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.

June 2023 Edition

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CSC & ABECN

ANNUAL GOLF TOURNAMENT

Date: Thursday, June 15, 2023

Time: 8:00am - 4:00pm

Location: Coal Creek Golf Resort 18112 Township Rd 492, Ryley, AB T0B 4A0

We are so pleased to host our annual golf tournament for a second year in a row with ABECN Edmonton, and even more excited to host at a unique golf course with a history. The current site of Coal Creek Golf Resort has had coal mining activity since the turn of the 19th century. In 1956, Mr. and Mrs. Nordby became owners of Dodds Coal Mining Company. The family still owns and operates the current mine operation and are also the one's responsible for the reclamation project of the original mine site into Coal Creek Golf Resort.

Fees include: 18 holes of golf, power carts for every pair of players, breakfast sandwiches and coffee station prior to tournament, steak with all the fixings/sides afterwards, and various prizes.

Dress code to be enforced: collared shirts, soft, spiked or no spiked shoes, no jeans or ripped clothing.

Registration and breakfast begin at 8:00am

Golf starts at 9:00am

Lunch and prizes to follow.



2023 / 2024 Edmonton Chapter Executive

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Director	Tracey Stawnichy	780 994 3699	Rates cover
Chairman	Andrew Brassington	587 335 8434	
Vice-Chairman	Dylan Leclair	587 335 9552	An
Secretary	Jessica Prosser	587 340 7169	\$
Treasurer	Catherine Osborne	780 705 7108	Add \$50 to h
Architectural	Kevin Osborne	780 717 1007	the C
Chapter Liaison	Position Open		
Education	Mike Ewaskiw	780 237 7844	
Engineer	Jamie Murphy	780 983 0288	New
General Contractor	Position Open		dcc ca/Ab
Interior Design	Corry Bent	780 995 1647	4CC.CA/AD +C
Manufacturer/Supplier	Mike Lafontaine	780 907 4920	
Marketing, Promotion, and Communications	Jamie Murphy	780 983 0288	_
Membership	Dave Lawrence	780 901 7260	
Newsletter	Tracey Stawnichy	780 994 3699	
Specifications	David Watson	780 758 4147	
Website Administrator	David Watson	780 758 4147	
Trade Contractor	Kevin Kramers	587 232 0613	1
Program	Abby Sharpe	587 338 9194	
Owner's Rep	Cam Munro	780 231 1739	\$50 for
Sustainability	Position Open		\$2
At Large	Dave Lawrence	780 901 7260	

Advertising Rates

Business Card: April 1 to May 30 Rates cover your ad on our website 24 hours per day, 7 days per week. Business card on-line: Annual \$100 if received by May 1; \$75 if received by August 1; \$50 if received by August 1; \$25 if received by November 1; \$25 if received by February 1 Add \$50 to have a link to your company web site from the CSC Edmonton Chapter web page.

Chapter Sponsor

New Chapter Sponsor Bundles: edmonton.cscdcc.ca/About+Us/Sponsor+Opportunities+-+CSC+Edmonton+Chapter/

Student Sponsor				
Meeting Sponsor				
\$50 for Individual (personal) Sponsor				

\$50 for Individual (personal) Sponsor \$250 for Corporate Sponsor

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,

Special shout out to the Calgary chapter for putting on a fantastic conference. A lot of great connections were made.

Our golf tournament is fast approaching, and we are looking forward to a great day.

We usually take a bit of a break over the summer, but we are working on a social event that will have everyone "pedaling."

Our Association thrives on volunteerism. If you would like to, or know someone who would like to volunteer on the Executive Committee or for specific events, please reach out.

Have a great summer!"

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)

Dan Dale, President

LUX Architectural Products 14525 – 112 Avenue, Edmonton, AB T5M 2V5 P: (833) 540-0589 E: dan@luxarpro.com Jordan Lalonde, Sales Rep Sika Canada AG PO Box 343, Gibbons, AB T0A 1N0 P: (780) 203-7110 E: jordan_lalonde@yahoo.ca

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

Andrew Brassington, CTR

Technical Sales Representative Henry® - A Carlisle Company 15 Wallsend Drive, Scarborough, ON M1E 3X6 P: (587) 341-5268 E: abrassington@henry.com

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) – Monday, September 11, 2023 / Location TBD Specifier – Monday, September 11, 2023 / Location TBD Construction Contract Administration (CCA) – Monday, September 11, 2023 / Location TBD Technical Representative (TR) – Monday, September 11, 2023 / Location TBD

Upcoming Classes Online:

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

Upcoming Virtual Classes:

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

Social Media:

Check us out:



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CSC AND ABECN ANNUAL GOLF TOURNAMENT

\$175 EARLY BIRD \$225 AFTER EARLY BIRD CSC / ABECN MEMBERS

HOLE SPONSOR \$500 (17)

2 PLAYER SPOTS

- LOGO SIGNAGE ON ONE HOLE
- ACKNOWLEDGEMENT AT
- EVENT/MARKETING MATERIALS
- HOSTED HOLE AVAILABLE

50/50 SPONSOR \$500 (2)

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- LOGO T-SHIRT FOR 50/50 SELLERS
- ACKNOWLEDGEMENT AT EVENT/MARKETING MATERIALS

BREAKFAST SPONSOR \$700 (2)

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- TABLE SPACE IN CLUBHOUSE
- ACKNOWLEDGEMENT AT
- EVENT/MARKETING MATERIALS

2023

JUNE 15

\$200 EARLY BIRD \$250 AFTER EARLY BIRD NON-MEMBERS

.......

HOLE IN ONE SPONSOR \$750 (1)

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- LOGO SIGNAGE ON ONE HOLE
- TABLE SPACE ON ONE HOLE
- CONTACT US FOR FURTHER
 DETAILS

POWER CART SPONSOR \$600(2)

- 2 PLAYER SPOTS
- CARTS ADVERTISING COMPANY
 LOGO
- ACKNOWLEDGEMENT AT
 EVENT/MARKETING MATERIALS

LUNCH SPONSOR \$800 (2)

- 2 PLAYER SPOTS
- TABLE SPACE IN CLUBHOUSE
- ACKNOWLEDGEMENT AT
- EVENT/MARKETING MATERIALS

COAL CREEK GOLF COURSE

18112 TOWNSHIP RD 492, RYLEY AB TOB 4A0



EARLY BIRD DEADLINE: MAY 12TH, 2023 FINAL DEADLINE: MAY 31ST, 2023

MEET YOUR CSC EXECUTIVE COMMITTEE MEMBERS

Corry Bent, BA Design, BFA, DID - Bent Perspectives

Officer – Interior Design



<u>What motivated you to join the industry?</u>: After graduating from 9 ½ years of university and turning down a job with Pattison Sign Group, I got an offer from Chandler Kennedy Architectural Group and my first couple of projects were CFRN and CBC Canada ... I never looked back. I had thought that the visual communications would override the Interior Designer in me, but I was blessed with great projects from working with the Oiler's Group and Aquila Productions at Rexall to Strathcona Hospital and everything in between. The draw has always been the diversity of the client groups and coming up with a unique concept for each project.

<u>How long have you been in the industry?</u> Well let's just say a while...my kids still say I'm 39-ish ... so longer than 25 years but not 35 years!

What's the one thing people would be surprised to learn about you?

I guess not very many know that I come from an International Manufacturing family, so I have always been around the designing and manufacturing of industrial products from scratch. My dad had all of us involved with the business from a young age. Playing around large machines and paint lines were a learning experience but watching things come to life was real knowledge. Just knowing how much goes into creating something and how many people are involved is the truly inspirational.

What's the most interesting project you have been a part of?: I have to say most of them because I have always felt that no matter how big or small each project was unique and deserved a unique solution. That being said I have a few, one was the Prince George RCMP complex. We used unusual materials in unusual ways. Working closely with the project team to ensure the building had a unique identity, forensic elements were incorporated into the interior and exterior, in the form of colour bands replicating DNA strands. The local natural environment also played a large part in inspiring the design and were incorporated into the interiors. The glacial ice flow came to life in the lobby reception desk, using a glass formed product as the transaction counter and arranging the security glass to look like shards of ice. We used natural forest material for the ceilings and wall elements, and also used reclaimed glue lam for bulkheads over the reception counters. Geometric wood panels were used to incorporate the forest material into the wall and work together with the "living green wall" creating a balance in the large lobby area. Natural stone pathways were incorporated into the with wayfinding.

<u>What's the one thing you'd like to see in the next 20 years?</u> I would like to see Biomimicry be used to the fullest extent in interiors, architecture and materials. I want the day to come, were we mimic Mother Nature and not take from her but learn better ways to create spaces and place for humanity to thrive. AI gets smarter everyday, but it will never replace artists, designers, architects with Real artistic talent because of the DNA of the thought process. CHAT GPT has a place in design, but it will never know how to dream. I don't want to live on a spaceship because we destroyed Earth and can't adapt to Mars.

Articles of Interest

The Consequences of Light Pollution

Sourced from: https://www.architectmagazine.com / Blaine Brownell

Anterovium/Adobe Stock



The evidence of the Anthropocene is typically described as material changes (think: modifications to the planet's surface, the accumulation of waste plastic in the world's oceans, or excess carbon in the atmosphere). But humanity's outsize impact on the Earth is also represented by the influence of light. According to scientist Johan Eklöf, "Every city and every street is visible a long way out in the cosmic darkness, which is perhaps one of the most obvious signs that we have entered a new era: the Anthropocene, the time of humans." In The Darkness

Manifesto: On Light Pollution, Night Ecology, and the Ancient Rhythms that Sustain Life (Simon & Schuster, 2023), Eklöf describes how our addiction to nighttime illumination is problematic for many planetary species, and ultimately entire ecosystems, requiring a holistic reconsideration of outdoor lighting.

Half of insect species are nocturnal, as are a third of vertebrates and nearly two-thirds of invertebrates – thus, "most of nature's activity" takes place during the night, explains Eklöf. Light pollution, or excess illumination, creates detrimental effects among many species. Moths, for example, are disoriented by light pollution, which either confuses them as sunlight or attracts and blinds them, making them easy prey. Moths play a significant role as pollinators, and are as effective as bees in this imperative ecological function. Yet light pollution is influencing moths' declining numbers, thus reducing pollination in plants. Who would have known that the health of ecosystems would be fundamentally endangered by electric light?

The term light pollution was originally used in reference to the undesirable obfuscation of the starry sky, but since has assumed a much graver connotation. The International Dark-Sky Association offers five principles, developed with the Illuminating Engineering Society, that all outdoor lighting applications should follow to avoid light pollution. The principals are: "all light should have a clear purpose" (useful); "light should be directed only to where needed" (targeted); "light should be no brighter than necessary" (low light levels); "light should be used only when it is useful" (controlled); and "use warmer color lights where possible" (color).

Entire ecologies are at risk. Re-establishing nighttime darkness should be a fundamental goal for the modification and design of the future built environment.

Lighting suppliers like North Dakota–based Border States offer guidelines on dark-sky compliant fixtures. These are essentially full cut off fixtures, meaning they emit light only below a horizontal plane, thus minimizing light trespass and glare. The IDA maintains a Fixture Seal of Approval program certifying fixtures according to these guidelines including the minimization of cool-

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temperature light (which is particularly undesirable as it is most closely associated with the mid-day sun). Examples of IDA-approved lighting include Dark Sky Luminaires from Hillsboro, Ore.–based Ligman Lighting. The company's Arizona Light Column exemplifies its "Turtle-Friendly Amber LED" approach, providing warm-spectrum illumination within a confined radius so as not to confuse sea turtle hatchlings attempting to navigate by moonlight.

Existing outdoor light fixtures can also be modified to limit light trespass by using light shields. For example, Ferguson offers the Nightsaver Collection of shields that deliver full cutoff illumination. Parshield manufactures a clip-on visor for floodlight and spotlight PAR-38 bulbs installed outdoors. According to the company, residential lighting, the product's primary application, is responsible for up to 45% of light pollution. Light shields can ensure that illumination is delivered to the desired areas, minimizing light trespass and glare.

In many contexts, electric lighting may be altogether unnecessary. Photoluminescent materials can be incorporated into path surfacing to enable effective wayfinding without risking light pollution – or the need for electricity. For example, Austria-based engineering firm TPA designed a glow-in-the-dark bike path in Lindzbark Warminski, Poland. The installation incorporates so-called luminophores in the asphalt surfacing, and these photoluminescent aggregates absorb energy from sunlight throughout the day. At night, the path emits a blue light for up to 10 hours. Another technology, LuminoKrom photoluminescent paint, offers an effective means to delineate roadway borders and vehicular lanes for nighttime travel. French company OliKrom worked with Eiffage Group's construction and engineering branches to develop this paint to withstand heavy traffic and weathering, offering virtually unlimited light recharges.

Ultimately, curtailing humanity's increasing and excessive use of nocturnal illumination will require overcoming deeply held cultural associations. Eklöf cites nyctophobia, or fear of the dark, as the primary motivator of outdoor lighting. However, the default ways that we illuminate the built environment using light-polluting fixtures are not helpful in overcoming this phobia. Studies show that security is often thwarted, not enhanced, by bad lighting installations, as glare can make it more difficult to see into shaded areas. In addition, typical nighttime lighting hinders our eyes' inherent, albeit slow, tendency to develop night vision. According to Eklöf, "One look at a streetlight, a cell phone powering on, or a passing car with headlights breaks down our rhodopsin – our light-sensitive visual pigment – which falls down like a house of cards, and the eye is forced to begin again."

For architects, embracing the darkness feels deeply counterintuitive. After all, architecture is a visually centered medium that has long been defined by its relationship to light, at least in the Western tradition. As Le Corbusier summarized in his 1923 book Vers une Architecture, "Architecture is the masterly, correct and magnificent play of masses brought together in light." An alternative perspective can be found in Junichiro Tanizaki's 1977 text In Praise of Shadows, which celebrates the subtle nuances and details present in shadows that are otherwise obliterated by a single harsh light bulb. Surrounded as we are by the bright glare of modern illumination, Tanizaki emphasizes our need to reclaim what is becoming a vanishing experience: "It is an indescribable feeling to sit curled up in the semi-daylight sunk deeply into meditation in the feeble light."

Nocturnal darkness is not merely a choice; it is a necessity. "Life has evolved in accordance with the day's alternating light and darkness, and the more animals we study, the more we realize that both day and night are equally important for their ecology," Eklöf writes. Over two-thirds of moth species – organisms that are crucial for the continuation of plant life on Earth – are now disappearing, in no small part due to light pollution. And many other life forms that rely on nocturnally active insects, such as bats, are also endangered. As a result, entire ecologies are at risk. Re-establishing nighttime darkness should therefore be a fundamental goal for the modification and design of the future built environment. After all, life on this planet – and ultimately of our own species – depends on it.

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What Does it Mean to "Use Water"?

Sourced from: https://www.buildinggreen.com / Nadav Malin

In the world of policy and regulation, the difference between consumptive and non-consumptive water use is like night and day.

Are these children using water? Or just borrowing it?

Photo: Daniel Case



As individuals and organizations, we all use water for drinking, washing, and flushing away waste. We install low-flow fixtures (sometimes by regulation) and fix leaks to save water – especially when we're faced with drought conditions. LEED and other programs give us credit for using less.

But not all water uses are the same. In many cases, we're just borrowing the water. Typically, a municipal water utility will draw water from a source (such as a river), treat it to potable water standards, supply it to homes and businesses, and then receive much of it back as sewage to be treated again (this time to a lower standard) and released back into the river.

That's why policies and regulations distinguish between "consumptive water use" and "nonconsumptive water use." Consumptive uses include drinking and any application that causes the water to evaporate, such as in cooling towers. When we use water for irrigation, some of it is "consumed" by the plants (both retained in the plant and evapotranspirated), some evaporates, and

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some might percolate back into the ground to rejoin the hydraulic cycle. The Ohio Department of Natural Resources defines it succinctly: "Consumptive use means a use of water that results in a loss of that water to the drainage basin from which it is withdrawn." The U.S. Geological Survey has a similar definition but disagrees with Ohio on one important detail: "Water returned to a different watershed than the point of withdrawal (interbasin transfer) is not considered a consumptive use" (emphasis added).

The nuances don't stop there. Often water is withdrawn from an aquifer deep in the ground. When it is "used," and then released as surface water, very little of it is likely to make it back into that aquifer. In that case, even a non-consumptive use has likely depleted that aquifer and released the water to a surface water body.

Either way, water supplied to a home, school, or business goes to some combination of consumptive and non-consumptive uses. If you're managing water rights in the arid Southwestern U.S., the difference between the two is critical.

In the case of non-consumptive uses, the things we do to "save water" aren't really about the water itself – that's not going anywhere whether we use it or not. What we're saving in that case are the energy and chemicals used to transport and treat the water. That helps explain why the U.S. mandates on low-flow toilets, showerheads, and faucets were included in the 1992 Energy Policy Act.

But the water-energy nexus comes back around: one of the largest consumptive uses of water in the U.S. is for electricity generation: most of our fossil and nuclear power plants generate steam, some of which is released, and our hydroelectric reservoirs lose a lot of water to evaporation. Chalk up another reason we need more solar and wind, ASAP. And don't stop saving that water.

What Have Ants Taught Architecture?

Sourced from: https://blog.ferrovial.com / Israel Fernández



An ants' nest, with its tunnels and underground chambers, can host up to 7 million of these Formicidae. Ants are an excellent example of space optimisation. But they also have a high level of social organisation, learning by observing and eating with other insects, developing and copying ideas which they end up applying to their own working systems.

Everyone is familiar with the typical acrylic plastic terrariums, full of interconnected tunnels on different levels. Ants build sci-fi cities to make the most of their activity. But they always do this based on need: there is no speculation involved, no show home to be visited. The depth to which they tunnel depends on social (the number of worker ants in the colony) and environmental (quality of the soil

and suitability) factors. If we compare them in scale to our human buildings, the relative size of ant structures would be comparable to some of Shanghai's tallest skyscrapers.

A collective miracle

Ants never work on an individual basis, but for the benefit of the whole community. Their collective sense of nest works on several levels; they have no works supervisor, no plans, no manager levels, yet they know what decisions to take for the good of the colony, thanks to a pheromone which adheres to the building materials, helping them organise and not get out of step.

This pheromone stimulates them to build in the same spot, to take the place of their fellow ants and determine the size and shape of the final nest. They use their body size as a template, so that they always know when they need to stop climbing, and when to strengthen the lower levels.

The most impressive ant bridge

One of their greatest achievements is the building of organic bridges. The marabuntas – also referred to as legionary or army ants – use their bodies to link up and create supply routes to apparently inaccessible areas. They can even stick their ends together to create a stronger structure. When this strong link starts to fail and they realise that the sacrifice is greater than the advantage gained, they start to pull apart in reverse order to that in which they linked together.

Our own viaducts are an attempt at copying this behaviour, and the reason why we have stopped using iron for building: the steel and concrete material currently used has a greater elastic limit, just like the organic legs of ants, so that the link structure is more resistant.

A raft of 100,000 ants

Another relevant example are rafts. When flooding occurs, ants will flee in line and build organic "vessels" of up to 100,000 ants linked together via legs and mouth, vessels which can sometimes be the size of a food tray, and which can float for weeks on the current in order to find a new home in which to survive. This networked clump of ants is also water resistant due to the layer of air which forms above the water surface. Their survival instinct is collective and efficient.

A tower three metres deep

Although the key construction is the tower, the large towers which stick up above the ground are but the tip of the iceberg: they can be up to 3 metres deep. The towers are like a large chimney. They may seem like the only escape route, but in fact they are no more than a ventilation shaft and a means of distribution for the various sublevels. If this exit is blocked, they can create alternative routes based on temperature and humidity. In fact, there is usually a large network of chimneys connecting to one central underground point. Yes, just like community boiler systems.

Please march out in single file

But ants still have a lot more to teach us. Several studies aimed at monitoring their behaviour in a state of panic concluded that when they are "frightened" they quickly look for a means of escape, prioritising corners. Us humans have similar reactions in comparable circumstances. So studying the way they react helps in planning the construction of emergency exits in public places, such as train stations or sports stadiums.

Their sense of "optimisation" is prevalent. For example, when a colony sends out explorer ants to look for food, they establish a perimeter and then move around more or less randomly. When the explorer ants return, the other ants march out to collect the food, refreshing the pheromone trail and creating the shortest, quickest route. At a stroke, they design a four-lane motorway.

Despite all this, our intelligence has made us able to outperform them. Well... intelligence and the use

of structural steel, as in the case of the Home Insurance Building; triangulation of structures, as in the Eiffel Tower; and hundreds of innovations in the fields of geometry and engineering. The average height of an adult man is 1.75 metres; that of an adult ant 20 mm. Our tallest building, the Burj Khalifa, reaches a height of 828 metres. That is 473 times the height of a person, compared to 136 times the depth of the deepest tunnels in an ants nest.

A question of personality

But not all species show the same behaviour. In the same way that architecture is in part defined by the nature of a particular country, red fire ants are more prone to building a jumble of nests, while harvester ants tend to build straight tunnels with large chambers for storing grains. Harvester ants are, of course, weaker and smaller. Australian weavers leave the ground to build their nests in tree leaves, which they drill with their pincers, then roll up and stitch together with silken thread made by their larvae. However, ants living in urban areas close to hard, tarmac surfaces – therefore easier to destroy – tend to be lazier and neglect their escape routes.

In the same way as our ancestors built their homes with mud or using other locally available materials, ants use whatever they find around them to build their nests. A popular study, led by Argentinean specialist Marcela Cosarinsky, showed that ants do not simply pile up building material, but in fact use a very special assembly process: if they have sand available, they will use only sand, but if they also have clay, they will combine both materials to create a porous mixture to optimise work and building times.

This porous structure simulates our method of building with hollow bricks, but instead of using rectangular blocks, they create small hollow balls, like ice-cream scoops, handling them and impregnating them with their powerful jaws.

As the bioclimatic sphere from Seville's Expo 92 reminds us, these balls or spheres aid temperature regulation and eliminate condensation after wet periods, in a manner similar to the ventilation systems in our kitchens, or to hydrostatic balancing valves. There's no denying it: we have more in common than meets the eye with these small creatures. And we both do our utmost to create the best possible buildings.

\$1.6M Renovation Transforms Edmonton's Canada Permanent Building

Sourced from: https://www.constructioncanada.net / Israel Fernández

The Canada Permanent Building, which has been a downtown Edmonton landmark for more than a century, has undergone extensive internal renovations worth \$1.6M, to update the building's infrastructure while preserving its vintage charm.

Carrie Candy, the building's spokesperson, explained the entire structure was stripped down to the studs, and new walls, ceilings, floors, and electrical systems were installed. However, the unique features of the building, such as the stairs, railing, and outer facade, were retained. The building's restoration cost of \$1.6 million, was mostly financed by the building owners, with the city contributing approximately \$110,000.

The Canada Permanent Building was constructed in 1910 by contractors Pheasey & Batson and designed by Roland Lines for \$65,000. It served as a bank for the Canada Permanent Mortgage Company and later became a Japanese Village restaurant. The question now is what the building will house in 2023.



Photo courtesy Jeffery J. Nichols (User: Arctic.gnome), via Wikimedia Commons

According to Alex Hryciw of the Downtown Recovery Coalition, the building's restoration could aid in revitalizing downtown, which has struggled since the COVID-19 outbreak three years ago.

The building contains three floors, each with 232 m2 (2,500 sf) of space and is suitable for various events and functions, such as weddings or restaurants. The building is a rectangular structure built with reinforced concrete and faced with red brick and stone. The front facade features extensive classical detailing, with three bays outlined by lonic pilasters that stretch up to the second storey, where they support an entablature adorned with a heavy cornice embellished with modillions and a broken segmental arched pediment. The front entrance is in the third bay and is crowned with the segmental arched pediment bearing a carving of a winged lighthouse, the symbol of the Canada Permanent Mortgage Company.

The flat roof is bordered by a stone balustrade with urns and a central date stone, which features an Adamesque swag garland with tassels. In addition, the rectangular and arched

windows on the front facade have multi-paned transoms. The spandrels between the first- and second-storey windows of the other two bays are ornately carved, providing a striking contrast to the front entrance's detail.

The Canada Permanent Building is an example of the Edwardian Baroque style, and its architectural features are a testament to the building's historical significance. The province and city declared the building Provincial Historic Resource in 1995.

City Coun. Aaron Paquette believes the Canada Permanent Building's restoration could inspire other developers to restore Edmonton's historic structures. He believes younger generations should learn about and appreciate the structures built by previous generations.

As the city sees a rise in remote working and fewer businesses occupying downtown real estate, people require a reason to visit downtown, and the restoration of an old building sparks interest in people of all ages.

5 Types of Workplace Bullies and How to Identify Them

Sourced from: https://www.fastcompany.com / Megan Carle

My first memory of being bullied was when I was 10.

It was December 1975, a typical winter day in Spokane, Washington. Grandpa Mike and I had made the two-block trek to Cannon Hill Park, where I would hit the ice and skate my heart out for my audience of one.

I was putting on my best performance ever when suddenly I stopped mid-pirouette. Five girls from my school had surrounded me. "Is that her?" asked one, pointing at me. "Is that the stuck-up one?"

It had been such a great day. I had been fearless, attacking the ice, feeling so special and safe. Then, in a blink, my feelings of joy and triumph were undercut.

Source illustration: erhui1979/Getty Images



Bullying Happens Everywhere

Bullying not only happens at neighborhood ice skating ponds, school playgrounds, and parks – it happens in workplaces as well. It's confusing. It trips us up. It blindsides us. It makes us unsteady on our skates.

When bullied as a child, I fled to the safety of my grandpa. When bullied at work, Ruth Namie didn't flee. Instead, in 1997, she and her husband,

Gary Namie, founded the Workplace Bullying Institute (WBI). In the nearly three decades since, workplace bullying has been studied more deeply, but little has been written from the perspective of targets, those who are preyed upon. First, we need to understand the fundamentals of the game.

For starters, just what is bullying? It's not simple rudeness or incivility. It's not healthy debate, creative tension, or a difference of opinion. It's not about being challenged or pushed or having a bad day. And it's not about conflict.

Bullying is about one person dominating another. It's about dehumanizing, degrading, and devaluing targets. It's about power and control.

What is Bullying at Work?

It's so important to understand that workplace bullying is real, has a name, has perpetrators and targets. Why? Because unless you name it, you can't deal with it. The WBI defines workplace bullying as "repeated, health-harming mistreatment by one or more employees of an employee: abusive conduct that takes the form of verbal abuse; or behaviors perceived as threatening, intimidating, or humiliating; work sabotage; or some combination of the above."

Workplace bullying has affected almost 80 million U.S. workers, according to a 2021 WBI survey. To provide some context, that means one out of every two workers have been affected by workplace bullying. One out of two. The survey goes on to highlight that 67% of workplace bullies are men, and their preferred targets are women. The preferred targets of female bullies are also women. Although one in three employees reports workplace bullying, workplace bullying remains "the indiscussable," says the WBI. So let's discuss it.

Workplace bullying changes lives. It instills doubt in people who are confident and competent. It freezes clear-minded, goal-oriented, visionary leaders in a fog of self-doubt, unable to move forward, backward, or sideways.

Bullying leads to the loss of talent. Because the targets of bullying can be at literally any level of the organization, this loss of talent occurs across the entire breadth of any company that tolerates or enables bullying. Bullying forces targets to leave organizations in which they're still contributing at a high level with plenty of runway ahead.

Five Types of Workplace Bullies

Bullying is either public or private. It is either overt or covert. Overt bullying behavior is obvious: it's yelling, banging on a table; aggressive, threatening behavior. Covert bullying behavior is hidden, nuanced, subtle. It's quiet and confusing, at times delivered in one-on-one meetings. Public bullying is witnessed by others. Private bullying is witnessed by only the bully and the target.

The In-Your-Face (IYF): The public/overt bully's sole purpose is to denigrate someone in a public setting. The IYF bullies want witnesses. They want everyone to know that they're in power, they're in charge, they're untouchable. In the workplace, they're the managers who yell, bang the table, point the finger.

The Rat-Face (RF): The public/covert bully lives to trip you up. This bully's name is taken from an American slang term that I first heard when I was 11 and my mom took me to the movie All the President's Men. I learned that "rat- f*#king" was a way to create confusion. In the workplace, RF bullies play dirty, sabotage your work, and can be easy to spot because they're the ones who like to laugh at other people's expense. Like the IYFs, they want you to know they're in power. Unlike the IYFs, though, they're sly and sneaky; they want to keep targets and everyone else guessing. In the workplace, RFs are the managers who intentionally mispronounce your name, plant their operatives on your team, and look at their phone and laugh while glancing at you.

The Two-Face (TF): The private/overt bully is first-team "all you" in public but humiliates and diminishes you in private. Like the IYF and RF bullies, TF bullies want you to know they're in power, they're in charge. But their beatdown will happen in private, after singing the target's praises in public. In the workplace, they're the managers who tell anyone and everyone what a great job you're doing and, in private, cut you down with biting, demeaning language.

The About-Face (AF): The private/covert bully is a special breed of bully, so named because just when the AF seems to be heading one way, this brand of bully will abruptly pull a 180. Tough to put your finger on, the passive-aggressiveness of the AF is nuanced, subtle, hidden in the shadows. AF bullies are particularly gifted at making you believe they are your friend when they're simply using you and the information you share with them to direct their desired narrative, while advancing their own agenda and interests. In the workplace, AFs are the passive-aggressive managers who ask you about your meeting when they're already been updated about it from their precisely placed operatives.

Gaslighters: Within the covert bullying family is a particularly disturbing kind of bully, the Gaslighter, which lands somewhere between the Rat-Face and the About-Face. Gaslighters (whose name comes from the 1944 film Gaslight, starring Ingrid Bergman as the target) overachieve in their ability to trick and deceive. Gaslighters are the ultimate at head games. They want you to know they're in power, that they're in charge by keeping you guessing and off-balance. In the workplace, gaslighting is done by the managers who sabotage your work, ask you for information you've already given them, move meeting locations and then ask, "Where have you been?"

Fun fact? Workplace bullies can be one type, several types, or all types. In other words, one day a target might be contending with an In-Your-Face, and the next day – or, better yet, later that day – the same bully shows up as a Rat-Face. The common theme? Power and control, either real or imagined.

Targets are left unsteady, unsafe, and uncertain about which technique is going to come at them next. The cumulative effect of the constant bullying assault is debilitating, paralyzing, and frightening, making the targets feel as if they are disappearing. Targets end up feeling confused, crazy, and responsible for their own deterioration. Because of bullying, I've seen once-confident people start to doubt their capabilities – one in particular stared back at me in the mirror.

At the park that day in Spokane so long ago, I experienced In-Your-Face bullying in a very typical way – name-calling. In today's culture, being called "stuck up" would be like leaving someone open on Snapchat or not following someone back on Instagram. It was a public display meant to trip me up.

And it did – even if the grown-up version I'd later face would make it pale by comparison.

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

ASSOCIATION LIAISONS

- 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

Alberta Association of Architects (AAA) <u>http://www.aaa.ab.ca/</u>	Alberta Painting Contractors Association (APCA) www.apca.ca	
Alberta Painting Contractors Association (APCA)	Association of Professional Engineers,	
www.apca.ca	Geologists, and Geophysicists of Alberta	
Alberta Wall & Ceiling Association (AWCA)	(APEGGA)	
http://awca.ca	http://www.apegga.org/ dward@apegga.org	
Alberta Roofing Contractors Association (ARCA)	Association of Science and Engineering	
http://www.arcaonline.ca	Technology Professionals of Alberta (ASET)	
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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 Russ Medvedev, russm@aset.ab.ca

Building Owners and Managers Association (BOMA) <u>http://www.bomaedmonton.org/</u> / <u>edmonton@boma.ca</u> 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





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