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.

December 2021 Edition

Editor: Tracey Stawnichy

In This Edition...

2020 / 2021 Edmonton Chapter Executive

Director	Tracey Stawnichy	780 994 3699
Chairman	Andrew Brassington	587 341 5268
Vice-Chairman	Dylan Leclair	587 335 9552
Secretary	Jessica Prosser	587 340 7169
Treasurer	Catherine Osborne	780 486 6400
Architect	Kevin Osborne	780 717 1007
Chapter Liaison	Position Open	
Education	Mike Ewaskiw	780 237 7844
Engineer	Jamie Murphy	780 983 0288
General Contractor	Renee McKenzie	780 717 7798
Interior Design	Corry Bent	780 995 1647
Manufacturer/Supplier	Mike Lafontaine	780 907 4920
Marketing, Promotion, and Communications	Position Open	
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Newsletter	Tracey Stawnichy	780 994 3699
Specifications	David Watson	780 758 4147
Website Administrator	David Watson	780 758 4147
Trade Contractor	Position Open	
Program	Kyla Keller Jessica Prosser	780 886 1281 587 340 7169
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Sustainability	Position Open	
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Annual $100 if received by May 1;
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$25 if received by February 1
Add $50 to have a link to your company web site from the CSC Edmonton Chapter web page.

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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

Andrew Brassington, CSC Edmonton | Chapter Chair

Happy Holidays, Chapter Members!

On behalf of the Executive Committee, we would like to wish you very happy holidays and a prosperous new year!

Take a look at our education offerings and start the new year off right. There will also be some big events next year, including Infonet 2022.

Follow us on LinkedIn to stay up to date with our current news and events.

All the best to you and yours in the new year. Cheers!

Membership in CSC

Joseph Trivellin, CTR

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)

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

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.

Mike Ewaskiw, CTR, Manager
Architectural & Engineering Services
P: 780-237-7844 E: mewaskiw@stonhard.com

EDUCATION COURSES

Upcoming Classes:

- Principals of Construction Documentation (PCD) – TBD
- Specifier – TBD
- Construction Contract Administration (CCA) – TBD
- Technical Representative (TR) – TBD

Upcoming Classes Online:

Principles of Construction Documentation (PCD) – January 10, 2022 – March 7, 2022
Construction Contract Administrator (CCA) – January 10, 2022 – March 14, 2022
Specifier – January 10, 2022 – April 4, 2022
Technical Representative (TR) – January 10, 2022 – March 28, 2021

Upcoming Workshops:

Principles of Construction Documentation (PCD) 5 Day Workshop – TBD
Construction Contract Administration (CCA) 5 Day Workshop – TBD
Specifier (SP) 7 Day Workshop – TBD
Technical Representative (TR) 5 Day Workshop – TBD

Social Media:

Check us out:

Articles of Interest

The World's Most Exclusive Address is Actually on a Yacht – and it's 39 Apartments Just Hit the Market

Sourced from: https://www.msn.com / Kristen Shirley

Courtesy of Winch Design

Few trips are as luxurious as one aboard a superyacht. Impeccable service, stunning surroundings, exceptional amenities, and divine cuisine all combine to create a unique experience that you may never want to leave. Pretty soon, you won't have to buy a superyacht of your own to live on one. In 2024, the superyacht Somnio will launch with 39 luxurious apartments – a true floating paradise.

At 222 meters (or nearly 730 feet), and with 33,500 GRT (gross register tonnage), Somnio will be the largest yacht in the world by both length and volume. (The current record is Azzam, which measures 180 meters.) Somnio will cost a staggering €500 million and is being built by VARD in Norway.

Instead of the typical cabins aboard a yacht, every unit will be an ultra-luxury apartment with expansive windows. The smallest apartments are close to 2,000 square feet of indoor and outdoor space, while the largest spans over 10,300 square feet, including a nearly 4,000-square-foot private terrace. The interiors are completely bespoke, down to the layout. Somnio is working with three top design firms that specialize in yachting: Tillberg Design of Sweden, Winch Design, and Luttenberger Design.

Provided by Travel + Leisure / Courtesy of Luttenberger Designs

Owners can choose the number of bedrooms and optional rooms, including a private kitchen, gym, or library. Every apartment will have a private outdoor space, a rarity among even the largest superyacht charters (most outdoor space is open to all guests aboard a yacht). Floor-to-ceiling windows flood the apartments with light and allow for stunning views. Owners will be able to admire the iconic cliffs of the Amalfi Coast, the New York City skyline, or even see polar bears and penguins in Antarctica – all from the privacy of their apartments.

Naturally, the amenities aboard are extensive. There's a large aft deck for days at sea, which includes a beach club with a lap pool and two large spas. There are plenty of loungers and outdoor seating so you can soak up the sun and the views. For water sports, head to the marina at the stern of the yacht, where there will be experts in fishing, diving, snorkeling, and more. There's also a helicopter landing pad for residents looking to arrive in style.

Provided by Travel + Leisure / Courtesy of Winch Design

Inside, there are two restaurants. World-class chefs will board at select destinations to cook their famous cuisine and immerse owners in local culture. There's a 10,000-bottle wine cellar with incredible vintages, a top-deck lounge and library, a sports bar, a movie theater, and the Connoisseur Club for fine spirits and cigars. Health and wellness are a focus aboard, too; Somnia will have medical care aboard, and there's a great fitness area and a spa, as well.

Co-founder and captain Erik Bredhe, formerly captain of The World, a cruise ship-sized vessel with 165 residences, is certainly the man to lead such an ambitious undertaking. "Beauty may be found as much on the inside of Somnio as it is on the outside," he said. "As the only residential superyacht in the world, we are delighted to work with designers that complement our exacting standards. Our owners will experience only the best, as is befitting of a yacht of this nature."

Ready to learn more? You'll need a referral or a private invitation, as the ownership list is closely curated and will be tightly guarded. Apartments start at €9.5 million.

Step Inside This City of the Future That Time Forgot

Sourced from: https://www.architecturaldigest.com / Chris Malloy / Photography by Courtesy of the Cosanti Foundation

The outside shell of the Ceramics Apse was shaped over a form carved of fine silt. The apse faces south, allowing for shading in the summer from the sun straight overhead. In the winter months, the sun is at a low angle, warming the interior of the apse. (Photo: Tomiaki Tamuri)

An hour north of Phoenix, a city rises from the desert. Its population is 80. It was started in 1970 and is only 5% complete. The city, designed by the late Italian architect Paolo Soleri, is called Arcosanti. Arcosanti rests on an arid rise among Sonoran scrub and needled trees. Its ribbed vaults, round shapes, and sweeping curves look lifted from fantasy or sci-fi. Many structures point south for light and heat purposes. There are no roads.

Soleri conceived of Arcosanti in keeping with Arcology, a mode of thinking about design that he created. Arcology brings efficiency and environmental intelligence to the structures and pathways of human life. In theory, a city planned with this school of thought in mind will yield a calculated urban sprawl where people live in harmony with the natural world.

“We’re here imagining cities are the newest thing,” says Jeff Stein, co-president of Arcosanti. “Cities happened only 7,000 years or so ago. We haven’t had time to design them properly for human evolution.” Stein lives in a second-floor, south-facing apartment. “The thickness of the room is predicated on sun angles,” he says. “On the winter solstice, the sun shines all the way in.” His abode connects to a solar greenhouse that provides heat in the winter and food year-round.

A view of Arcosanti from the southwest (Photo: Alfonso Elia)

Arcosanti is also built for efficiency. To get to work, Stein has a 30-second commute. He walks out to his balcony, shimmies down a ladder, and turns in to his first-story office. Stein's building cluster has a courtyard with fig trees. The courtyard is one of the numerous meeting places in the city's lanes and open spaces.

Arcosanti further maximizes convenience and community space by cutting roads. "Right now, most American cities are at least 50% pavement," Stein says. "If you get rid of streets, all of a sudden you have a walking city."

The S.O.D. Unit (Soleri Office and Drafting Unit) is the southeast cornerstone of the East Crescent Complex at Arcosanti. Constructed during 1978-79, it houses administrative offices, the planning and drafting department, and Paolo Soleri's apartment at Arcosanti. There is also a large meeting room and greenhouse. (Photo: Alfonso Elia)

The city's most striking feature is likely the apse of its bronze foundry, where Soleri bells are cast. The apse resembles quarter-sphere hollows of Romanesque cathedrals where the center gives way to side chapels. Soleri's apse faces south. It fills with shade in summer, light in winter.

Each year, 50,000 people from all over the world visit Arcosanti. University students come to study design and sustainability. Concerts and festivals are held in its amphitheater. Some visitors even rent apartment guest rooms and stay overnight. Construction on Arcosanti has been glacial; the project may never reach completion, but through the unfinished ecological city the principles of Arcology live on as a model.

"At a time when climate is changing and seas are rising, there's going to be great migration into the

coasts," Stein says. "We're trying to be part of the global conversation of how eight million people can live on the planet."

Which Materials are Easiest to Recycle?

Sourced from: https://www.archdaily.com / Eduardo Souza

The construction industry is responsible for 75% of the consumption of earth's natural resources. Stone, sand, iron, and many other finite resources are extracted in huge quantities to supply the markets. Additionally, construction sites themselves generate enormous quantities of waste, whether through construction, demolition, or remodeling. In Brazil, for example, construction waste can represent between 50% and 70% of the total mass of municipal solid waste [1]. This waste often ends up in landfills and dumps rather than being properly disposed of, overwhelming municipal sanitation systems and creating informal disposal sites.

If more care is taken, however, this waste could have enormous potential for reuse. If given proper destinations and processed correctly, recycled materials can replace those extracted from deposits to form new building components, maintaining a quality generally comparable to traditional materials.

Recycling is the process of reusing discarded materials to reintroduce them into the production cycle. This process reduces the consumption of raw materials, decreases the total volume of waste, and can create jobs for thousands of people. To start the process, an efficient separation and collection system is essential. Although the classifications are different in every country, two major classes generally exist. The first includes concrete, ceramics, stone, and mortar, which represent most construction waste. The other class concerns wood, metal, glass, plastic, plaster, and more. Here are the most common materials to recycle and what uses they often have:

Steel

Steel can be made from the combination of iron ore and coal, which is heated in a blast furnace, or by recycling scrap, which is made in an electric furnace. The recycling of steel goes back to the Roman Empire, when soldiers collected instruments of war left in trenches to produce new weapons. In fact, steel can be endlessly transformed into new objects without loss of quality. When recycled, the consumption of electricity lowers by 80%, causing a lower environmental impact and eliminating completely the extraction of raw materials.

Rebar for reinforced concrete, wires, nails, and some metal profiles are generally made from scrap metal.

Concrete

Recycling concrete allows construction waste to be reused and construction costs to be reduced. In recycling hardened concrete, a special crusher is used and produces what is known as "recycled aggregate". Until recently, recycled concrete was only used as a subfloor. But tests are showing that concrete aggregate can create structural elements from 30 up to 40 MPa with the right technologies. Importantly, recycled aggregates are also anywhere from ten to fifteen percent lighter per unit of volume than virgin concrete, which entails less weight per cubic meter and thus less material, transportation, and overall project costs.

Wood

Using "reclaimed wood" has become quite popular. Hardwoods can last hundreds of years, if kept properly. They can be used in large structural parts or as slats for the manufacture of other artifacts such as crates, pallets, or supports for various purposes. But even softer, cheaper woods can be recycled, especially as a raw material for the panel industry. The most common use of recycled wood

today occurs with the complete grinding of wood and manufacture of MDF sheets for the production of woodwork.

Another option, if none of the above processes can be applied, is to dispose of wood waste for biomass production by burning it in industrial furnaces.

Plaster

Recycling plaster in construction is feasible, but if it is improperly disposed of, it can emit flammable and highly toxic hydrogen sulphide, contaminating the soil and groundwater. However, if suitably processed, recycled plaster retains the same physical and mechanical characteristics as conventional plaster at a relatively low cost.

EPS

Expanded polystyrene, or EPS, is a material that can be recycled as well. EPS becomes a raw material for the manufacture of new plastic products when it is crushed and compacted. It can be used for finishes or even paints.

Glass

Although glass bottles and containers are highly recyclable, the recycling of window glass faces a series of additional complications. Due to its different chemical composition and melting temperature, it cannot be recycled alongside other glass objects, including other types of window glass itself. Window glass can, however, be melted and remanufactured into fiberglass, to be incorporated into asphalt or even combined in yellow and white reflective road paints. Broken glass can be combined with concrete to create floors and granite countertops as well.

Zinc, aluminum, packaging, fabrics. These additional materials may also have reuse and recycling options. Of course, there are also substances such as asbestos, latex paint, chemical solvents, adhesives, and lead-based paint that need to be treated carefully to reduce their impact on the environment. With growing concerns about transforming the built environment to be more sustainable, thinking about the entire life cycle of a material becomes vital. In addition to reducing the chances of dumping in clandestine locations and helping to relieve pressure on landfills, recycling can lead to lower costs for both the environment and the consumer. In addition, it reduces the demand for new natural resources, reduces production and transportation costs and eliminating the need to send waste to landfills.

Design in the Age of Pandemics

Sourced From: Sourced from: https://archive.curbed.com / Diana Budds

Throughout history, how we design and inhabit physical space has been a primary defense against epidemics.

The Lovell Health House, in Los Angeles, is one of those places that makes you green with envy. Perched on a hillside, the gleaming, all-white modernist house is bathed in sunlight and has floor-to-ceiling windows throughout. There's a soaking pool, avocado trees in the yard, huge porches, and a roofdeck. It's house porn with a higher purpose: Its architect – Richard Neutra, famous for his case study houses – designed it in the late 1920s for Philip Lovell, a nutritionist, naturopathic doctor, and Los Angeles Times columnist who believed in the virtues of a raw-food diet, ample sun, and fresh air. His home was tailored for a lifestyle of health and wellness – and it takes its cues from buildings designed to cure tuberculosis.

Designed by Richard Neutra, the Lovell Health House features details borrowed from tuberculosis hospitals (courtesy Dion Neutra, Architect, and Richard and Dian Neutra Papers, Department of Special Collections, Charles E. Young Research Library, UCLA).

For thousands of years, humans have looked to physical space to treat and cure sickness, just as Philip Lovell did. People have redesigned cities, infrastructure, architecture, and interiors all in the name of minimizing the risk of infectious disease. Meanwhile, enterprising businesspeople have capitalized on the fear of germs to sell products and services that supposedly stopped the rumored causes of illness (spoiler: they usually didn't work). It's only recently – with advancements in virology, bacteriology, epidemiology, and medicine mostly in the 19th and 20th centuries – that antibiotics and immunizations have been on the frontlines of infectious diseases. Now, with new diseases emerging, like COVID-19, and no vaccines or cures to fight them, one of the most effective solutions is to go back to the physical: social distancing, quarantine, isolation, and, perhaps, adaptations to our cities, neighborhoods, and homes.

"We have novel diseases that we don't have a cure for and we have global travel so that means a pathogen can jump into a human being and that person can be in basically any global city within 24 hours and so the only thing we have left is quarantine," says Geoff Manaugh, who, along with his wife Nicola Twilley, is writing a book about quarantine, due out in spring 2021 from MCD Books. "We have to return to this kind of medieval spatial response to disease control, which means that architecture and urban design suddenly become medical. There's something totally fascinating about that—that we can use the built environment as a way to control epidemic spread."

It's an innate human instinct to distance yourself from danger, to put space between you and whatever it is. As early as 400 BC, Hippocrates theorized that poor physical environments, like bad air and water, caused illness and disease, and believed that going to areas with fresh air and water were essential to health. The word quarantine – which means restricting the movement of people or goods – is rooted in the latin word for "forty days," a reference to preventative measures taken in Venice during the middle ages to stop the spread of the bubonic plague. Ships arriving from areas affected by the "Black Death" were required to anchor for 40 days before the crew could disembark. After the Apollo 11 astronauts returned from the moon in 1969, NASA quarantined them in an Airstream trailer for 21 days out of precaution for bacteria or organisms that they might have brought back with them from the mission.

"[Quarantine is] a spatial buffer, it's a temporal buffer," Manaugh says. "It's almost like an algorithm of adding space and time and preventing something from encountering us immediately. That's stayed the same over the centuries."

For thousands of years, space has been a primary defense against infectious disease. After the Apollo 11 astronauts returned to earth in 1969, they spent 21 days in an Airstream trailer under quarantine just in case they brought harmful microorganisms with them (courtesy of NASA).

Manaugh and Twilley's book is based on years of interviews and travel, and grew from earlier curatorial research for exhibition they organized the Storefront for Art and Architecture in 2010 called "Landscapes of Quarantine." The exhibition explored historic spaces of quarantine – like NASA's Airstream; the Chernobyl Exclusion Zone; areas of Guantanamo Bay that the U.S. used to imprison HIV-positive Haitian refugees; and the islands around New York City, which were once used to hold immigrants before entering the country, for smallpox patients, and for people who had other infectious diseases, like Typhoid Mary. For the exhibition, Manaugh and Twilley invited designers to imagine the future of quarantine given the urgency of our era of antibiotic resistance, new diseases, pandemics, and bioterrorism. These speculations included a satirical public health campaign about making the most of your time in quarantine, and a look at how cities might accommodate more spaces for quarantine, which raised issues of ethics and discrimination.

Space, as it relates to infectious disease epidemics, isn't just about quarantine; it's also a design problem. If you look around most neighborhoods today – in cities and suburbs – you'll see evidence of how humans have responded to infectious disease by redesigning our physical spaces. Sara Jensen Carr, an architecture professor at Northeastern University, is exploring the connection in her forthcoming book The Topography of Wellness: Health and the American Urban Landscape, due out from the University of Virginia Press in fall 2020.

Carr's book focuses on design interventions from the industrial revolution until today and explores them through the lens of epidemics, including infectious diseases like cholera, typhoid, and tuberculosis; how the burgeoning field of urban planning used public health to advance its ideas in the 19th century; how 20th century modernist architects viewed their buildings as a type of medicine; how the language of epidemics was misused during the 1960s to advance discriminatory city planning; and today's interest in using urban design to address obesity and mental health.

During the industrial era, modern sanitation and water systems were originally created to fight the pathogens that cause cholera and typhoid. Before indoor plumbing and sewer systems were common, it was typical for raw sewage to flow out of buildings and directly onto city streets. It wasn't until a severe cholera outbreak in London in the 1850s that a physician proved contaminated drinking water caused the deaths. Prior to that the prevailing theory was "miasma," the medieval understanding that disease was spread through contact with "bad air," like vapors emanating from rotting organic matter.

This eventually led to a sanitary reform movement, which created drinking water and sewage infrastructure. As Carr explains in her book, this worldwide movement led to straighter, smoother, and wider streets that were necessary to install underground pipe systems and that could be washed down.

Frederick Law Olmsted, who was a sanitary officer during the Civil War, used public health to convince New York City to build Central Park, arguing that its open spaces would become "the lungs of the city." His belief in the medicinal qualities of green space also influenced his 1868 master plan for Riverside, Illinois, a "garden suburb" that was viewed as a healthier alternative to city life due to widespread access to recreational space.

The sanitary reform movement also became a domestic issue, as germ theory – or the scientifically proven theory that microorganisms cause disease – began to overtake the miasma theory as the accepted reason why people became sick. As Nancy Tomes explains in her book The Gospel of Germs: Men Women and the Microbe in American Life, large-scale public health campaigns between the 1880s and 1920s began educating people that microorganisms caused illness and an obsession with cleanliness took root, particularly in affluent homes.

Victorian bathrooms were once lavishly furnished with drapes, carpet, and decorations like other rooms. The sanitary reform movement changed that.

Certain furnishings were perceived to collect germs so it became popular to get rid of them. An 1887 manual urged women to break with the Victorian style of home furnishings and opt for items that wouldn't collect dust, which was believed to carry disease-causing microorganisms: "To propitiate the goddess of health, we can well afford to sacrifice on her altar the superfluous draperies, carpets, and ornaments of our living and sleeping rooms," it said.

Before the 1880s, bathrooms were decorated similarly to other rooms in affluent homes, complete with carpet, drapes, and wooden cabinetry. Removing those items became popular in the late 1800s and early 1900s. At the dawn of the 20th century, companies selling flooring and wallcoverings capitalized on the assumption that smooth, impervious surfaces were healthier than carpet and textiles. Materials like porcelain, tile, and linoleum became coveted for the spaces that were most closely associated with germs, like kitchens, bathrooms, and laundry rooms.

Modernist architects believed that clean, sanitary spaces were essential for treating illness and Sara Carr explores this phenomenon in her book. Sanatoriums, for example, treated tuberculosis by isolating people with the illness and giving them access to sunlight and fresh, dry air. Hallmarks of modernist sanatorium design – which experienced a surge in the 1920s and 1930s – included large windows, balconies, flat surfaces that wouldn't collect dust, and white paint, which offered the appearance of cleanliness and made residues and smudges visible.

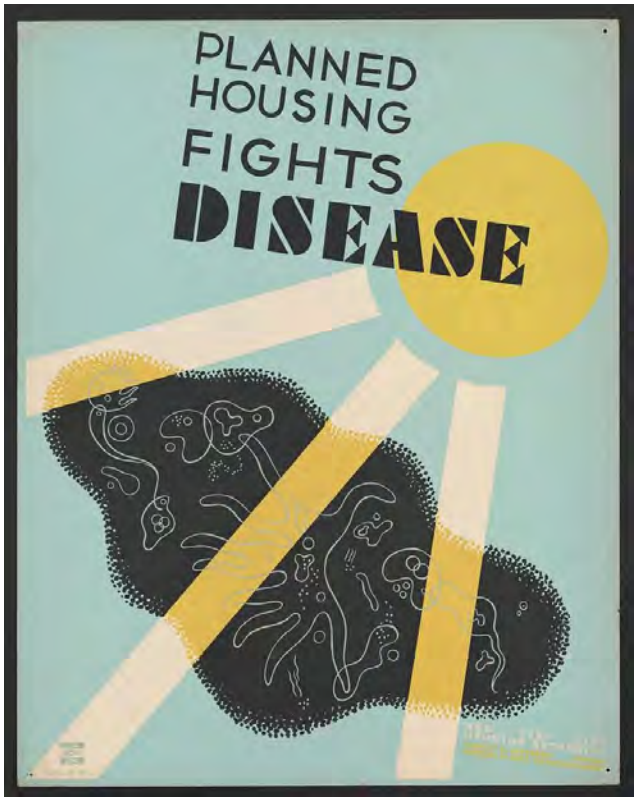
Those traits crossed over from health care architecture into residential, like Neutra's design for the Lovell Health House. Le Corbusier, arguably the most famous modernist architect, was notorious for his obsession with cleanliness in his designs. The Villa Savoye, an influential modernist house he created, features a handwashing sink right near its entrance.

"Le Corbusier viewed light and air as being medicinal," Carr says. "He talks about the exact cubic feet of air and square footage of windows [in his architecture]. It would be the perfect amount for optimum health. He's thinking about doses and germ theory."

Infectious disease was also one of the drivers of housing reform and the urban renewal era between the 1930s and 1970s. In New York City, overcrowded living conditions in tenements were perceived to be "fever nests" and "lung blocks" for the high rates of residents with tuberculosis infections.

Public health was used to rationalize slum clearance programs, which disproportionately targeted African American and Latino neighborhoods, which were perceived to be diseased, to make way for "healthier" public housing towers. 1930s Works Project Administration propaganda posters proclaimed that "Planned Housing Fights Disease."

WPA propaganda poster from the 1930s



"By comparing urban blight to cancer and infectious diseases in terminology and by mapping blight door to door like cholera, [policy makers] were able to convince people it was 'contagious,' like it could spread to the suburbs, so that the only possible solution was eradication," Carr explains. "Slums and urban blight were not actually disease in of themselves, rather the result of policies, disinvestment and racism, so really the only effect was the displacement of the people that lived in these neighborhoods, which in turn left them vulnerable to social conditions that continue to plague their health today."

As immunizations, antibiotics, and antiviral drugs became more advanced, using the built environment to treat infectious disease epidemics waned. Building in new ways to fight disease was effective in mitigating the spread of disease, as was the case with sewer and water infrastructure and reducing overcrowded housing (which helped reduce transmission of some diseases, like tuberculosis), but it was a blunt tool in comparison to medicine.

"There was a real decoupling of environment and health interest when germ theory came to the forefront," Carr says. "When we had diseases that were more effectively tackled by vaccines, like

polio and Tuberculosis, there wasn't that coordinated government action [on urban landscapes]. Vaccines and medicines became the best way to treat [these epidemics]."

Meanwhile, there was a split between medicine and public health during the 20th century. As medicine was used to treat disease, public health became more about behavior and societal systems. But now, with no medicine available to treat emerging infectious diseases, like the COVID-19 pandemic, using space as a way to address epidemics has renewed interest.

In a recent article for The Conversation, three professors specializing in environmental health, urban geography, and global suburbanization, argued that deeper understanding of how we build our cities is urgently needed.

"We need to understand the landscapes of emerging extended urbanization better if we want to predict, avoid and react to emerging disease outbreaks more efficiently," they wrote. "Rapid urbanization enables the spread of infectious disease, with peripheral sites being particularly susceptible to disease vectors like mosquitoes or ticks and diseases that jump the animal-to-human species boundary."

In a recent Citylab story, Michele Acuto, professor of global urban politics in the School of Design at the University of Melbourne, speculated that building out our digital infrastructure – from a need to stay connected while being socially distant – could be the equivalent to the 19th century's use of civil engineering and urban planning to address cholera and typhoid.

Carr hopes that there might be a revival of the sanitation movement that brought us infrastructure like safe drinking water and sewage systems. Consider the lack of safe, clean, accessible public bathrooms in all across America. The CDC recommends washing hands after sneezing, coughing, blowing your nose, or using a public space to reduce the risk of COVID-19 infection. How are we supposed to do that if public bathrooms aren't readily available?

"Kigali had mobile temporary hand-washing stations. Will we see a version of that in the U.S.?" Carr says. "The problem is, we're terrible at maintaining infrastructure...The United States has abandoned its public realm. Maybe we should think about the value of the public realm and public space in combating this thing."

Manaugh could see a use for technology in addressing the need for quarantine and isolation to slow the spread of epidemics: "In terms of keeping people isolated, maybe [a smart home] can read your temperature and it knows you can't go out into the shared parts of an apartment building," Manaugh says.

While some version of Alexa confining you to your home sounds pretty dystopian, Manaugh also imagines more pragmatic approaches. "What I think would be interesting to see is, fast forward five years or even 10 years, if the average American home has surreptitiously and kind of quietly absorbed design cues from the health care industry in order to make the domestic interior safer for germ transmission," he says. "That might mean new materials, it might mean totally different kinds of design."

The future remains uncertain, and as the COVID-19 pandemic continues to spread, more questions will undoubtedly arise. Seemingly overnight, our way of life has changed as hospitals overflow, as cities go on lockdown, as schools close, and as working from home becomes more prevalent. Larger societal implications and how they'll manifest through design is something Carr is actively thinking about.

"One thing we've gotten away from looking at – and this is in early writing from Hippocrates and [the ecologist] Aldo Leopold – is thinking about how our bodies reflect disruptions in the ecosystem," she says. "What's good for the body is good for the ecosystem. My body of work is looking at how climate

change impacts our health: What does [climate change] mean for air pollution? For vulnerable populations? I always wonder: What do these pandemics have to do with a warming world? What will we learn in the long term?"

ASSOCIATION LINKS

- **Alberta Construction Safety Association (ACSA)** www.acsa-safety.org
- **BuildingSMART Alliance** (North American Chapter of BuildingSMART): www.buildingsmartalliance.com
- **BuildingSMART International (formerly IAI)** www.buildingsmart.com
- **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
- **Building Information Modeling (BIM) Forum** www.insightinfo.com/bimforum
- **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)
http://www.aaa.ab.ca/

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)
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
www.interiordesignalberta.com

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)
http://www.aset.ab.ca/
Russ Medvedev, russm@aset.ab.ca

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

Bulletin Board

Message from the Executive:

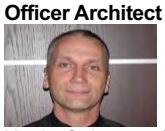
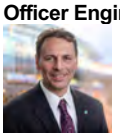
We in the Executive are looking for creative-minded individuals who can take on a position and follow through with ideas…if this is YOU, send a message to information@cscedmonton.ca and we will be quick to get back to you!

Open Positions Include:

Officer Marketing
Newsletter Editor
Chapter Liaison

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 / Newsletter Editor  Tracey Stawnichy, LEED AP, CSC Contract Administrator ACI Architects Inc. P: 780-994-3699 tstawnichy@aci-arch.com	**Chair**  Andrew Brassington, CTR Western Canada Sales Rep ROCKWOOL P: 587-341-5268 Andrew.brassington@rockwool.com	**Vice-Chair**  Dylan Leclair, CTR IKO Commercial P: 587-335-9552 Dylan.leclair@iko.com	**Treasurer**  Catherine Osborne Administrator ACI Architects Inc. P: 780-486-6400 cosborne@aci-arch.com
Secretary  Jessica Prosser Business Development / Sales DAAM Galvanizing - Edmonton P: 587-340-7169 jessica@daamgalv.com	**Officer Architect**  Kevin Osborne, CET, CSC Associate / Architectural Technologist ACI Architects Inc. P: 780-486-6400 kosborne@aci-arch.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**  Mike Ewaskiw, CTR Architectural & Engineering Services Manager Stonhard / Fibergrate P: 780-237-7844 MEwaskiw@stonhard.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 cbent@shaw.ca	**Officer Contractor**  Renee McKenzie, Project Manager Jen-Col Construction P: 780-717-7798 mckren40@gmail.com	**Officer Manufacturing**  Mike Lafontaine Expocrete P: 780-962-4010 Mike.Lafontaine@oldcastle.com
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