# Specifier

Editor: Tracey Stawnichy

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 2024 Edition

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# CONVERTING UNDERUTILIZED OFFICE SPACES INTO RESIDENTIAL UNITS

Date: Thursday, February 15, 2024
Time: 11:45am – 1:00pm
Place: Matrix Hotel – Amber A Room 10640 – 100 Avenue NW, Edmonton, AB T5J 3N8
Registration and Lunch Served: 11:45am
Presentation By: Maxim Olshevsky, CEO of Atra Group and Peoplefirst Developments

An insightful presentation on the transformative impact of converting underutilized office spaces into residential units, particularly in the Calgary and Edmonton markets. The focus is on understanding the market conditions and uncovering the potential for successful office-toresidential conversions in these urban areas.

Key discussion points will include the feasibility of such projects, navigating the various limitations and liabilities, and devising strategies to address common challenges. Additionally, the presentation will examine the significant role these conversions play in urban revitalization, emphasizing how aspects like affordability, accessibility, and energy efficiency are crucial in shaping sustainable and vibrant communities. Attendees will leave with a deeper understanding of the economic and regulatory factors driving these conversions and their potential for impact on our urban centers.

2024 Edmonton	Chapter Executive		Advertising Rates	
			Business Card: April 1 to May 30	
Director	Tracey Stawnichy	780 994 3699	Rates cover your ad on our website 24 hours per day, 7 days per week	
Chairman	Andrew Brassington	587 341 5268	Business card on-line:	
Vice-Chairman	Dylan Leclair	587 335 9552	Annual \$100 if received by May 1; \$75 if received by August 1;	
Secretary	Jessica Prosser	587 340 7169	\$50 if received by November 1;	
Treasurer	Catherine Osborne	780 705 7108	\$25 if received by ⊢ebruary 1 Add \$50 to have a link to your company web site from	
Architectural	Kevin Osborne	780 717 1007	the CSC Edmonton Chapter web page.	
Chapter Liaison	Position Open		Chapter Sponsor	
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Sustainability	Position Open			
At Large	Dave Lawrence	780 901 7260		

### 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.

The opinions and comments expressed by the authors do not necessarily reflect the official views of Construction Specifications Canada. Also, appearance of advertisements and new product or service information does not constitute an endorsement of those featured products or services.

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### **Announcements:**

# **Chair's Message**



Andrew Brassington, CSC Edmonton | Chapter Chair

Hello Chapter Members,

It's February already?!? Hope the first month of the year treated you well and you are on the right path to success.

Our last CSC event was one of the biggest attendances we've seen at event in a while with 80 people! There was a lot of engagement in both student and industry members.

We have our next event on February 15th about Converting Underutilized Office Spaces into Residential Units. Please join us at the Matrix Hotel for this informative talk!

More information to come about our annual InfoNet Tradeshow and Networking Event. New speaker, new venue, big ideas!

All these events go from ordinary to extraordinary with you.

Looking forward to seeing you soon.

Cheers!"

# **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.

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### 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)

None this month.

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

None this month.

### Previous Members Re-Joining / Re-Activated

None this month.

# **CSC Education:**

### Mike Ewaskiw, CTR, Manager, Architectural & Engineering Services, Stonhard



### **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 Mike for all your education needs. P: 780-237-7844 E: mewaskiw@stonhard.com

# **EDUCATION COURSES**

# **Upcoming Classes:**

Principals of Construction Documentation (PCD) –January 8, 2024 Specifier – January 8, 2024 Construction Contract Administration (CCA) – January 8, 2024 Technical Representative (TR) – TBD

# **Upcoming Classes Online:**

Principles of Construction Documentation (PCD) – January 8, 2024 Construction Contract Administrator (CCA) – TBD Specifier – TBD Technical Representative (TR) – TBD

# **Upcoming Virtual Classes:**

Principles of Construction Documentation (PCD) – January 12, 2024 Construction Contract Administration (CCA) – February 23, 2024 Specifier (SP) – February 23, 2024 Technical Representative (TR) – February 23, 2024

Social Media:

Check us out:







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# **Articles of Interest**

# 16 Materials Every Architect Needs to Know (and Where to Learn About Them)

#### Sourced from: https://www.archdaily.com / Ariana Zilliacus

A building's materiality is what our bodies make direct contact with; the cold metal handle, the warm wooden wall, and the hard glass window would all create an entirely different atmosphere if they were, say, a hard glass handle, a cold metal wall and a warm wooden window (which with KTH's new translucent wood, is not as absurd as it might sound). Materiality is of just as much importance as form, function, and location—or rather, inseparable from all three.

Here we've compiled a selection of 16 materials that should be part of the design vocabulary of all architects, ranging from the very familiar (such as concrete and steel) to materials that may be unknown to some of our readers, as well as links to comprehensive resources to learn more about many of them.

.1 Concrete

Concrete is the most widely used building material in the world, making it a good starting material to get to know. However, it also has significant environmental impacts, including a carbon footprint of up to 5% of worldwide emissions. To get to know all about designing with concrete, the Concrete Center has a collection of useful reports, many of which are free with registration.

### .2 Wood

One of the oldest, most traditional building materials around the world is of course timber. The material is beginning to take on new forms thanks to engineered wood products, and with high-rise buildings and even translucent properties, this diverse material is being taken to new heights. reThink Wood has a great collection of resources to learn about, and help architects design with, wood.

### .3 Steel

The city skylines as we know them exploded out of our discovery of steel, commonly used for reinforcement but serving as a beautiful skin in several examples. The wiki SteelConstruction.info offers everything you need to know about designing with steel.

### .4 Plastic

Although this may seem like a cheap, unsustainable material to some, one should not be so quick to judge the possibilities that plastic holds. We produce so much of it; why not recycle it in the form of architecture or bioplastics? What about the whole new world that comes with 3D printing? The American Chemistry Council has a great overview of plastics as a material, as well as a rundown of their major uses in architecture, with links to further resources for each.

### .5 Stone

Another material used over generations in certain geographical locations around the world, stone has a wide diversity of textures, colors, and strengths. Despite its heavy, solid materiality, one can still work with it to achieve diverse forms. The Building Stone Institute has a variety of resources including fact sheets and specification sheets for many of the most common types of stone used in construction.

### .6 Textiles

Textiles have been explored most commonly using tensile structures, however, there's a whole range

of opportunities using this material: load-bearing chairs, inflatable spaces, fabric casting, and wooden fabrics amongst others. Fabric Architecture Magazine has a collection of technical articles for architects, while their resource guide provides a comprehensive overview of the products on the market in this category.

### .7 Glass

Our most used material to achieve transparency and light is without a doubt glass, one of the most commonly used façade elements in contemporary architecture. Some are taking it a step further, attempting to extend its properties to create "intelligent" responsive glass. The PPG Glass Education Center is a great place to learn more.

### .8 Brick

Despite its rigid, rectangular shape made to fit in your hand, brick architecture has been shown to create beautiful structures with the right craftsmanship. Innovative thinkers are also finding new ways to incorporate active sustainability into the small building elements. The Brick Development Association has a collection of resources for learning more about brick.

### .9 Kevlar

A material stronger than metal body armor, with awesome tensile strength, Kevlar is certainly an asset when building large structures. With a less rigid composition than steel, however, it could reform the way we think of large load-bearing structures. As a still relatively new material, there are few comprehensive information sources on Kevlar's architectural applications, but this article and this snippet from the book Material Architecture by John Fernandez are good places to start.

### .10 Bamboo

Bamboo usage is generally dictated by the geographical location of the architectural project. In locations where bamboo makes sense, it is an incredibly flexible, strong, sustainable material that can be useful in many ways.

### .11 Carbon Fiber

Reflecting everything about our new material endeavors is carbon fiber: "five times stronger than steel, twice as stiff, weighing significantly less." The composition of carbon fiber makes it flexible to work with, allowing it to take shapes from surfaces to rods, depending on your requirements.

### .12 Photovoltaic Cells

With all the high-rises soaring high above the earth, it's a wonder photovoltaic facades haven't become a norm. Due to the evolution of photovoltaic technology, cells may no longer have to be locked in place on the roof. The International Energy Agency's design handbook for photovoltaics in buildings is available for free online.

### .13 Earth

Earth is among the oldest building materials we can think of due to its almost universal accessibility and relative ease of use at small scales. It's capable of being compressed into modules, as well as creating freeform surfaces, all of which can eventually return to the earth with ease.

### .14 Waste

We produce a huge amount of waste covering a huge range of materials, but getting to know your waste is an excellent idea for future architects. Whether it's converting cigarette butts into building material or plastic bottles to earthquake-resistant walls, recycling is something to be admired.

### .15 Straw

Creating a passive thermal environment, shielding from rain, and blending into similar natural surroundings are just a few things that straw is good at. It's no wonder thatched roofs were so popular in the past.

### .16 Organic Materials

With the massive loss of habitats happening around the world, getting to know organic structures created by animals is something that's best to do sooner rather than later. Not only can we learn from their use of materials, it also opens up opportunities for us to coexist by incorporating their organic materials into our architecture.

As with all materials, accessibility and cost plays a huge role. There are sure to be materials not on the list that would be the obvious option in certain parts of the world, so be sure to get to know the materials around you in addition to these and you'll be sure to have a complete resource.

# **New Federal Law Aims to Streamline Construction Payment Practices**

Sourced from: https//www.constructioncanada.net

On December 12, Jean-Yves Duclos, minister of public services and procurement, implemented a federal prompt payment legislation, which came into effect on December 9. The legislation—the Federal Prompt Payment for Construction Work Act—seeks to tackle issues related to payment delays along the contracting chain.

Developed in collaboration with key construction industry stakeholders and other government departments, the new law is designed to ensure payments are made promptly and efficiently throughout the construction process, protecting vital construction jobs and making it easier to do business with the Government of Canada.

Under this legislation, the federal government is required to make payments within 28 calendar days of receiving a proper invoice from a contractor. Subsequently, the contractor has seven days to pay subcontractors, who then have seven days to pay their sub-subcontractors, and so forth down the payment chain.

The primary objective of the legislation is to ensure all parties involved in construction projects receive timely payments. This flow of funds is essential for the successful completion of federal infrastructure projects.

Existing construction contracts have been given a one-year period, starting from December 9, 2023, to comply with the Federal Prompt Payment for Construction Work Act. This initiative aims to have a positive impact on the construction industry, by enhancing financial predictability and supporting the timely completion of crucial infrastructure projects across Canada.

# Edmonton Working with Norwegian Company to Turn Waste into Green Energy

Sourced from: https://www.msn.com / cbc.ca

A Norwegian clean energy development company has signed an agreement with the City of Edmonton to create one of Canada's first industrial scale waste-to-energy facilities.

In a news release sent Wednesday, officials announced the city would divert about 150,000 tonnes of residential waste away from landfills, and dispose of it at a waste-to-energy facility operated by

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Varme Energy Inc.

Slated to begin in early 2027, the facility, which will be located about 40 kilometres northeast of Edmonton, will convert residential waste into green electricity and industrial heat. It will cost roughly \$300 million to build.

The facility will produce steam that either generates electricity or provides heat for homes and industrial processes. The process will also integrate carbon capture and storage.

Shawn Collins, CEO of Varme Energy Inc., said in an interview Tuesday the agreement will result in what he believes will be the largest avoidance of methane in Edmonton.

"When you incorporate carbon capture, all of the emissions that would normally be escaping out of the exhaust stack of a waste energy facility are captured and sequestered underground," he said.

"By combusting that and putting it underground, you both avoid the methane at the landfill and capture all of your carbon and put it underground, making the round trip experience significantly carbon negative."

Collins said conversations around the raw economics of carbon capture have only come to the forefront over the last couple of years, pointing to recently introduced tax credits from the provincial and federal governments.

Alberta Premier Danielle Smith introduced the Alberta Carbon Capture Incentive Program in November to increase investment in carbon capture, utilization and storage facilities (CCUS) in the province.

She told reporters at a news conference in Edmonton that CCUS facilities have the potential to become a powerful tool for building carbon-neutral economies.

"This technology is important because we're working to phase out emissions," Smith said in November. "We're not phasing out energy production."

Carbon capture facilities have been used in Europe and other parts of the world for more than three decades.

Varme Energy Inc. is also looking at operating a similar facility in Innisfail, Alta., 184 kilometres south of Edmonton. The company is also exploring projects in southern Alberta.

Denis Jubinville, the City of Edmonton's branch manager of waste services, said the city released a request for proposals in January 2023 for a waste energy provider as part of its climate resilience mandate and its 25-year waste strategy.

"Within that strategy, we talk about diverting waste out of landfill, every time waste goes to a landfill, there's the option or the potential of greenhouse gas that's emitted," he said. "We want to reduce that as much as possible."

About 40% of the waste collected by the city is already diverted away from the landfill through its recycling programs, Jubinville said.

The garbage that will be processed by Varme is part of the 60% that has been going to the landfill.

He said there will be a "reasonable" cost to the city for diverting trash to Varme's facility, but could not say how much.

"But it is a lower cost than some of the other options that have been available to us for diverting waste," Jubinville said.

"It will increase the cost to the utility; however, we do have upcoming opportunities ... that should

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enable us to mitigate some of the impacts to our ratepayers."

Until the facility opens in 2027, Jubinville said the city is working to educate residents on reducing waste where they can. Once it opens, the city will send residual garbage waste to the facility for a period of 15 years.

# **Japanese City to Pioneer Car Charging at Traffic Lights**

Sourced from: https://www.globalconstructionreview.com / David Rogers

Kashiwa-no-ha's use of EVs and (eventually) automated trolley buses is intended to decrease the city's impact on its environment (Abasa/Public Domain)



The city of Kashiwano-ha on the northeast corner of Tokyo Bay has become the first Japanese city to test wireless charging for EVs, The University Journal reports.

The universities of Tokyo and Chiba are doing the trial with nine companies, including Japanese tire maker Bridgeston and real estate group Mitsui Fudosan.

The idea is to put a

wire coil in the road surface in front of traffic lights so cars can charge when they're red.

The theory is that a 10-second charge will let a typical EV travel one extra kilometre.

Tokyo University says the trial will run from October to March 2024 under the direction of the Ministry of Transport near the west exit of Kashiwa-no-ha Campus Station.

The system was developed by Professor Hiroshi Fujimoto and Associate Professor Osamu Shimizu of the Graduate School of Frontier Sciences at the University of Tokyo.

To increase the efficiency of the process, a current only passes through the chargers when a vehicle is detected.

Kashiwa is billed as a "smart city" based on a partnership involving the public, private, and academic sectors.

Hitachi's website describes it as "a revolutionary community development project".

# ASSOCIATION LINKS

- Alberta Construction Safety Association (ACSA)
  - www.acsa-safety.org
- Alberta Building Envelope Council (ABEC) www.abecnorth.org
- Building Information Modeling (BIM) Forum www.insightinfo.com/bimforum
- Biomimicry Guild
   www.biomimicryguild.com
- Canadian Green Building Council (CaGBC) www.cagbc.org
- CCDC Documents
   www.ccdc.org/home.html
- Construction Specifications Institute (CSI) www.csinet.org
- International Construction Information Society (ICIS) www.icis.org
- OmniClass
   www.omniclass.ca
   www.omniclass.org
- Uniformat
   www.csinet.org/uniformat
- Institute for BIM in Canada (IBM)
   www.ibc-bim.ca

- Architecture 2030
   www.architecture2030.org
- BuildingSMART Alliance (North American Chapter of BuildingSMART): www.buildingsmartalliance.com BuildingSMART International (formerly IAI) www.buildingsmart.com
- Biomimicry Institute
   www.biomimicryinstitute.org
- Canada BIM Council
   www.canbim.com
- Canadian Green Building Council (CaGBC)

   Alberta Chapter: www.cagbc/chapters/alberta
- Construction Specifications Canada (CSC)
   www.csc-dcc.ca
- buildingSMART Data Dictionary bsdd.buildingsmart.org
- MasterFormat (https://secure.spex.ca/siteadmin/freedocuments/images/1.pdf)
  - buildingSMART Canada
     www.buildingsmartcanada.ca
  - Ace BIM www.acebim.ca

# **ASSOCIATION LIAISONS**

Alberta Association of Architects (AAA) <u>http://www.aaa.ab.ca/</u> Alberta Painting Contractors Association (APCA) www.apca.ca Alberta Wall & Ceiling Association (AWCA) http://awca.ca Alberta Roofing Contractors Association (ARCA) http://www.arcaonline.ca info@arcaonline.ca

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) <u>http://www.ashrae.org/</u> / <u>ashrae@ashrae.org</u> Alberta Painting Contractors Association (APCA) www.apca.ca

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) <u>http://www.aset.ab.ca/</u>

Russ Medvedev, russm@aset.ab.ca

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

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

Portland Cement Association ConcreteTechnology@cement.org

Interior Designers of Alberta www.interiordesignalberta.com edmonton@boma.ca 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





# **The Executive**

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