



Sealant and Waterproofing
Association of Canada

BULLETIN

FALL/WINTER 2024, EDITION 6

**Members
in Action:**

**Raising
the bar
at Car
Park 43**

Also in this issue:

**SWA's
Surfside
Condo
Collapse
Luncheon**

**SWA
News &
Events**

DO NOT ENTER

2 CHURCH ST.

Green P Entrance

SWA Bulletin

Fall/Winter 2024, Edition 6

1

President's Message



As I write this final message as your president, I am filled with a deep sense of gratitude and optimism. Over the past four years, it has been an honour to serve as the president of the Sealant and Waterproofing Association of Canada. Together, we have navigated challenges, embraced opportunities, and experienced tremendous growth—both in our association and the industry we represent.

I am thrilled to report that our association continues to thrive, with membership growing steadily. As we all look ahead to 2025, I am also encouraged to see that the economic outlook for the construction sector in Canada remains positive. Strong demand for infrastructure improvements, sustainable construction practices, and innovation in materials and methods will keep our industry at the forefront of the Canadian economy. As an association, SWA is committed to supporting this momentum by providing the technical expertise and educational opportunities our members need to succeed and thrive in this evolving landscape.

We have some exciting events on the horizon. Our technical seminars, designed to promote continuing education and keep our members at the cutting edge of the industry, will continue to play a key role in our mission. These seminars provide invaluable knowledge sharing and ensure our members stay ahead of the latest trends and innovations. Additionally, I am particularly excited about our upcoming Annual General Meeting, which will take place at the breathtaking Table Rock Restaurant in Niagara Falls, Ontario. This event will not only provide an important forum for our business discussions but serve as a wonderful social and networking opportunity. I encourage all members to attend and engage with their peers and industry leaders. This is also an opportunity to have some fun!

As I step down into the role of past president, I am filled with confidence for the future of our association. We are fortunate to have a talented and dedicated leadership team on the Board and I am excited to see the new president take the reins and continue to build on the success we've achieved together.

Our mandate to grow nationally remains a top priority. To that end, I am pleased to announce that we are making excellent progress toward the establishment of a new Western Canada chapter. This expansion is a testament to the strength of our association and our collective commitment to providing value to our members from coast to coast.

In closing, I would like to extend my heartfelt thanks to all of you—our members, partners, and colleagues—for your unwavering support throughout my presidency. It has been an incredible journey and I am proud of what we have accomplished together. I look forward to continuing to contribute to the success of the Sealant and Waterproofing Association of Canada in my new role as past president.

With warmest regards,
Jeremy Horst

In this issue TABLE OF CONTENTS

- 4 Members in Action**
Raising the Bar at Car
Park 43
- 6 SWA's**
Surfside Condo
Collapse Luncheon
- 9 SWA News and Events**



Sealant and Waterproofing
Association of Canada

BULLETIN

The SWA Bulletin is published for the
Sealant and Waterproofing Association.

70 Leek Crescent,
Richmond Hill, Ontario L4B 1H1
(Tel) 416-499-4000

info@swacanada.ca
www.swacanada.ca

Producer: Hellcat Creative

Writer/Editor: Matthew Bradford
mirbradford@gmail.com

Design: George Condis
geocdesign.com



Macdero Injection Services is a proud division of Macdero Construction (Ontario) Ltd. We specialize in remedial waterproofing through a diverse range of injection options for parking garages, building infrastructure, tunnels, elevator pits, and more.



PARKING GARAGES



ELEVATOR PITS



TUNNELS



RUBBLE WALLS



+ MORE

Applications:

- KOSTER Approved Applicators
- Penetration Waterproofing
- Curtain Wall Gel Injection
- Epoxy Injection
- Crystalline Waterproofing
- Conduit Sealing

Contact:
Cameron Mackay | Sales & Service Coordinator
(416) 843 - 8370 | cameronmackay@macdero.com
www.macdero.com



**EXPANSION CONTROL SYSTEMS -
SEALING THE GAPS IN THE BUILDING ENVELOPE**



THINK, DESIGN, DETAIL, AND SPECIFY IN 3-D
Reach out to us today for bespoke solutions that meet your needs

TECHNICAL SALES REPRESENTATIVES

Milan Schuck
schuck.milan@ca.sika.com
647-334-5867

Balraj Jhaji
jhaji.balraj@ca.sika.com
647-402-9013

Paul Hanratty
hanratty.paul@ca.sika.com



TO LEARN MORE



BUILDING TRUST
CONSTRUIRE LA CONFIANCE

**Consultant:**

Read Jones Christoffersen Inc.

Contractors:

Maxim Group General Contracting

Forest Paving

Vulcan Asphalt and Supply

Manufacturers:

Sika Canada Inc.

Henry - A Carlisle Company

Jamac Sales and Distribution Ltd.

Maxim Group at Car Park 43

Toronto's Car Park 43 is where you'll find the latest example of SWA members in action. Here, Maxim Group General Contracting Limited has joined RJC Engineers, Forest Paving, Vulcan Asphalt and Supply, and other subtrades to restore the Toronto Parking Authorities (TPA) five-level parking structure.

"The TPA wants to use this garage as their featured parking structure going forward," says Amanda Porciello, Estimator and Project Manager with Maxim Group, noting, "It's a massive endeavor but we've got a lot of experience between us to help them set that standard."

The TPA initiated Car Park 43's restoration after discovering that the garage's waterproofing system had reached the end of its useful life and the structural slabs were at risk for deterioration. The project's scope includes replacing all bonded asphalt system on the suspended structural slab (roughly 240,000 sq. ft.), concrete restoration of the structural slabs, full mechanical and electrical system replacements, and 300,000 sq.ft. of painting. It also entails 60,000 sq. ft. of slab on-grade concrete replacement, including a full replacement of all the below grade sewer and storm systems. Top quality materials have

been selected to meet the TPA's high quality standards. Among them include the Masterseal 1500 system, provided by Sika, and Henry 709-11 hot rubberized asphalt.

All coming together

Car Park 43's transformation has called on the team's collective expertise. That includes Forest Paving and Vulcan Asphalt, which was responsible for the complete resurfacing and installation of the bonded asphalt system within the structure. Tight coordination between the general contractor and manufacturers was required to ensure the materials were installed correctly with the proper surface preparation so as to achieve the proper adhesion of the waterproofing materials. As they did, focus was paid to managing the quality control of the installation, ensuring the safety of all the subtrades working within the works area, and overseeing activities to ensure a high quality project outcome.

"Our experienced crew's attention to detail, combined with thorough inspections and adjustments during the project, ensured a seamless execution," notes Ethan Honeston,

Project Manager and Site Supervisor with Forest Paving. “Furthermore, our commitment to sustainability and the use of eco-friendly materials resonated with the client’s goals, contributing to the overall success of the revitalization.”

Project speedbumps

Bringing the massive parking garage back to life is no small undertaking. It has also posed several challenges that have relied heavily on the team’s experience. For example, Porciello explains, working on a six-inch-thick suspended slab meant finding the proper equipment and approaches to complete the installation with minimal deficiencies—especially considering the TPA’s high regard for quality control. “The slab needed some durability given the heavy flow of traffic thought this garage and a high-performing asphalt system [using Henry 709-11 hot rubberized asphalt] is the perfect solution for our client,” she says.

Installing the asphalt and bonded waterproofing system on the slab required additional planning on behalf of Maxim Group and Forest Paving. As Porciello notes, “Because it’s a six-inch structural slab, we were limited when it came to slab loads and we had to review existing structural drawings and purchase smaller equipment in order to accommodate the load requirements and install the asphalt systems.”

The team also had to adapt to unknown and unexpected structure conditions. With regards to the below grade drainage system, for example, crews found that all the existing pipes with laid with zero slopes and not to code, requiring a complete redesign of the system.

Of course, performing a full-scale revamp on a busy Toronto parking garage is bound to disturb the neighbors. This is certainly the case for Car Park 43, which rests underneath a Toronto Community Housing building. To minimize noise and disruptions for its occupants, crews have been carefully monitoring their activities, working between set hours during the day, and shutting down operations

during nights, holidays, and weekends. “A big challenge in this project is the fact that TPA is losing 100 per cent of its revenue by allowing us to occupy the full parking structure,” says Porciello. “So, we’ve had to allocate 25 skilled trades persons on the project to complete the project ahead of schedule and within budget.”

Even with these restrictions in place, Maxim Group and the team have been making full use of the time they do have on-site to get the parking garage back in operation in a timely fashion. While the project was originally intended to be completed within three years, the team’s collaborative efforts have shortened the timeline to two, allowing the TPA to start collecting revenues one year ahead of the intended project schedule.

“Coordinating work in phases, ensuring safety for pedestrians and vehicles accessing our work area, and addressing unforeseen issues in a timely fashion were among the key challenges of this project.” adds Honeston. “However, this also provided an opportunity to showcase our expertise in managing complex urban projects, ensuring timely completion while maintaining strict quality controls.”

As of October 2024, the project was nearly 80 per cent complete with bonded asphalt systems installed on all four levels and the lighting replacements and painting work done for three of the four levels. At the time of print, the next task is to finish work on the below-grade drainage system.

Porciello says Maxim Group is thankful to be working with seasoned SWA members and other subcontractors who have kept the project on track, noting, “We’ve had a lot of help from a lot of different companies and sub-trades who have collaborated and worked together to get the project done on time and within budget, which has been incredible.”

“Once we’re done,” she continues, “this garage will last them another 25 years to 30 years.”

SWA's Spring 2024 Luncheon

Lessons from the Surfside collapse



It was an afternoon of good company, fine food, and vital insights during SWA's March 2024 Luncheon. Held at the Royal Woodbine Golf Club, the luncheon featured a keynote from Sally Thompson, professional engineer and managing principal with Synergy Partners, who presented a deep dive analysis of the Surfside condominium collapse in Florida, USA.

"I don't have a morbid curiosity about collapses, but I do have a deeply held belief that what we do jointly is really important," she said. "We can sometimes get complacent in thinking that it's normal to see buildings that are heavily deteriorated because we see lots of them that are, but we have to keep reminding ourselves that it does matter."

The collapse of the 12-storey Champlain Towers South condo in Surfside, Florida, USA, is a stark reminder of what can happen when building deficiencies are uncovered, ignored, or deprioritized due to a lack of resources or stakeholder consensus. The disaster occurred on June 24, 2021, after a preliminary punching shear failure in the condo's pool deck caused that portion of the structure to come down. Seven minutes later, the failure progressed and the entire east wing of the building collapsed. The disaster claimed 98 lives and led to severe financial and legal repercussions for a number of parties deemed responsible for the collapse. It also caught the attention of Sally and her team, who wanted to learn from the failure to help prevent similar collapses from occurring. "On June 25th, 2021, I woke up and said, 'If

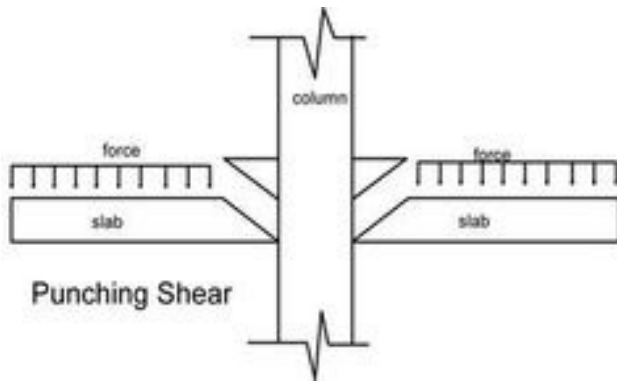
anybody in my office was at that building the day before, could they have done something to prevent this failure? Could we have saved these lives? And so, that was my quest," she told SWA members.

Anatomy of a condo collapse

What caused the Surfside condo collapse? Who was responsible, what were the repercussions, and what can SWA members learn from this avoidable disaster? Thompson spent her time at the podium addressing these questions in a detailed presentation that explored all aspects of the fatal condo failure while drawing from her extensive engineering background and research by the National Institute of Standards and Technology (NIST).

"There are any number of reasons something like this can happen, be it original design issues, construction problems, extra loads that were





Turning back the clock

added to the deck which reduced its capacity and service life, or even damage related to the construction of a building that had happened next door," she said, adding, "But as I'm sure everybody in this room guesses, it was the combination of the above."

Indeed, as Thompson explained, the pool deck's collapse was the result of several unmitigated factors that led to the podium slab collapsing around its columns and being pulled away from the south foundation wall and, subsequently, taking the tower down soon after. Among them included the fact that the parking and pool decks lacked a waterproofing membrane. This resulted in the long-term degradation of the reinforced concrete structural support in the parking garage beneath the pool due to water penetration and corrosion of the reinforcing steel – an issue that had been documented in an inspection three years prior and had only gotten worse without any remediation. Additionally, the pool deck was determined to have been underdesigned from the start and increasingly destabilized by the addition of heavy planters, pavers, pooling, and other unplanned loads throughout the years.

Yet another contributing factor is that the condo was likely impacted during the construction of a new building, 87 Park, which took place mere metres from the condo during 2016/17. At the time, reviews by the developers themselves revealed the project had exceeded vibration limits at 29 of its 36 vibration tests completed during shoring installation.

After delving into other root causes and factors, one question remained. "Could something have been done to stop this?" Thompson asked. "I go back to the 2018 Morabito report where this was this commentary, 'Failure to replace the waterproofing in the near future will cause the extent of the concrete deterioration to extend exponentially.' That's good to know, but the 'near future' is not very well defined to a condo board. Does that mean this month? This week? This year? You have to make that very specific in cases like this."

Vague repair timelines notwithstanding, it is now evident that these and other foundational issues were well known to the Surfside condo stakeholders, either by workers and staff who identified them during the course of their day, or in formal reports. And yet, Thompson added, "People knew but did nothing."

Thompson spent the back portion of her presentation exploring why little action was taken to address much-needed repairs. For one, she explained, the board that received the 2018 report lacked the fortitude to implement a special assessment. The board that eventually replaced this group green-lit an assessment nearly two years later, but by that point it was too late. As Thompson noted, the funds were due after the collapse took place.

"There's a failure of governance here," she stressed. "You have a client who's been told they have serious structural deterioration they need to fix, but because you're dealing with

changing boards, it gets delayed for two and a half years.”

Thompson spoke to the criticality of well-funded reserve funds to address situations like this. As someone who has worked extensively with condo boards throughout her career, she discussed how older Ontario condominiums are prone to having insufficient reserve funds as a consequence of the history of reserve fund legislation in the province combined with pressures on the boards to keep maintenance fees low.

The positive take-away is that there were many possible intervention points. Had repairs been made when the damage was observed, had the design been adequate, had the 30mm crack that developed two weeks before the failure not been ignored, or had loads not been added, the Surfside condo would not have become a cautionary tale.

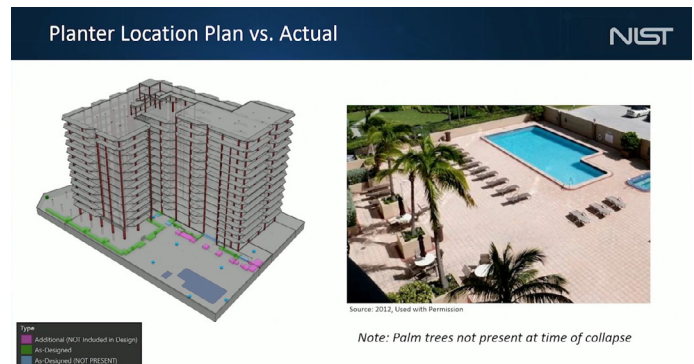
Adding up the damages

Without question, the most damaging aspect of the Surfside condo was the loss of human life. A distant second to that, however, was the financial repercussions faced by the 28 parties who were found to have been liable for the collapse. Ultimately, more than \$1B was paid by parties found to have been liable in some ways for the collapse and resulting deaths, including the security company, engineers, lawyers, and developers at 87 Park.

The 87 Park contribution is particularly interesting, said Thompson, as they knew they were causing excessive vibrations but were dismissive of it. “This is one lesson for everybody here: never write anything that you would not be proud to have on the front page of the newspaper tomorrow,” Thompson said. “And these guys wrote some nice little emails amongst themselves that said things like ‘We know they’re complaining about cracking next door but let’s just get it done and we’ll pay them off so they can fix it later.’”

Lessons for contractors

Thompson’s presentation ended with several takeaways that can be applied to SWA members. First and foremost, she said, everyone has a responsibility to communicate issues before they get bigger: “When you’re out there looking at a building and it’s got some problems, we have to ask ourselves: When can we walk away and not get hit for our share of the billion dollars the next day? Which ones are OK and which are not? That’s a tough line, but we need to keep that in mind.”



“For the contractors in the room,” she added. “Be careful. If you’re asked to put on an additional load, take those load checks seriously.”

As for overall lessons that can be taken away by anyone working with condos, Thompson stressed the importance of communication, clarity, and accountability when it comes to assessing, documenting, and following through on the kinds of issues that many trades and stakeholders observed before the condo came down. For example, she added, “As professional engineers, we have to remember our duty to public welfare is paramount. We have to encourage [building owners/managers] to do the proper evaluations and we can’t be afraid to force the building owner’s hand when it needs to be forced.”

SWA thanks Sally Thompson for her compelling and engaging presentation, as well as the SWA members in the audience who came out to learn from this important case study.

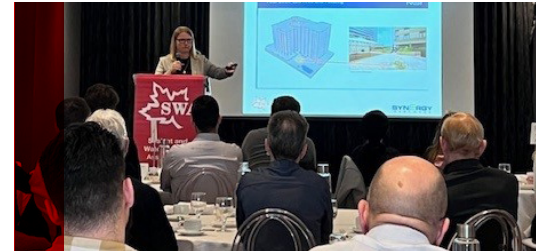
NEW MEMBERS



GETTING TOGETHER

Surfside Condo Luncheon Seminar

SWA hosted a luncheon for SWA members on March 26, 2024, at the Vue event space at the Royal Woodbine Golf Club. Thanks to everyone who came out, and to Sally Thompson for her presentation on the Surfside condo collapse in Florida, USA. Read more in this issue.



Product Expo

The latest product expo was held at the Scarborough Town Centre on April 11, 2024. The event features 16 exhibitors showcasing the latest in industry tech and innovations.



SWA Fishing Derby

Seven boats of SWA members took to the waters for SWA's Fishing Derby on June 12, 2024. Congratulations to this year's winner, Peter Hamilton, and a big thanks for everyone who turned out.



SWA Golf Day

Clubs were swung and connections made at SWA's Golf Day. The event took place July 9, 2024, at Wooden Sticks Golf Club.



UPCOMING EVENTS

JANUARY 17, 2025	Ski Day-Osler Bluff Ski Club
JANUARY 29, 2025	Western Chapter Meeting, Vancouver
MARCH 10, 2025	SWRI Winter Technical Meeting-Palm Springs, CA
MARCH 21, 2025	Curling Social, Thornhill Curling Club

Learn more at <http://www.swacanada.ca/events>

SWA BOARD OF DIRECTORS

President: Jeremy Horst, RJC Engineers

Vice President: Amanda Porciello, Maxim Group General Contracting Limited

Past President: Bill MacKay, Macdero Construction (Ontario) Ltd.

Director: Brandon Pasta, Enco Caulking & Maintenance

Director: Jason Gheda, SST Group of Construction Companies, Ltd.

Director: Jillian Wilson, WSP Canada Inc.

Director: Marla Cosburn, DRE Industries

Director: Ravi Khatri, Bothwell-Accurate

Director: Wayne Gomes, Jamac Sales and Distribution Ltd.

Director: Frankie Savage, Flynn Group

Director: Ilia Ghotbi, Tremco CPG

Director: Peter Giannopoulos, Jamac Sales and Distribution Ltd.