reinforcing steel in the slab. A sealer can also act as a sacrificial layer to protect the concrete from abrasion and wear due to traffic. Concrete sealers can also enhance the colour and impart an attractive shine to concrete, which is especially beneficial on stamped, integrally coloured, and stained or dyed surfaces. The sealer should be applied at minimum 28 days after placement.

Also keep in mind that you should not use salt or de-icing materials on the concrete during its first winter.

Enhancing Concrete Durability with Fly Ash

Fly ash is one of the most popular supplementary cementing materials used in the North American concrete market. It is composed of fine ash particles that come from the burning process of coal-fired power plants.

During the combustion reaction of the power plant furnace, residual particles become part of the hot exhaust gases. Eventually, these particles cool down and become solid or hollow spherical particles. The solid fly ash is collected from the bag filter or electrostatic precipitator. Once considered a waste material, it can be used to enhance concrete durability.

- The surface area of the fly ash is usually between 300 to 500 m²/kg, but it can be varied from 200 m²/kg to 700 m²/kg
- The size of the particles is usually below 20 µm
- The bulk density is between 540 to 860 kg/m³

- The major ingredients of fly ash are silicon dioxide, aluminum oxide, iron, and calcium. Other chemicals such as magnesium and Sulphur are also present.
- The colour of fly ash can be dark grey or tan. The colour is dependent on the chemical and mineral content. Higher lime content can result in light colour, iron can make the fly ash have browner colour, and dark grey is coming from the unburned carbon.

- CSA A3001 defined Class C and Class F fly ash as follows:
 - Class F: Low calcium (less than 15% CaO), carbon content less than 5% (some may be higher than 10%)
 - Normal dosage of 15% to 20% of cementing material (by mass)
 - Class C: Higher calcium content than class F, low carbon content (generally less than 2%), further divided into type CI and CH fly ash:

- Type CI: CaO content 15% - 20%
- Type CH: CaO content higher than 20%
- Normal dosage of 15% to 40% of cementing material (by mass)

Fly ash has many environmental benefits when used in concrete. For example, it can improve the durability of concrete and increase its lifespan. Fly ash can reduce heat of hydration, permeability, alkali-silica-reaction and sulphate attacks. In addition, it can reduce greenhouse gas emissions when replacing Portland cement. Furthermore, since fly ash is the waste from the coal-fired power plant, using it in the cement industry diverts it from landfills.



Supporting a Major Agricultural Project in Carmichael, SK

Earlier this year, Ash Grove Cement worked with Concrete Construction Group (KCG), a long-standing customer and ready-mix producer, in supplying cement and supplementary cementitious materials to help build a new high throughput grain elevator facility in Carmichael, Saskatchewan, for their client Richardson Pioneer Limited.

KCG has been in the concrete industry for close to 60 years producing ready mix and supplying a wide variety of other products and services. Along with his son Trey, Sheldon Guckert has taken over the business from his father Peter. With early beginnings in a small town with a single ready-mix plant in Leader, Saskatchewan, KCG has since grown to three ready-mix plants that supply concrete throughout the southwest Saskatchewan region. KCG also produces and supplies their own aggregates, ensuring the highest standard of quality control in ready mix for their region.

The project started in the summer of last year on the site foundation with piles and mat slabs, which would bear the weight of the storage bins (8 concrete silos, and 3 large steel storage bins). There were two separate mat slabs poured onsite, both just under 1,000 cubic meters. KCG supplied the concrete through their plant in Swift Current, Saskatchewan, utilizing 18 of their ready-mix trucks and two concrete pumps on site.

In total, eight concrete silos for the grain elevator facility were poured this year within a tight timeline. Through slipform construction, the continuous pour for these

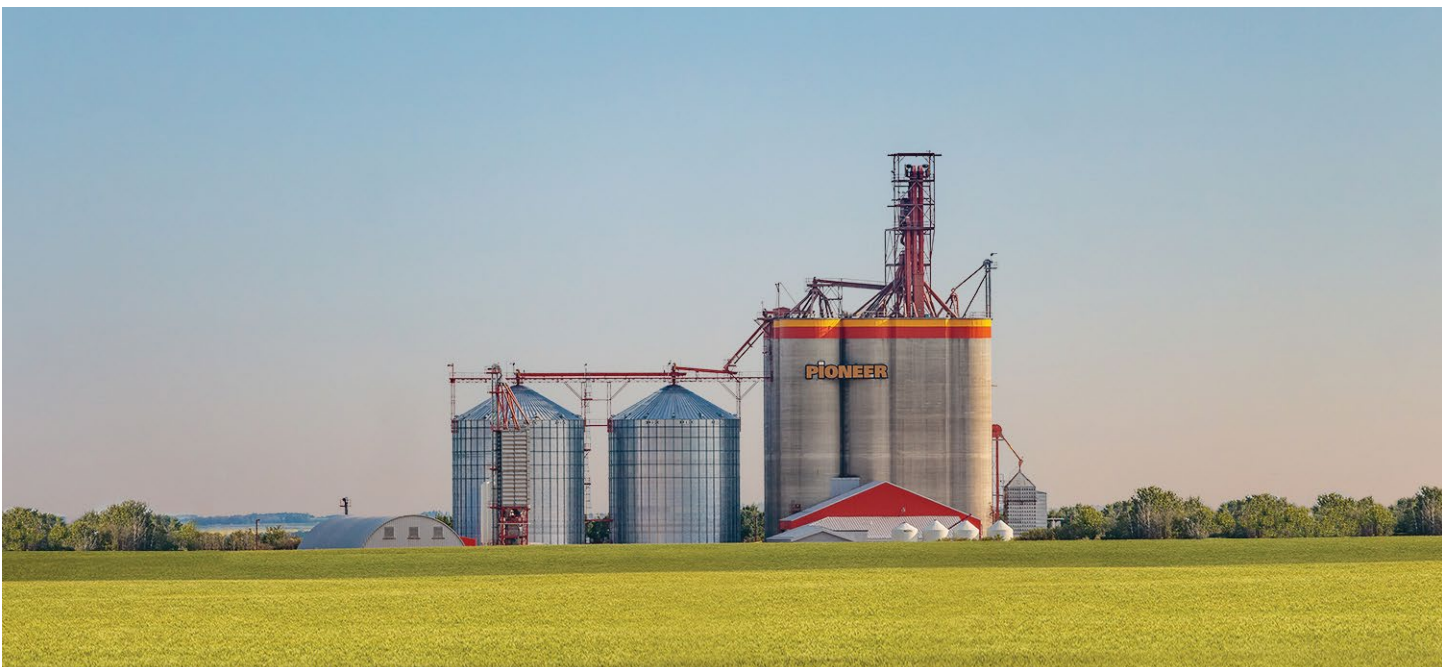
silos was completed in under seven days. Operating around the clock, the slipform rose approximately 10 feet to 13 feet every 12 hours. By setting up their mobile batch plant onsite and utilizing five of their ready-mix trucks, KCG was able to produce just under 100 cubic meters of concrete per hour during peak flow rate. This is KCG's fifth grain elevator project since their inception.

The new grain elevator facility will include 46,000 metric tonnes of storage capacity with a loop track rail design that is capable of loading 175 high cube rail cars. It will feature high-speed

receiving and load out, with a high-capacity grain cleaning system.

KCG will continue to supply ready mix to this site for the next few years, as there are plans immediately following completion of the new grain elevator to construct a 10,000-sqft fertilizer storage warehouse.

Ash Grove Cement is proud to contribute to this major agricultural project within the town of Carmichael, Saskatchewan by supplying Concrete Construction Group with both cement and supplementary cementitious materials.



For Quick and Efficient Ordering Send us an Email!

As we enter our busy season, our customers' needs and day-to-day requirements continue to be our focus, and we are always looking for ways to improve the customer experience. To provide the best service to our customers moving forward, we encourage everyone to place their orders via email instead of the traditional calling in of orders.

E-mailing orders have benefits for all of us:

- No wait time for reaching a Customer Service Agent
- Improved order accuracy
- Confirmation email for all orders
- Quick and efficient
- Additional means of communication with email monitored by our CSR team

Since this method of placing orders is quicker and more efficient than placing orders on the phone, we are evaluating the scope of this new system for all our terminals.

We encourage you to consider whether this method of ordering would be beneficial in the day-to-day operations of your business team. If so, our CSR team can be reached at orderdisk-miss-ca@ashgrove.com. We look forward to our future communications!

This email inbox is closely monitored from 4 a.m. to 7 p.m. during business hours and during off service hours it is monitored intermittently by our CSR Supervisor/Management team.



Ontario Summer Eve

Ash Grove kicked off very busy spring and summer seasons, connecting with numerous customers at a variety of industry events and meetings since the last edition of Dispatch was published. The past two years of Covid-19 restrictions have made these face-to-face events that much more exciting to attend!

Our Market Managers have been active with customer visits, industry golf tournaments, AGMs, and have enjoyed getting to catch up with many of you. These events allow us to connect and receive feedback from all of you on how we can meet the challenges of the current market and evolve to reflect the needs of the industry.

Yes, we love to have fun and entertain at these events, but we do take note of how we can continue to build long-term relationships, gain new connections, and collaborate with all of you to prepare for the future.

Some highlights from the last few months include attending CCPPA's annual general meeting in beautiful Kelowna, British Columbia, and Golfing at Concrete Ontario's annual golf tournament in Bolton, Ontario.



The Ottawa Region Masonry Contractors Association (ORMCA) Golf Day made a return on June 7, 2022, at the prestigious Kanata Lakes Golf and Country Club after a two-year hiatus. Unfortunately, mother nature had other plans and the monsoon that occurred that day pushed back the tournament by another week. The ORMCA hosts this annual event to promote masonry construction throughout the Ottawa region, giving participants the chance to team-up with local masonry contractors, architects, and engineers and to develop long-lasting relationships through the sport. While teams only had a chance to play nine holes before rain, once again, interrupted Golf Day, players were able to head back to the club house where spirits may have been damp but the meal and hospitality certainly warmed hearts.

Over the years Merkley Supply and Ash Grove have teamed up as major supporters of this event to help with its continued success. A shout out to Tony De Marinis (DMA), a member at Kanata Lakes, who helps make this event happen. The countless hours he puts in, and his dedication to the promotion of masonry construction with this event needs to be recognized.

Ash Grove is proud to support various industry events and fundraisers for a variety of great charities. It gives us great pride to join forces with many of you and to give back to the communities where we all live and work. We look forward to catching up with more of you in the coming months and thank all of you for your continued support of our great industry's meetings and events.



nt Highlights



Supporting Ukraine

Over the past few months, the world has been dealing with the shocking events taking place in Ukraine. Ever since the start of the invasion, our most crucial task has been to keep our 820 colleagues and their families safe.

As of today, we are happy to announce that all our colleagues remain safe and in a known location, most of whom are well away from the conflict zones. Furthermore, we are working on moving people to the west side of the country and into neighbouring countries. So far, hundreds of colleagues and their families have been safely and successfully evacuated from the country, and our CRH employees continue to work around the clock to provide them with all the support they require. However, since the men are staying in Ukraine to fight, some families are unwilling to leave the country. Whether the families want to leave or stay, we will continue to support them in any way possible and work to ensure their safety.

Additionally, CRH is thrilled to announce a donation of €1 million to UNICEF to support and provide humanitarian relief to the people of Ukraine. The amount will be used to establish and ensure the smooth running of four 'Blue Dot' centres. These centres will focus on providing support to 3,000-5,000 vulnerable women and children every day.

With tensions rising and the situation quickly escalating in Ukraine, an overwhelming number of CRH employees have requested a way in which they could show their support. As a result, and in collaboration with UNICEF, we have set up a CRH employee donation page where employees can provide financial support for the humanitarian aid relief program efforts. Furthermore, along with the €1 million donation, CRH will match the total funds collected through the CRH employee donation page for the foreseeable future. As of right now, we are proud to say that collectively CRH employees have donated \$280,000. An amount that CRH has matched, bringing the new total to \$560,000 along with the corporate donation of €1 million.

We will keep supporting all our employees who are going through this terrible time for however long they require assistance. We would also like to take this opportunity to thank all our employees for their tremendous spirit and outstanding generosity. Our thoughts and prayers are with everyone in Ukraine.

STAY STRONG!



Launch of Evergreen, the Great Lakes Women's Employee Resource Group

At CRH, we serve our communities and we strive to reflect the fabric of the counties, towns and cities where we operate. We believe in being an open, diverse, and inclusive organization. This always has and always will be vital to our success.

We are proud to announce the launch of Evergreen: The Great Lakes Women's Employee Resource Group (WERG). This will be an outstanding resource for both our female and male employees alike. With the vision of building a more inclusive work environment, Evergreen welcomes and values differences across the Great Lakes Division.

Evergreen is a symbol of strength, resilience, and growth. This voluntary group led by employees will be supporting and fostering a workplace that embodies our core values and helps us achieve our goals. It aims to provide a sense of community within our

organization through networking and professional development opportunities, including virtual events, workshops, and a variety of engaging speakers. WERG hopes to create a supportive environment and to be the voice of the different perspectives and ideas heard across our division.

This journey starts with us. We are thrilled that the Great Lakes leadership teams have supported us in creating this division's first-ever Women's Employee Resource Group (WERG). Together, we hope to create a meaningful impact and that takes all of us, with committed and dedicated workstream leaders who are going to provide guidance through resources and tools as we navigate it together. The Great Lakes Division stands taller when it stands together. This is a step in the right direction.



Photo Gallery

- 1 Team building with our Florida colleagues in Blue Mountain
- 2 Ontario Sales Team meeting
- 3 Cooking up at storm at our Spring Sales Meeting
- 4 Concrete Alberta Golf Tournament
- 5 Group shot representing our diversity at our Spring Sales Meeting
- 6 Gord slicing and dicing away at our Spring Sales Meeting
- 7 2022 Mavericks Charity Golf Tournament in Calgary
- 8 Hanging out with Merkley at the Sens game



Ash Grove Mississauga Cement Plant
 2391 Lakeshore Rd West Mississauga, Ontario L5J 1K1
 Email: AMAT-Communications-CA@crh.com

