the edmonton Specifier

Construction Specifications Canada is an organization representing diverse interests in the construction industry and related professions. It is dedicated to improving the quality and flow of information between these interests, whether in the form of specifications, contract administration or marketing.

February 2025 Edition

Editor: Tracey Stawnichy

In This Edition...

Radon Mitigation: Considerations for New Construction – Part 3 Buildings

Date: Thursday, February 27, 2025
Time: 11:00am – 1:00pm
Place: Matrix Hotel, 10640 – 100 Avenue NW, T5J 3N8

Presented by: Alex Grams, P.Eng., Associate, Specifier at DIALOG

Radon gas exposure is estimated to be the cause of 16 per cent of lung cancer cases in Canada and results in over 3000 deaths per year – yet the regulatory framework for addressing radon ingress into buildings is ambiguous, and follow-up testing after occupancy is at the discretion of building owners.

In this session, Alex will explain what radon is, where it comes from, why it poses a health hazard to building occupants, and what the implications are for the design of new construction buildings. He will explore design options and best practices, unique considerations for certain building typologies, and look at several case studies.
Lunch and Learn - Radon Mitigation | Eventbrite

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$50 for Individual (personal) Sponsor
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FOR FURTHER INFORMATION

Contact any member of the Executive, attend one of our Chapter Meetings, send your name and address to CSC Edmonton Chapter, PO Box 35093 Mid Town PO. Edmonton, AB T5J 0B7, or go to edmonton.csc-dcc.ca for additional contact information.

GOALS OF CSC

Construction Specifications Canada is a multi-disciplinary non-profit association dedicated to the improvement of communication, contract documentation, and technical information in the Construction Industry. CSC is a national Association with Chapters in most major Canadian Cities.

To this end, CSC pursues the study of systems and procedures that will improve the coordination and dissemination of information relevant to the construction process.
We seek to enhance the quality of the design and management aspects of the construction activity through programs of publication, education, and professional development, believing that by so doing, we can contribute best to the efficiency and effectiveness of the construction industry as a whole.

OBJECTIVES OF CSC

To foster the interest of those who are engaged in or who are affected by the compilation or use any forms of specifications for the construction industry.

To publish literature pertaining to the construction industry.

To engage in activities to improve procedures and techniques related to the construction industry.

Announcements:

Chair's Message

Dylan Leclair, CSC Edmonton | Chapter Chair

Happy Valentine's Day, Edmonton Chapter,

I am excited to say that our Education Program is off to a running start again with 14 people in attendance for Principles of Construction Documentation and 5 in CCCA. Thank you to our instructors Shaune Smith and Jamie Murphy!

We also have 2 exciting educational Lunch and Learns for February and March scheduled. On February 27, Alex Grams will be presenting on Radon Mitigation: Considerations for New Construction at the Matrix Hotel. Currently, Andrew and I are working with Entuitive to shore up the final details for March, so stay tuned for more to come.

My final note for February is Infonet 2025 is now live on Eventbrite. Reach out to everyone and let's start hyping Infonet 2025 and make this one of the best attended events.

Have a good one!

Membership in CSC

Dave Lawrence

In the construction industry's fast-paced environment, the need for and value of Construction Specifications Canada is greater than ever. CSC brings together individuals from all segments of the construction industry. All who have a vested interest in Canada's largest industry are invited to join CSC. When you join CSC, you become part of the only association that brings together professionals from all aspects of the construction industry.

DESIGN TEAM

CSC offers members of the Design Team the opportunity to meet with other members and exchange information. It also affords you the chance to help improve technology and its management, and the means to improve ways in which your ideals are translated into clear, concise, and complete documentation.

BUILDING TEAM

If you are a member of the Building Team, CSC offers you the opportunity to become involved in formulating specifications. Your valuable input into the programs can help generate time and cost savings, as well as improve performance.

SUPPLY TEAM

The multi-disciplinary composition of CSC allows members of the Supply Team to meet with other members of the construction team. CSC programs in data filing and information retrieval are geared to present convenient and concise information on your products for proper evaluation and specification.

THE STUDENT

If you are a student of architecture, engineering, or construction technology, CSC will provide you with a greater exposure to, and a better understanding of, the construction industry, giving you an excellent opportunity if you plan a career in the construction field.

People and Places – Welcome to new and past CSC Edmonton Chapter Members!

Fresh Faces (New Members)

Bronwyn Blackstaffe Bass
Interior Designer, START Architecture
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Christopher Bennett
Principal, Bennett Build
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Daniel Clark
Senior Project Manager
MPE Engineering (a division of Englobe)
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Matthew, Dyck
Lead Systems Engineer, Rail & Transport at WSP
P: (780) 410-0094 E: matthew.dyck@wsp.com

Ian Lysak
Product Development Manager,
Armour Architectural Products
P: (780) 239-7687 E: ilysak@armourap.com

Yes, We've Moved (Contact / Mailing Address Update)

Abby Payne
Account Manager, Sound-Rite
11208 – 40 Avenue NW, Edmonton, AB T6J 0R2
P: (780) 953-2950 E: a.payne@sound-rite.com

Previous Members Re-Joining / Re-Activated

Kyla Keller
Specification Writer, KK Specs
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P: (780) 886-1281 E: kkspecs@outlook.com

Patrick Bond
Architectural Services Representative
Dormakaba Canada
P: (780) 868-1165 E: patrick.bond@dormakaba.com

CSC Education:

Kevin Osborne, CET

Principles of Construction Documentation

The PCD course is an introductory course that will enable the student to have a better understanding of construction documentation (specifications, drawings, and schedules), products, bidding procedures, and contracts**. It is also a prerequisite to all the other CSC education courses.**

Specifier 1

Specifier 1 is an intermediate level course that will take the individual beyond the concepts previously introduced in the PCD Course. Although some of the same topics are included, the depth of comprehension

and explanation exceed that of the PCD course. The Specifier 1 is a prerequisite for the Certified Specification Practitioner (CSP) designation from CSC. Successful completion of the course may be credited toward the experience component requirements for the Registered Specification Writer (RSW) designation.

Technical Representative
The TR course provides a better understanding of contract documents and bidding procedures, product representation, professionalism, and ethics, and will provide a new depth of understanding and explanation of concepts beyond what was previously introduced in the PCD course. The course is designed for the individual involved in the supply section of the construction industry, such as manufacturer representatives, agents, or distributors of products. The student will have successfully completed the PCD course.

Contact Kevin for all your education needs. kosborne@br2architecture.com

EDUCATION COURSES

Upcoming Classes:

Principals of Construction Documentation (PCD) – Monday, Jan. 20, 2025 – April 7, 2025
RJC Engineers, 100, 17415 – 102 Avenue NW, Edmonton, AB T5S 1J8
Specifier – TBD
Construction Contract Administration (CCA) – Monday, Jan. 20, 2025 – April 7, 2025
START Architecture, 9431 – 41 Avenue NW, Edmonton, AB T6E 5X7
Technical Representative (TR) – TBD

Upcoming Classes Online:

Principles of Construction Documentation (PCD) – January 6, 2025 (14 weeks)
Construction Contract Administrator (CCA) – TBD
Specifier – TBD
Technical Representative (TR) – TBD

Upcoming Virtual Classes:

Principles of Construction Documentation (PCD) – January 10, 2025 (5 weeks)
Construction Contract Administration (CCA) – November 22, 2024 (5 weeks) / March 7, 2025 (5 weeks)
Specifier (SP) – November 1, 2024 (7 weeks) / March 7, 2025 (7 weeks)
Technical Representative (TR) – November 1, 2024 (5 weeks) / March 7, 2025 (5 weeks)

Social Media:

Check us out:

Contact us:
edmonton@csc-dcc.ca

INFONET

April 10, 2025

Matrix Hotel
10640 100 Ave
Edmonton, Alberta

http://edmonton.csc-dcc.ca

Casino Party

Provided by Edmonton Casino Party

www.edmontoncasinoparty.com

The CSC Edmonton Chapter is bringing the excitement of Las Vegas to you!

Join us for an evening filled with insights into new materials and technologies, followed by some lively camaraderie and fun.

SCHEDULE:

3:00 PM: TRADESHOW
5:30 PM: HOST ANNOUNCEMENTS AND DINNER
6:00 PM CASINO
9:00 PM: DOOR PRIZE AND CASINO WINNERS CALLED
9:15 PM: NETWORKING

Sponsorship Packages:

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- 8 tickets to the event
- 8 drink tickets
- Two page advertisement
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$1,600.00 +G.S.T.

- 6 tickets to the event
- 6 drink tickets
- One page advertisement
- Basic Tabletop Exhibit (No Power Access) for Trade Show

Industry Partner

$800.00

- 4 tickets to the event
- 4 drink tickets

Infonet Committee 2025

Director, Andrew Brassington
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Treasurer, Catherine Osborne
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Education, Kevin Osborne
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Officer at Large, David Lawrence:
davidlawrence@interbaun.com

About the Event

3:00 P.M.:
Sponsors have the opportunity to showcase the latest trends, products and innovations to new and familiar clients.

5:30 P.M.:
Create your own culinary experience with delicious options from the mac and cheese buffet, taco bar, slider station, and more! Please note, this is not a sit-down dining experience—it's a networking feast!.

6:00 P.M.:
Welcome to Vegas in Edmonton!
Kick off your evening with $50,000 in fun money, with the potential to turn it into millions! Try your luck at authentic Vegas-style casino games, including blackjack, casino war, baccarat, roulette, and craps.

9:00 P.M.:
If you're one of the top three high rollers, you'll get to choose an amazing prize to take home—and brag about your winnings!

50/50 Tickets Available!
Purchase 50/50 tickets throughout the evening for a chance to win big! Your ticket also gives you one more shot at the amazing door prize.
All proceeds support the Stephanie Wertz Education Fund.

Articles of Interest

This Ancient Building Material is Making a Comeback

Sourced from: https://fastcompany.com / Patrick Sisson

Photo: Courtesy EcoCocon

The idea of a straw building might bring to mind a medieval homestead, or perhaps the fairy-tale dwelling of The Three Little Pigs. Used since the 19th century – typically as a rural, rustic building material—straw has been a DIY solution for affordable, earth-friendly construction. But a new wave of contemporary straw designs, as well as more industrial-scale efforts to expand the availability of straw as a building material, have modernized this traditional method of making a home.

In Slovakia, EcoCocon, a company that manufactures prefab straw panels, just opened a new factory a month and a half ago built out of its own product. The automated factory showcases EcoCocon's modular, straw-based construction system, as well as striking wooden trusses that suggest straw panels could play a role in building out warehouses and other large facilities.

"Literally, you put in straws, plywood, and a pack of screws on one end, and then on the other end, you have the finished product," says Peter Jensen, a representative for EcoCocon in the U.S., about his firm's new factory. "You don't have any people involved in between."

Considering the challenges facing architects who want to curtail carbon emissions in new buildings, straw offers a compelling case. Made from agricultural waste, straw walls sequester significant carbon – about 1.5 pounds for every pound used, before factoring in material transport – and can even be composted when knocked down. Some researchers have theorized that building with these types of biomaterials could turn buildings into carbon sinks, instead of the source of roughly 40% of global carbon emissions.

Tightly compacted (and in the case of some manufacturers, prefabricated into wall panels), insulating straw is dense, easy to work with, and not subject to significant pest, mold, or fire problems. And it doesn't require new technology adoption or a radical shift in current construction blueprints for homes.

Photo: Courtesy EcoCocon

"It's astonishing how much better straw is than virtually anything else," says Chicago-based architect Tom Bassett-Dilley, who designs straw-insulated homes and has done extensive energy modeling showing the advantages of straw.

He recently analyzed the carbon emissions difference between standard construction and straw. The embodied carbon—or the amount of carbon emissions needed to produce the building materials used in the project—was 80% less for a straw home.

Building materials and technology, especially insulation, can

be a bit of a “black box” to typical home dwellers, says Michael Burchert, a German decarbonized building expert. Few think about it, and when they do, in the case of straw construction, they think of ancient methods and assume it isn’t safe or stable. They don’t realize how “brutally cheap” it can be to use secondary material, and that just a tiny fraction of what gets produced by agriculture could help insulate a significant part of the new homes built every year.

In addition to incredible insulating power, straw also deadens outside sound, creating a much quieter indoor environment. Bassett-Dilley says that even in a cold climate like Chicago’s, if the power goes out in the middle of winter, the indoors stays about 40 degrees Fahrenheit.

Part of the perception challenge, said Burchert, is that it’s an ancient method of building. At its simplest form, it doesn’t need new infrastructure or new innovations. It’s about changing the materials diet: fewer fossil fuel-based materials, more vegetables.

“Politicians want things to be innovative, they want things to be produced in new factories,” he says.

But building has already been happening. In northern Denmark, Henning Larsen designed the Feldballe School in Rønde, a sleek, minimalist structure made from wood, straw, and local seaweed. Construction is underway in Malmö, Sweden, for the Hyllie building, a 12-story apartment tower made of timber and straw.

Photo: Rasmus Hjortshøj/Coast/courtesy Henning Larsen

Bassett-Dilley, who has experimented with a straw bale shed for his kid’s school and is currently working on a pair of straw-insulated homes, says working with straw didn’t radically change his process, outside of wall thickness. Walls of typical homes can be about 8 inches thick, while straw walls typically run 12 inches thick.

“It’s all within standard, easy-to-understand processes, and design wise, it’s actually pretty forgiving in terms of where you can put openings,” he says. “Clients tend to like the deep windowsills you can put more plants on.”

Straw does present some logistical challenges; the slightly thicker walls can be a limiting factor on a tightly packed urban lot. And the material is still not quite ready for many retrofit projects. Sustainable efforts to upgrade older buildings use a spray-foam-type insulation to make the structure more energy efficient; straw is much tougher to add after the fact. And issues with building codes and fire safety still need to be resolved or understood by local authorities who might be skeptical of new straw structures.

While there’s a long history of using straw in construction, it’s also a new way of doing things to a contemporary builder; Bassett-Dilley says the industry in general is very slow to change.

The cost advantage question can also be a bit challenging. While utilizing waste straw is certainly cheaper than other forms of insulation, in terms of a home’s total budget, insulation might make up 2% of the total cost. But it can be a time-saver, especially prefab panels, which can save on overall labor and construction costs. But advocates point to the very strong case of straw as a significant sustainability win. Further reinforcing the value of this approach, straw can be gathered from regenerative farming, adding to its value to the soil and land.

In the U.S., the manufacturing infrastructure for more straw building is lacking, says Bassett-Dilley, which impedes both new projects and the ability to showcase this process to other architects and

builders. But we do have a lot of straw, offering the ability to set up local prefab wall assemblies using a plentiful farming by-product. And overseas, the use of straw is booming; EcoCocon has seen its business double every year for the past six years, and hopes that its new factory can eventually produce a million square feet of panels annually.

C2C Launches a New, More Accessible Circularity Certificate

Sourced from: https//www.buildinggreen.com / Elizabeth Waters

With its Certified Circularity Standard, Cradle to Cradle hopes to expand the reach of its product circularity efforts.

The Cradle to Cradle Products Innovation Institute (C2CPII) recently announced the release of a new certification option, the Certified Circularity Standard. Derived from the full standard, the new certification is “designed to provide an accessible pathway for companies of all sizes to create and verify circular products,” explained Ren DeCherney, global lead of the built environment at C2CPII, in an email to BuildingGreen. “This opens the door for more companies to embark on the Cradle to Cradle Certified journey.”

C2CPII’s full product standard, Cradle to Cradle Certified Product Standard – now in version 4.1 – covers all aspects of product sustainability and is widely considered the “gold standard” for product certifications. It is organized across five categories:

- Material Health
- Product Circularity
- Clean Air & Climate Protections
- Water & Soil Stewardship
- Social Fairness

A product’s C2C certification level—Bronze, Silver, Gold, or Platinum—is determined by its lowest category score. For instance, a product might meet the requirements for Gold in four categories, but if it achieves only Bronze in the fifth category, its overall certification level will be Bronze.

Securing a C2C certification is a very involved process with significant cost. The new Circularity Certificate, like the Material Health Certificate before it, offers a way for manufacturers to meaningfully engage with and receive recognition for circularity work without meeting the requirements of the full certification.

Details and Requirements

To receive the Circularity Certificate, a product must meet, at minimum, the Bronze-level requirements of the Product Circularity category in the full product standard. Bronze-level requirements include:

- designating each homogenous material in a product as intended for either the biological or technical cycle.
- defining the cycling pathway for each.
- developing a cycling plan that identifies and addresses barriers to material reuse and recovery.
- incorporating a percentage of cycled and/or renewable content in the product.
- ensuring that 50% of the product by weight is comprised of materials compatible with its cycling pathway.

Silver, Gold, and Platinum-level criteria expand from there. For instance, 99% of a Platinum-level product by weight must be designed for disassembly. (See BuildingGreen’s circularity explainer for a

detailed explanation of the topic and its terms.)

Circularity Certified products must also comply with the chemical screening portion of the Material Health category. “At C2CPII we always say, ‘first safe, then circular,’ reflected DeCherney, explaining that after extensive stakeholder discussions, the organization decided that including material health requirements “is in keeping with the Cradle to Cradle design principles that our standard is based on,” which she continued, “emphasize the use of healthy, non-toxic substances as we strive to create a resilient future.” That said, achievement of the Circularity Certificate will not automatically earn products the Material Health Certificate, which requires manufacturers to go beyond screening and complete a material health assessment.

As with the full certification, products that receive the Circularity Certificate will receive a Circularity Data Report and be listed on C2CPII’s product registry. According to DeCherney, the requirements of the Certified Circularity standard will help products stay ahead of existing and upcoming regulations and reporting requirements. For instance, she continued, it may help U.S. “companies meet growing state-level requirements to reduce waste through Extended Producer Responsibility (EPR) policies, recycled content, and recycling requirements.”

Also like the full certification, manufacturers will need to recertify products every three years while demonstrating measurable progress toward the Platinum level of achievement, commented DeCherney.

In a subsequent email, DeCherney clarified that C2CPII is redesigning its certified product registry, where it publishes the generic requirements certified products have met, to display more specific product achievements. This change is in development for early 2025, she said.

Intended Users

C2CPII, explained DeCherney, is looking to manufacturers of gypsum, acoustic ceiling tiles and panels, tile, casework, insulation, resilient flooring, carpet, textiles, and furniture as likely initial users within the building industry. In this way, she continued, the standard aligns with other industry initiatives, including the AIA Materials Pledge Reporting Guide, the Gensler Product Sustainability Standard, and the HOK Material Tracker project, that are targeting similar product types.

Companies can begin applying for Certified Circularity now. According to DeCherney, C2CPII expects to begin issuing certificates in early 2025.

“Designers, ask manufacturers about their circularity story and if they are certified,” she encouraged, “your voice matters!”

How Robots and AI Contributed to the Restoration of Notre Dame’s Beauty

Sourced from: https://tomorrowsaffairs.com / Tomorrow’s Affairs Staff

Modern technology played a major role in saving Paris's Notre Dame Cathedral, even as its arches and roof burned in April 2019, causing fear for the fate of one of the world's most beautiful buildings.

Drones equipped with cameras then rose above the Paris Cathedral and directly sent an image of the roof on fire to the headquarters of the firefighters, who were thus able to organise their actions swiftly and with enormous precision.

At the same time, firefighters sent "Colossus," a remote-controlled heavy firefighting robot, into the heart of the fire. Where men could not tread, "Colossus" entered on its tracks, trampling over the burning ruins and bringing fire hoses with it to extinguish the fire.

There is no doubt that high-tech inventions saved the church from immediate collapse. Moreover, the consequences of the fire would have been incomparably greater if it had occurred only ten years earlier, potentially leading to the cathedral's complete destruction.

Only with the beginning of the restoration of Notre Dame did modern technology take centre stage, and it played a key role in one of the largest actions of global solidarity to save the gem of French and world cultural heritage.

How to Get the Original Look?

The first challenges began with the fact that the building, which was constructed between the 12th and 14th centuries, has no construction records that could have helped the restorers.

How to restore the structural elements that are more than eight centuries old, then the roof, and particularly the artistic details, which are so many on the most famous Gothic cathedral in the world, and which perished in a fire five years ago? How to guess the materials used, their texture and colour, if the builders have no records from the time of construction?

The development of the so-called "digital twin"—a 3D projection of Notre Dame—played a crucial role in overcoming this significant challenge.

"We combined data showing the cathedral before the fire, after the fire, and during the restoration" - Livio De Luca.

This model was made using the vast knowledge of the cathedral, its details, the materials used for construction, and the structural and static performances.

Livio De Luca, who led the team for the digital restoration of the cathedral, said that this huge job included not only data related to the shape of the building and the materials used for its construction but also all the scientific research that has been done on the cathedral so far.

"We combined data showing the cathedral before the fire, after the fire, and during the restoration," said De Luca, an architect from the French National Centre for Scientific Research.

AI Also Helped in Rebuilding

Naturally, AI also played a significant role in the reconstruction process, particularly in the reconstruction of the arches that were destroyed. The remains of the arches, with the help of AI, gave a picture of what they originally looked like, down to the smallest detail, as well as their position on the cathedral.

Architects and engineers used information from a vast database about the cathedral to examine the structure in detail and develop solutions that both matched the original and, in many cases, improved it.

Digital restoration techniques allowed access to numerous historical references and archives, which gave restorers access to the original appearance. This process not only restored the destroyed and damaged parts of the building structure, but also brought back the original colours, textures, and other details used by the ingenious builders 850 years ago.

The monitoring system had to provide accurate real-time information about the static condition of the building and its structural integrity at every moment of the five-year renovation, which enabled timely interventions by restorers.

Digital restoration techniques allowed access to numerous historical references and archives, which gave restorers access to the original appearance

Exchange of Knowledge

The restoration of the Paris Gothic cathedral, the city's symbol, involved more than a thousand experts, engineers, technicians, and restorers over the past five years.

Notre Dame would have waited much longer than 7 December this year for its opening if this army of experts had not been constantly networked and together used the global knowledge of construction and of Notre Dame specifically, contained in digital archives.

An interdisciplinary approach during the renovation was a priority. The 2019 disaster mobilised the global science and engineering community, accelerating reconstruction through knowledge sharing and the use of digital databases.

On Sunday, after five years of restoration, Notre-Dame's rector, the Rev. Olivier Ribadeau Dumas, held a mass and said that no one alive "has seen the cathedral like [that]. It [was] more than restored—it [was] reborn."

Along with people's knowledge and skills, technology has made a decisive contribution to this endeavour.

How Textiles Shaped Architecture: Prehistoric Structures for Modern Buildings

Sourced from: https://www.archdaily.com / Ankitha Gattupalli

Much before humans constructed their first permanent shelters, they discovered the protective power of animal hides as a barrier against harsh environmental conditions. This fundamental principle of building with flexible materials finds influence in the architecture of today, despite the lack of strong precedents that have been lost to time. Textiles served as humanity's first architectural elements, predating ancient construction methods like stone masonry. The relationship between textiles and shelter would go on to shape the entire history of architecture, from prehistoric settlements to modern skyscrapers. What lessons might these ancient origins of architecture hold for future advancements in building design?

Archaeological discoveries paint an intriguing picture of humanity's ingenuity. At the Grotte du Lazaret near Nice, France, researchers discovered evidence of a shelter constructed 150,000 years ago during the mid-Pleistocene period. The large hut, measuring 11 meters long and 3.5 meters wide, represented one of the first attempts at creating controlled environments. While only the stone supports for upright posts remain, archaeologists believe animal hides were stretched across the framework to create walls and covering - a marriage of textile and structure. The Siberian Steppe also provides evidence of textile architecture, with confirmed fabric structures dating back over 44,000 years to the ice age. There are also speculations that textiles were utilized for spatial division and shelter even before they were worn as clothing.

In 1851, German architect and theorist Gottfried Semper proposed a concept that would change how we think about architecture's origins. In his work "The Four Elements of Architecture," Semper argued that architecture didn't begin with permanent structures, but with textiles. He described how early

humans first gathered around the hearth - the primary element of architecture - and then created enclosures to protect it.

These first enclosures, Semper argued, were made by weaving tree branches together to form "wickerwork" walls. This technique eventually led to weaving with plant fibers and other materials, creating the first true textile walls. Even after societies developed solid masonry structures, Semper noted that these walls were often decorated with patterns that unconsciously imitated their textile predecessors.

As human societies evolved, different cultures developed increasingly sophisticated approaches to textile architecture. The North American Indian tipi represents one of the most elegant solutions to the challenge of creating a portable shelter. Originally made from buffalo skins before transitioning to canvas, the tipi's simple conical form belied its technical sophistication. The structure featured an adjustable smoke flap at its peak, allowing for precise control of ventilation, while an interior liner managed moisture and prevented drafts.

The Bedouin people of North Africa developed equally impressive solutions with their "black tents," known in their language as the "house of hair." These structures, made from black goat hair, demonstrated an intricate understanding of material properties. When rain fell, the goat hair would contract and become naturally waterproof, while the specific weave pattern allowed enough air circulation to keep the interior comfortable. The tents could be transported up to 64 kilometers in a single day, proving that mobile architecture didn't have to sacrifice sophistication for portability. This natural climate control system developed thousands of years ago can serve as inspiration to many modern energy-hungry buildings.

In Central Asia, the yurt showcased another approach to textile architecture. These structures, which have remained largely unchanged for centuries, use felt coverings laid in up to eight overlapping layers. Rather than being sewn together, these layers work in concert to provide water resistance while allowing individual sections to be opened or closed as needed to respond to changing weather conditions.

The relationship between textiles and architecture took a revolutionary turn in the 20th century through the work of German architect Frei Otto and the development of tensile structures. With this approach, the primary support came from tension in materials rather than compression. Bringing a uniquely scientific approach to textile architecture, Otto conducted extensive experiments with soap films, using their natural tendency to find minimal surface tensions as a model for designing efficient structures.

His work culminated in the iconic 1972 Munich Olympic Stadium, featuring an innovative canopy of acrylic glass panels suspended from steel cables. This project demonstrated how far textile-based architectural thinking had evolved from those first ice age shelters, while still embodying the same fundamental principles of using flexible, lightweight materials to create protected spaces.

Modern glass-faced skyscrapers, while visually striking, often create enormous energy efficiency challenges. Modern buildings of the 21st century incorporate smart fabrics that respond to environmental conditions, control light, and temperature, and create flexible spaces within rigid structures. In office environments, textile solutions are being used to address contemporary challenges like the need for privacy in open-plan spaces and the demand for better acoustics.

The glass facades that dominate modern cityscapes present new challenges that textile solutions are uniquely suited to address. Innovative curtain systems help manage energy efficiency while maintaining aesthetic appeal, demonstrating how ancient principles of textile architecture can be applied to modern environmental challenges.

The journey from animal hide shelters to modern textile architecture reveals a cycle of innovation. While materials and technologies have evolved dramatically, the fundamental principles remain remarkably consistent: the use of flexible, adaptable materials to create comfortable, protected spaces that meet human needs. As Petra Blaisse, a leading contemporary designer, observes, "Architecture and textiles work in collaboration with each other to define a room's scenography". This balance is exactly what is needed: combining the efficiency and adaptability of textile solutions with the permanence of modern construction.

The story of textile architecture is, in many ways, the story of human ingenuity itself - an anecdote to the ability to transform simple materials into sophisticated solutions. While textile architecture might seem primitive compared to modern steel and concrete buildings, its core principles - adaptability, efficiency, and human-centric design - can strongly lend themselves to address contemporary challenges like climate change, rapid urbanization, and the need for flexible spaces. The principles established by early humanity continue to inspire new generations of architects, proving that the relationship between textiles and architecture remains as relevant today as it was 44,000 years ago.

ASSOCIATION LINKS

- **Alberta Construction Safety Association (ACSA)**
  www.acsa-safety.org
- **Alberta Building Envelope Council North (ABEC)**
  www.abecnorth.org
- **Building Information Modeling (BIM) Forum**
  BIM Forum
- **Biomimicry Guild**
  Biomimicry 3.8 - Innovation Inspired by Nature
- **Canadian Green Building Council (CaGBC)** www.cagbc.org
- **CCDC Documents**
  ccdc.org
- **International Construction Information Society (ICIS)** www.icis.org
- **Architecture 2030**
  www.architecture2030.org
- **BuildingSMART Alliance** (Canada Chapter of BuildingSMART)
- buildingSMART Canada - buildingSMART International
  BuildingSMART International (formerly IAI)
  buildingSMART International
- **Biomimicry Institute**
  www.biomimicryinstitute.org
- **Building Transformation**
  Building Transformations
- **Construction Specifications Canada (CSC)**
  www.csc-dcc.ca
- **MasterFormat**
  MasterFormat Numbers and Titles

ASSOCIATION LIAISONS

Alberta Association of Architects (AAA)
http://www.aaa.ab.ca/

Alberta Painting Contractors Association (APCA)
www.apca.ca

Alberta Wall & Ceiling Association (AWCA)
http://awca.ca

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
http://www.ashrae.org/ / ashrae@ashrae.org

The Canadian Wood Council (CWC)
http://www.cwc.ca
info@cwc.ca

Portland Cement Association
ConcreteTechnology@cement.org

Interior Designers of Alberta
Home : Interior Designers of Alberta

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA)
http://www.apegga.org/ dward@apegga.org

Association of Science and Engineering Technology Professionals of Alberta (ASET)
http://www.aset.ab.ca/

Building Owners and Managers Association (BOMA)
http://www.bomaedmonton.org/ /

Consulting Engineers of Alberta (CEA)
http://www.cea.ca/ info@cea.ca

Edmonton Construction Association
www.edmca/.com
contact@edmca.com

Terrazzo, Tile & Marble Association of Canada (TTMAC)
http://www.ttmac.com/
association@ttmac.com

Bulletin Board

Message from the Executive:

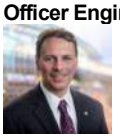
We in the Executive are looking for creative-minded individuals who can take on a position and follow through with ideas…if this is YOU, send a message to edmonton@csc-dcc.ca and we will be quick to get back to you!

Open Positions Include:

Vice Chair
Sustainability
Contractor's Rep

You don't need to be a member of the Committee to come and participate in our monthly Chapter meetings but watch out if you do! You may find yourself holding a position…maybe even as Chapter Chair…

The Executive

Director  Andrew Brassington, CTR Technical Area Sales Manager Owens Corning | Canada P: 780-222-6732 Andrew.Brassington@owenscorning.com	**Chair**  Dylan Leclair, CTR IKO Commercial P: 587-335-9552 Dylan.leclair@iko.com	**Vice-Chair**  Position Open	**Treasurer**  Catherine Osborne BR2 Architecture P: 780-423-6606 cosborne@br2architecture.com
Secretary  Jessica Prosser Project Manager Fullster Iron P: 587-340-7169 jprosser@fullsteriron.com	**Officer Architectural**  Kevin Osborne, CET BR2 Architecture 10441 – 123 Street Edmonton, AB T5N 1N8 P: 780-717-1007 kosborne@br2architecture.com	**Officer Specifications & Website Development**  David Watson FCSC, CET President NBS (Canada) (formerly Digicon) P: 780-758-4147 David.Watson@theNBS.com	**Officer Professional Development**  Kevin Osborne, CET BR2 Architecture 10411 – 123 Street Edmonton, AB T5N 1N8 P: 780-717-1007 kosborne@br2architecture.com
Officer Engineer  Jamie Murphy, RET, P.L. (Eng), CCCA, LEED AP, Principal Read Jones Christoffersen P: 587-745-0266 JMurphy@rjc.ca	**Officer Interior Design**  Corry Bent, DID, BA Design Bent Perspectives cbent@shaw.ca	**Officer Contractor**  Position Open	**Officer Manufacturing**  Mike Lafontaine Expocrete P: 780-962-4010 Mike.Lafontaine@oldcastle.com
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