

From the Desk of Sasha Kisin...

The contractor members of the Saskatchewan Masonry Institute (SMI) continue to navigate the everchanging market conditions in the current economy. In addition to the increased inflationary pressures, the effects of the production shutdowns at international manufacturing facilities, unprecedented global logistics complications, and a busy American construction market in 2021 are still lingering which is causing continued pricing strains and material delays.

Although masonry materials have not been immune to these price increases, many of the locally produced masonry materials have not been subject to the same magnitude of price increases as other competing construction products. This has had the positive effect of making masonry construction more cost competitive with other building materials which has already resulted in increased masonry wall share on multiple projects. Combined with the number of public infrastructure projects that are now entering the constriction phase, many of the SMI contractors are experiencing full employment for the coming summer construction season.

With the sustained construction activity within the masonry trade, the industry was able enroll enough first year apprentices into the Bricklayer Apprenticeship Program to hold a Level 1 course for the first time in three years. Saskatchewan Polytechnic, along with the individuals who work hard to make the masonry apprenticeship program successful, are one of the fundamental building blocks to ensuring the Masonry trade remains viable in Saskatchewan for

future generations. With the promise of consistent institutional projects in the pipeline, the masonry industry is cautiously optimistic that there will be a steady supply of apprentices to keep this vital program sustainable for years to come.

For those of you who haven't received the email update regarding the 2022 Saskatchewan Masonry Design Awards, the planning committee has made the difficult decision to cancel the in-person gala this September.

However, the spirit of the Saskatchewan Design Awards will live on as all of the traditional award categories move to an online voting platform! Through the SMI social media channels, voting for the different categories will be live at various times throughout the year and winners will be honoured at various industry events as well as virtually on social media. Page 5 has all the details for this exciting new format!



Upcoming Important Dates

- * CMCA's Annual Masonry Conference in Montreal, QC - May 15 - 18, 2022
- * Golf tournament - July 21, 2022 at Dakota Dunes Golf Links

The finalists for the top three projects from the first People’s Choice Award will be announced on page 5 of this newsletter with the ultimate winner being announced live in person at the SMI golf tournament this summer.

Speaking of golf tournaments, the annual SMI golf tournament will return this summer after a two-year hiatus on July 21, 2022 at **the Dakota Dunes Golf Links**. More information is available on page 7. Make sure to register early to secure your spot as this event routinely sells out!

On a personal note, I have been away from the office for the first three months of this year to help

take care of my new daughter, Adrijana Ellis Kisin, who was born on January 4th, 2022. This time away from the office has allowed me to reflect on my professional future and goals. As a result, I have made the difficult decision to resign from my position at the SMI/CMDC partnership in early May to allow me to take on a new chapter in my Engineering career. This was not something I took lightly as I have been in this role for 8 years (and additional 3 years before that as a student within the SMI office). During that time, I have been extremely fortunate to work with the amazing CMDC team and the dedicated group of SMI members. It has been a privilege to learn from a group of people who are passionate about the masonry industry and as a result I know that masonry design and construction will stay close to my heart for many years to come.

I am so grateful for the relationships that I have made within the CMDC and SMI offices, the SMI members, the U of S and Sask Polytech, and the Saskatchewan design community, many of which I proudly consider my personal friends, and look forward to keeping in touch with them into the future.

I strongly believe in masonry construction and wish the industry continued success in the future. I am looking forward to help train my replacement when one is selected to help ensure they can continue SMI’s mission to promote the use of quality masonry wall systems.



Aleksandar Sasha Kisin




The Benefits of Designing with Masonry

- Durable
- Resilient
- Low Maintenance
- Energy Efficient
- Cost Effective
- Timeless

www.saskmasonry.ca




@saskmasonry

Saskatchewan Centre for Masonry Design

The Saskatchewan Centre for Masonry Design (SCMD) at the University of Saskatchewan continues to be a hive of activity with students at various stages of their research projects! Below is a short update on each of their projects along with some of their initial results. If you enjoy these updates or would like to meet some of the students (they would make great future employees!), they will be showcasing their research projects and talking with attendees at the SMI Golf Tournament on July 21st, so make sure you register to confirm your spot!

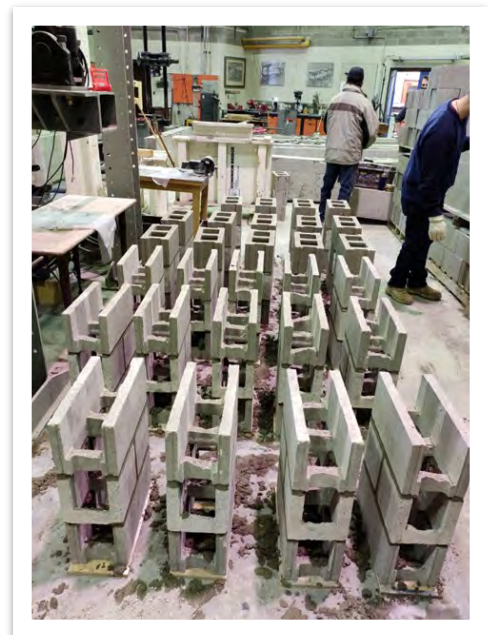


Thomas Vachon's research project to re-evaluate the χ -factor for masonry beam design is drawing to an end as he has almost completed his thesis for his committee to review and hopes to graduate summer 2022. He found in his research that good grout consolidation in masonry beams using fine aggregate or fabricating knockout units form standards CMUs can potentially allow for lower χ -factors. He has proposed changes to future editions of the CSA S304 *Design of Masonry Structures* and is working on two papers for publication. Thomas is hoping to enter the workforce early this summer and is currently pursuing multiple exciting opportunities with Structural Consultants in the United States. We wish Thomas all the best in his future endeavours!

Gordon Chui is also close to completing his thesis and defending it in the coming weeks. Through his research, he was able to propose a set of conversion factors between the masonry assemblage strengths determined in accordance with ASTM C1314-18 and

the CSA S304 standards. Since the ASTM C1314 procedure requires smaller prisms, most concrete testing labs across Canada could perform this test unlike the CSA test which requires much larger equipment that usually only universities have in their labs. This has the potential to allow designers to use higher f'_m values those listed in Table 4 of S304 in their designs by verifying the compressive strength of the assemblage through testing on an individual project basis. With his research concluded, Gordon accepted a job offer from the KGS Group's Saskatoon office. He will be starting as a Structural Engineer in Training in May. We look forward to seeing Gordon's designs come to fruition in the coming years!

Nitesh Chhetri is also in the final stages of writing his thesis on "The Impact of unit web height on the structural performance of concrete masonry prisms". A couple highlights from his research include the finding that CMU web height has a significant impact on the assemblage strength of a hollow masonry prism whereas the resulting assemblage strength for grouted prisms remained incentive to the change in web height. In addition, crack



patterns for both hollow and grouted prisms varied with CMU web height for all CMU sizes. These are important findings as they will help committees developing future editions of the CSA masonry standards as they try to harmonize CMU specifications in North America. Nitesh has indicated that he will be pursuing employment in the design and rehabilitation field once he has substantially completed his thesis.

Jawdat Alfarrar successfully completed his M.Sc. thesis in March. The results of his work supported the use of sodium nitrite as an agent to lower the freezing point of mixing water to allow masonry mortars to cure at -10C while having significantly higher compressive and flexural strengths than the control mortars. With further research, these results have the potential to significantly lower the cost and CO2 footprint of masonry construction by extending the building season where heating and hoarding is not required. Following the completion of his Masters project, Jawdat joined Nexii as a Research and Development Engineer where he is working to improve the sustainability of concrete.

Olga Savkina is now analyzing her test data and drafting her thesis following the successful completion of her two construction and testing phases. Her project is a continuation of Nitesh's work where she will focus on the reduced web thicknesses that are allowed by the current ASTM C90. Her research involved working with local block producer, Cindercrete Products Ltd. to produce two prototype moulds which could make the thin-webbed units. The results of her research will also impact the provisions in future CSA A165 standards. Thinner-webbed units would result in lighter CMU which require less material and a lower carbon footprint while also decreasing fatigue of masons and also potentially increasing their productivity.



Top: Current CSA Approved CMU cross-section (25 mm minimum web width for 200 mm units)

Bottom: Unit cross-section geometry allowed by American ASTM standards (19mm minimum web width for 200 mm units)

Micah Heide is the newest student at the SCMD. His project will be a continuation of Olga's thin-web CMU project where he will test masonry wall specimens constructed out of the proposed thin-web units and compared them to walls constructed out of CSA-approved CMU to determine if similar behavior is occurring under out of plane loading. He is currently finalizing his research proposal and hoping to start construction later this spring.

The masonry industry is incredibly proud of the research at the SCMD and many outstanding students have completed their graduate degrees through the Centre before going on to successful careers in the local and national design communities.

2022 Masonry Design Awards

As you may know, the Saskatchewan Masonry Design Awards has a long history of honoring the province's design and developer community for excellence in masonry construction. With galas every 4 years dating back to the early 80s, the Design Awards committee always worked hard to create memorable galas by willing to try new ideas and constantly adapting the show and staying ahead of the trends of the day.

Following significant deliberations, the 2022 Masonry Design Awards committee has made the hard decision to cancel the in-person gala ceremony this September. This decision was made after reflecting on current world events, economic climate, and the reduced SMI budget due to shrinking masonry wall share.

However, with the success of the initial "People's Choice Award" campaign on the SMI social media channels, the spirit of the Saskatchewan Design Awards will live on as all of the traditional award categories move to an online voting platform! Through the SMI social media channels, voting for the different categories will be live at various times throughout the year and winners will be honoured at various industry events as well as virtually on social media. Winning design teams and masonry contractors will also receive physical awards to commemorate their achievements.

The first edition of the People's Choice Award ran from January 2022—April 2022 and the top three contenders are:

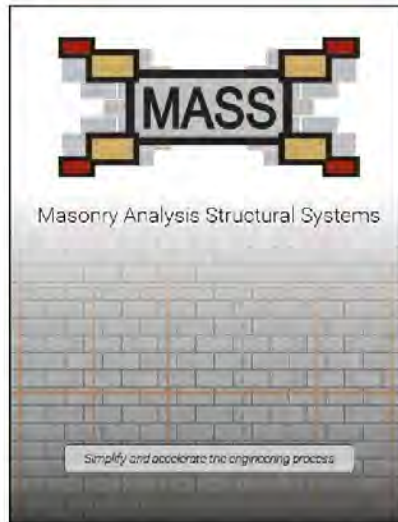
Project: College Avenue Campus
Architect: P3 Architecture Partnership
Structural Engineer: JCK Engineering Inc.
Masonry Contractor: Brxton Masonry Inc.



Project: Collaborative Science Building
Architect: Henry Downing Architects
Structural Engineer: WSP
Masonry Contractor: City Masonry Contractor Ltd.

Project: Chief Sabitawasis School
Architect: Wallace Klypak Architects Ltd.
Structural Engineer: BBK Saskatoon
Masonry Contractor: City Masonry Contractor Ltd.





Masonry Analysis Structural Systems

Version 4.0

Simplify and accelerate the masonry engineering process

Masonry Analysis Structural Systems (MASS) is a powerful software package that analyzes and designs masonry Beams, Out-of-Plane Walls and Shear Walls in accordance with the CSA Masonry Standards. This program dramatically simplifies and accelerates the masonry design process and is specifically tailored to Canadian Engineers.

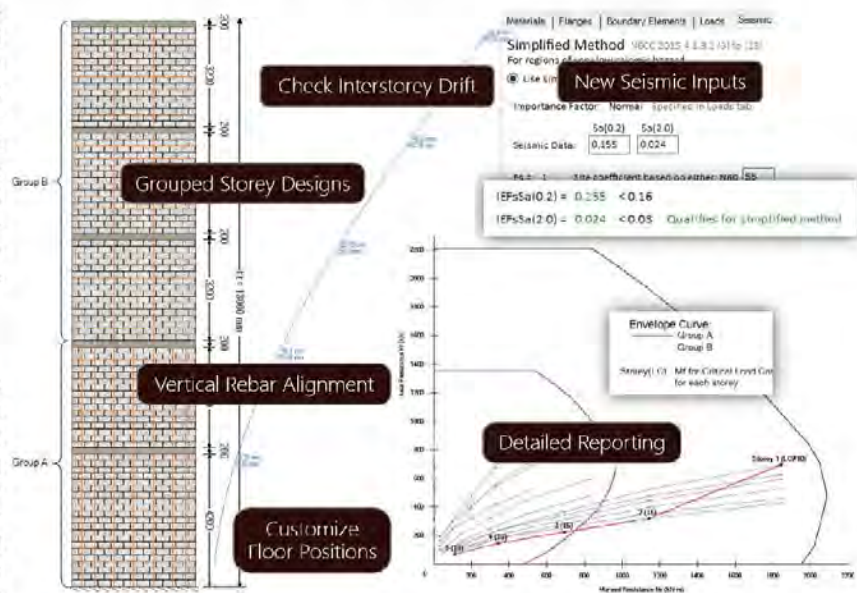
Masonry Analysis Structural Systems (MASS) is a visual, user friendly and dynamic structural software design package. MASS designs beams, out of plane walls, and shear walls for Moment, Shear, and Deflection. The newest version adds seismic considerations as well as a dedicated module for quickly designing multi-storey shear walls. *Everyone with a MASS™ license can be upgraded to Version 4.0 at no additional cost.*

In a low seismic region?

MASS Version 4.0 has a new seismic input tab specifically tailored to areas deemed by the 2015 National Building Code of Canada as having relatively low seismic risk. Simply input site data and the software detects the method being used between the simplified approach in NBCC 2015: 4.18.1 or the equivalent static procedure.

Designing Post-Disaster?

The higher ductility requirements for projects classified as being a Post-Disaster level of importance now require additional seismic considerations such as the ductility verification and the detailing of a plastic hinge region. MASS is able to perform these calculations and also check a shear wall against interstorey drift limits.



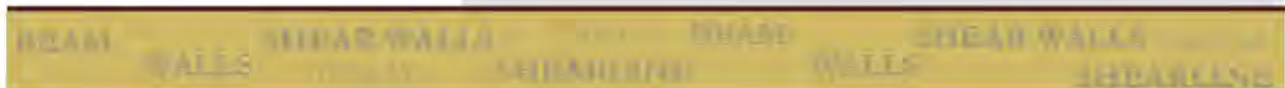
New to MASS?

Join more than 450 engineers across Canada in using MASS™ to save you valuable time on your next project. If you have not yet used the software, why not give it a try with a free trial copy? Simply contact support to request your trial.

NMDP would like to thank the following organizations:



To order MASS™ please contact NMDP's authorized service provider, the Canada Masonry Design Centre (CMDC) at:
360 Superior Blvd
Mississauga ON L5T 2N7
Tel: 888-338-3336 Fax: 905-564-5744
mass@canadamasonrycentre.com



SMI's Annual Golf Tournament Returns!

After a two-year hiatus, we are happy to announce that SMI's golf tournament has returned—but with some changes this year! SMI will be hosting the golf tournament at **Dakota Dunes Golf Links on July 21, 2022**. Lunch will be provided at 11 a.m. at the clubhouse, 12 p.m. shotgun start and dinner to follow at the hotel.

SMI will be providing transportation from Regina and return the next day. SMI will also be providing rooms for anyone wishing to stay the night. Please let Jamie at SMI know if a room is required.

If anyone would like to donate prizes, please drop them off at the SMI office.

Keep an eye on your email for a formal invitation!

Highlights from our Instagram Account

[@saskmasonry](https://www.instagram.com/saskmasonry)

