

GREEN BUILDING

+ ARCHITECTURE

SUMMER 2019

TERRA VIEW CUSTOM HOMES

Building Net Zero Ready communities
in the Guelph area



In this issue:

- City of the Future
- Icon Homes
- Electric cars:
Rimac C_Two
- Altius Architecture

Want to be featured in **GREENBUILDING** + ARCHITECTURE



Green Building + Architecture offers opportunities to underwrite editorial that focuses on a successful professional or business providing exceptional products and services. An underwriter is positioned as an authority within their specific industry, and the underwriter's message reaches all professionals within the local market.

Has your company reached a milestone, celebrated an anniversary, launched a new product, or won a recent award? Do you have expertise in a certain field that would be of value to other industry professionals? Or would you like to gain some exposure for your company and your products?

If so, **Green Building + Architecture** is the platform for you.

Green Building + Architecture custom profiles provide you with a highly targeted marketing resource to showcase your services and expertise. Much more than a self-promotional brochure, a custom profile is a third-party endorsement that inspires credibility and confidence in your target audience.

Underwritten articles vary from one page to multiple pages in length, and are available as high-quality, four-color reprints that can be used for sales and marketing purposes.

Green Building + Architecture custom profiles are available for a fraction of the cost to facilitate the copywriting, photography, layout/design, printing, shipping and other functions associated with developing a new marketing brochure.

High quality, professionally produced ePrints can be posted on your website to magnify brand visibility for your company, products and services.



Cover Stories

A cover story is the most valuable and prominent position in the magazine. Cover stories are about extraordinary companies accomplishing extraordinary goals.

For additional information please contact
Giulio Marinescu, Publisher
at 416-250-0664 or gbamedia@bellnet.ca

CONTENTS

SUMMER 2019

- 2 **From the Publisher's Desk**
World Green Building Council to shine a light on building lifecycle as campaign focus for World Green Building Week 2019
- 3 **Cover Story**
LEADING THE WAY
Terra View Homes making waves at forefront of net-zero movement
- 10 **THE CITY OF THE FUTURE**
UNStudio designs an integral vision to deal with future urban growth and sustainability for a test site in The Hague
- 12 **SATISFACTION GUARANTEED**
Icon Homes has displayed a commitment to customer service for over 50 years
- 16 **RIMAC C TWO:**
The crown jewel of electric hypercars
- 20 **COTTAGE IN THE CITY**
The Don Mills Ravine Home takes full advantage of private urban oasis
- 23 **TALKING POINTS**
With the climate change conversation, geothermal energy trending in a big way
- 24 **MORIYAMA & TESHIMA ARCHITECTS**
The Arbour, George Brown College's tall wood, low carbon buildings



GREENBUILDING + ARCHITECTURE

Volume 8, Number 2 – Summer 2019

www.gbplusamag.com

PUBLISHER: Giulio Marinescu
416-250-0664
gbamedia@bellnet.ca

2109-256 Doris Ave. Toronto, ON M2N 6X8

MANAGING EDITOR: Greg McMillan
editor@gbssmag.com

GRAPHIC DESIGNER: Tony Lomuto
Graphic Designs Unlimited
LTONY@sympatico.ca

Photo credits:
Hawthorn Films, Plompmozes,
Amaud Marthouret,
Moriyama & Teshima Architects,
G Photography, The Cora Group

Contributors:
Greg McMillan,
UN Studio,
Altius Architecture,
SOM Architects

Submit articles, event, news to
Giulio Marinescu
gbamedia@bellnet.ca

Canada Post Publication Mail
Agreement number 42332013

Undeliverable mail return to:
2109-256 Doris Ave.
Toronto, ON M2N 6X8

Printed in Canada by: CoFax Printing

© 2019 Green Building + Architecture
No part of this magazine may be reproduced by any means, in any form, in whole or in part, without the prior written permission of the publisher. The opinions expressed in this publication are those of the respective authors and not necessarily those of this publication. Green Building + Architecture does not specifically endorse the editorial, products or services presented in this magazine.

Subscription Rates
Canada: 1 year \$24, 2 years \$40, single copy \$6
United States: 1 year: \$32
International: \$36
Plus applicable taxes





Giulio Marinescu, Publisher

World Green Building Council to shine a light on building lifecycle as campaign focus for World Green Building Week 2019

New report on embodied carbon to be issued as a ‘call to action’ for the building and construction industry

The World Green Building Council (WorldGBC) will use the 10th annual **World Green Building Week** (23-29 September 2019) to focus on end-to-end carbon emissions created across the building and construction industry, highlighting the need for the sustainable production, design, build, use, deconstruction and reuse of buildings and their materials.

Today, buildings and construction together account for 36% of global final energy use and 39% of energy-related carbon dioxide (CO₂) emissions when upstream power generation is included.

Operational emissions from buildings account for 28% overall, while the remaining 11% are attributed to embodied carbon emissions, which refers to carbon that is released during material manufacturing and the construction and demolition process.

The issue of addressing embodied carbon emissions is becoming increasingly important to the building and construction industry as major organisations look to collectively achieve net zero carbon along the entire life-cycle of a building.

A detailed report put together by WorldGBC will outline the pressing issues around **embodied carbon** in the industry, presenting a vision for a net zero carbon construction future and a call to action to radically transform processes right along the planning and construction supply chain.

The report will help to raise awareness of this vital issue and will highlight examples of leadership and best practice from across the sector. In the report, WorldGBC will call for urgent action, recommending specific steps that business, government and civil society can take to help shape a net zero carbon future for the whole life-cycle of all buildings.

The report will be released during **World Green Building Week** in September 2019.

The focus for this year’s World Green Building Week campaign dovetails with the issue of air pollution. Green building is one key solution to improve air quality in the built environment. The energy used in material manu-



facture, construction and operation of buildings must come from clean, renewable sources of energy and not from burning carbon-emitting fossil fuels, which exacerbate global warming, pollute the air and damage human health.

Cristina Gamboa, CEO, World Green Building Council said: *“This year’s focus for World Green Building Week on the full lifecycle of buildings is key to promote innovation and accelerate the abatement of emissions from buildings, which stand at 39% of total emissions worldwide. The construction industry will find in the campaign ways to address the carbon footprint of buildings and identify how to accelerate market transformation.”*

Only by having an end to end understanding can our green building movement truly help contribute to the decarbonisation of the built environment. We look forward to engaging with our Green Building Councils and their members in lively and exciting ways that can genuinely make a difference to awareness around this pressing issue beyond our own industry.”

WorldGBC will be looking to its global network of green building and construction industry experts to act as ambassadors throughout the week to promote action on total emissions and the whole life cycle of buildings. This will take the form of proactive media opportunities, hosting events, publishing reports, thought leadership articles and manifestos, making net zero carbon building commitments, and promoting the week on social media platforms using the hashtag #buildinglife.

WorldGBC’s vision is to help shape a future in which every building in the world is net zero carbon, eliminating the buildings and construction sector’s reliance on fossil fuels which are causing irreversible damage to the planet.

In order to achieve this vision, the buildings and construction industry must take urgent action and consider the impacts of design and procurement decisions on the emissions associated with materials and construction processes.

For more information visit <https://www.worldgbc.org/worldgreenbuildingweek>

COVER STORY



LEADING THE WAY

Terra View Homes making waves at forefront of net-zero movement

The principals at Terra View Homes know more than a thing or two about incorporating sustainable and eco-friendly practices into their environmentally-conscious building philosophies.

For more than two decades, Terra View Homes has been a pioneer of green construction practices in Canada, and that continues as the Guelph-based builder is now creating the first complete net-zero ready labelled communities in the area – Hart Village and NiMa Trails.

“We believe that it is our responsibility to lead by example,” says Terra View Homes’ president David Brix. “By including sustainable

and eco-friendly features in every home, we are helping to lessen our impact on the environment and greatly diminish our homeowners’ carbon footprint and energy costs.

“We are excited to be involved with one of the first net-zero ready communities in Ontario.”

Brix, along with Terra View principal and company founder Andrew Lambden, pride themselves in building homes, not houses; communities, not subdivisions.

“We invite anyone to visit our communities throughout the Guelph area and see for them-

selves why Terra View has become a leader in the industry,” says Brix. “They can be assured that each home will be crafted to exacting industry environmental specifications to drastically reduce energy consumption.”

Terra View Homes is on the ground floor for projects chosen to be part of the Canada Green Building Council (CaGBC) zero carbon buildings standard pilot program.

At the NiMa Trails project, for example, which will apply the net-zero standards, the zero carbon building standard will go beyond that, showcased in a concrete panelized boutique condominium called Terra.



This 16-unit carbon-neutral structure will focus on a standard that will take into account things like the life cycle of a building, thermal mass, the carbon emissions that result from manufacturing those materials, renewable energy produced onsite, as well as geothermal heating and cooling. Again, a prime illustration of how Terra View pushes the green envelope.

Terra View Homes, started in 1991 with Lambden at the helm, provided the perfect springboard for Brix, who was keen on pushing their environmental philosophy to greater heights. A major turning point in their quest to become a leader in sustainable construction, says Brix, came when the pair attended the first West Coast green conference in San Francisco in 2006.

“The world was waking up to climate change and the impact better constructed homes could have on the environment and the health of the occupants,” he recalls. “This all coincided with Al Gore’s Inconvenient Truth tour, which started to wake up the world to the reality of humanity altering the planet’s climate.”

Terra View didn’t miss a step after that, embracing green building and garnering industry accolades as pioneers.

“We were one of the first area homebuilders to build exclusively Energy Star® homes starting in 2006,” says Brix. “In 2012, our LEED™ model home at Edgewater Estates in Kitchener showcased the extent of our dedication to environmentally-conscious building, incorporating the key elements of Energy Star®, GreenHouse™, Built Green™ and LEED™, from the foundation to roof-mounted solar panels.”

This level of commitment to the homeowner and the quality of the homes Terra View constructs has not gone unrecognized with dozens of prestigious awards. A cross section of notable achievements include:

- Project of the year for the landmark \$23-million dollar Seagram Lofts redevelopment in Waterloo;
- Waterloo Region Home Builders’ Association, Green Built Award;
- Ontario Green Spec Home Sweet Home Award;
- Guelph and District Home Builders’ Association Best Build Green Project;
- Multiple Best Single Family Home Plan Awards from Guelph and District Home Builders’ Association;
- Multiple best overall design awards for a single family homes from the Waterloo Region Home Builders’ Association;



Proud to Partner with
TerraView
custom homes

Reliance™
BUILDER DIVISION

Leaders in providing solutions for building greener homes.

- Heating
- Air Conditioning
- Hot Water
- Water Purification

Why Reliance™? We have over
23,500
★ ★ ★ ★ ★
5-STAR Google
REVIEWS NATIONALLY

Reliance Builder Division
Contact Tracey Rieger
289-230-6492
TRieger2@reliancecomfort.com

The Bamco Group
Distinctive quality, style & innovation

Proud supplier of Custom Kitchens to Terra View Custom Homes

The Bamco Group
440 Elmira Road North,
Guelph, ON N1K 1C3
Canada

Tel +1 519 823-8323
Fax +1 519 823-8292
E-mail: cabinetry@thebamcogroup.com
www.thebamcogroup.com

Condominium Lawyers

Toll Free 800 746 0685 Ext. 313
Attention: Robert Mullin
www.svlaw.ca

SV LAW
EXCELLENCE IN OUR COMMUNITY

Proud to provide legal services to Terra View Custom Homes

Congratulations Terra View Custom Homes! We are proud to be part of your success.



FERRELL
BUILDERS' SUPPLY LTD

Supplier of Brick, Stone, Landscape and Masonry Supplies

1-800-668-0860

colin@ferrellbrick.com

www.ferrellbrick.com



V.A. WOOD (GUELPH) INC.
CONSULTING GEOTECHNICAL ENGINEERS

405 York Rd, Guelph, ON N1E 3H3
519-763-3101 • office@vawoodguelph.com



THE PLUMBER

679 Sovereign Road, London ON N5V 4K8
T 519-455-4910 • F 519-452-1988

169 Lexington Court Unit E, Waterloo ON N2J 4R4
T 519-885-2140 • F 519-885-1494

info@patonbros.com • www.patontheplumber.ca



Sarmazian
FLOORING



575 Woodlawn Road West, Guelph, ON • 519-837-2120

471 Hespeler Road Cambridge, ON • 519-624-1499

E-mail: flooring@sarmazian.com • www.sarmazian.com



TVM Framing

Proud to provide carpentry services to
Terra View Custom Homes

Guelph, ON
Phone: 519-821-1869 • Cell: 519-820-7401
tomtarra@gmail.com

RADU PAINTING



*Proud to provide painting services to
Terra View Custom Homes*

(519) 588-5380 • viorelanaradu@yahoo.com

Wm. Green Roofing
INDUSTRIAL AND RESIDENTIAL
SINCE 1986



Wm. Green Roofing Ltd.
45 Dawson Rd., Guelph, ON
519-822-6414



www.wmgreenroofing.ca

GRANITEWORX
GX



285 Hanlon Creek Boulevard
Guelph, Ontario N1C 0A1

P. 519.821.5880 • F. 519.821.2422

E. info@graniteworx.ca

www.graniteworx.ca



- Awards for outstanding service as well as multiple Builder of the Year Awards from Guelph and District Home Builders' Association;
- And the President's Achievement award from the Tarion Warranty Corporation.

Terra View has constructed, and has been partners in, many other landmark developments, including the Seagram Lofts in uptown Waterloo, Old Quebec Street Shoppes in Guelph and the new Kitchener Market. There have been three Rotary homes, including a LEED platinum "Green Dream Home" in Guelph in 2009, which showcased the latest and greatest in green building. Terra View has constructed homes in Fergus/Kitchener/Cambridge/Waterloo and Guelph amounting to thousands of units over the past 27 years, culminating with the more recent emphasis on the net-zero program as the company standard.

Now building Guelph's first net-zero ready community at Hart Village, the project consists of 120 single family homes, townhomes and mid-rise condominiums. Interestingly, Terra View will honour the log constructed Heritage Hart homestead on the site by restoring it and providing it to the community as a focal point for the residents as a community centre. Of note: The builders are including, for a limited time, a 4kW solar array with every purchase, which will reduce the buyer's electricity bill going forward with a saving estimated to be \$60,000 over 30 years.

"We are industry leaders and are very customer-focused with longstanding dedicated team members," adds Brix. "Each purchaser is provided the services of our interior decorator, our architectural designer and site staff through scheduled meetings and onsite tours.

"We are one in a select group of Canadian home builders who have committed to build the homes of the future through the certification in the net-zero program. Each home will be capable of off setting its energy consumption through renewables and meets a code that comes into effect in 2031."

That's Terra View Homes – looking ahead to the future ... today.

TerraView
custom homes

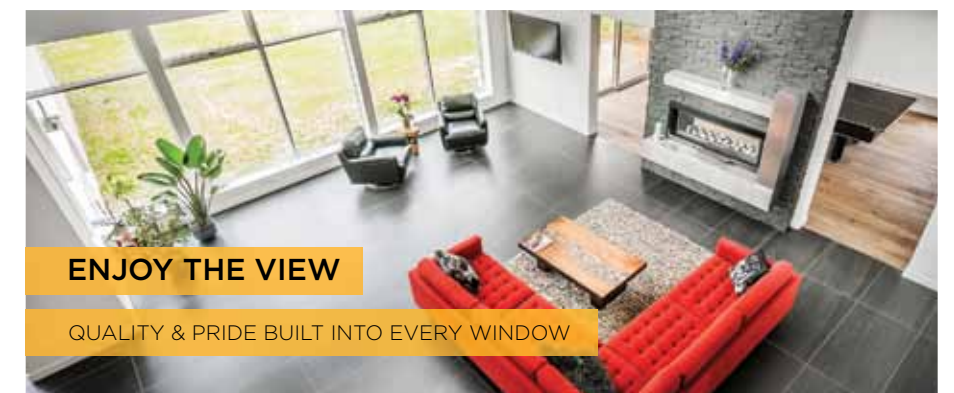
www.terra-view.com



1.800.265.2290

GOLDEN WINDOWS
LIMITED

VISIT ONE OF OUR SHOWROOMS AT:
888 GUELPH ST., KITCHENER, ON | 519.579.3810
309 EXETER RD., LONDON, ON | 519.652.1677
1112 MARCH RD., KANATA, ON | 613.592.9111



ENJOY THE VIEW

QUALITY & PRIDE BUILT INTO EVERY WINDOW

PROUD PARTNER OF TERRA VIEW HOMES

f i t i n g +

NORTHFIELD TRIM & DOOR Inc.

We are Terra View Custom Homes' Interior Trim, Door & Hardware Specialists

NORTHFIELD TRIM AND DOOR INC.
Family Owned Since 1967

Phone: (519) 884-4901 • Fax: (519) 746-5643
www.northfieldtrimanddoor.ca

BUILDING KNOWLEDGE CANADA INC.

Building Energy Performance Evaluation & Consulting Services


BUILDING KNOWLEDGE CANADA INC.
50 Fleming Drive, Unit 6
Cambridge, Ontario, Canada N1T 2B1

Phone: 519-658-6232 • Toll Free: 1-800-267-6830
Fax: 519-658-6103
Email: info@buildingknowledge.ca



UNStudio designs an integral vision to deal with future urban growth and sustainability for a test site in The Hague

The Fall 2019 issue of
GREENBUILDING
 +ARCHITECTURE
 will focus on
BUILDING ENVELOPE



Insulation and air sealing • framing • walls and ceilings
 • windows and door • HVAC • weather barriers • moisture
 • wall assemblies • finishes and more...

To place an ad or have your company featured in this special issue, please contact
Giulio Marinescu - Publisher
 at 416-250-0664 or gbamag@bellnet.ca

UNStudio's vision for The Hague is one of the studies made for 'The City of the Future', a joint initiative by BNA Research (the Royal Institute of Dutch Architects), the Delft University of Technology, the Delta Metropolis Association, the municipalities of Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven, the Directorates-General for Mobility and Transport, the Environment and Water, the Ministry of Infrastructure and Water Management and the Ministry of Interior.

The project started in January 2018, when 10 multidisciplinary design teams were tasked with investigating new ways of city-making using five test locations in Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven. These teams included landscape architects, urban planners, mobility experts, experts in the field of circular economy, energy transition, future strategies, big data, smart cities etc. The teams worked on a level playing field together with municipalities, stakeholders and experts in the field of important innovations.

Socio-Technical City: a response to key transition issues for the future

UNStudio's concept for the Socio-Technical City combines the two largest challenges facing the future of cities - urbanization and sustainability - and focuses specifically on the questions: how can an area like the CID, despite extremely high density in the future, be self-sufficient and energy-neutral? What does such an urban district look like? And how can you connect the technology that is required with the people who live and work there?

Gateways: Catalysts for encounter and innovation

With the elevated urban layer covering the existing railway tracks, UNStudio's urban vision distinguishes a number of technical 'domains', which refer to the major transition issues of our time: energy, circularity, mobility, climate adaptation / water management and food production.

These domains are then each envisioned as 'gateways': physical architectural interventions that offer practical solutions to the problems as well as functioning as attractive symbols for the specific themes - a geothermal power station as an icon for energy transition, a (Hyperloop) station as a landmark for mobility, a Biopolus water treatment plant as a symbol for circularity.

In this way, the Socio-Technical City bridges the gap between infrastructure and technology on the one hand, and quality of life and social well-being on the other. The model of the gateways is based on the idea that interaction is a requirement for innovation. The gateways form catalysts for meeting; they connect neighbourhoods and people and thus form breeding grounds for innovation.

Gateway Mobility: the Metropolitan Superhub

The concept for the gateways is inspired by the location itself. The existence of three intercity stations within walking distance of each other presents an unprecedented opportunity to transform this area into one Metropolitan Superhub; a system of closely linked terminals, comparable in size to Amsterdam Schiphol Airport.

It also provides an opportunity to create space for new forms of sustainable mobility such as the Hyperloop, with a free floating system of electric scooters, and possibly self-driving pods, interlinking the different modes of public transport.

Following the construction of the elevated urban layer, the Metropolitan Superhub can gradually become a city centre.

The city grows all around it and connects to this layer, while creating a level of density that is unprecedented in the Netherlands.

Gateway Geothermal Energy Plant: an energy cathedral, city bridge, winter garden and co-working space for start-ups

The geothermal energy plant is the central location of the energy supply and as such is an important gateway for the CID. Research shows that the use of heat pumps, Heat & Cold storage systems, optimum insulation and solar panels are not enough to fully supply a compact area such as this.

In order to make the district self-sufficient and energy-neutral, a solution was found by way of a system of 'energy exchange' with the surrounding districts.

The geothermal energy plant draws energy from a hot water reservoir that is 2.5 kilometers below ground and supplies it to the surrounding low-rise districts. In return, the low-rise districts generate a surplus of energy via roof-mounted solar panels that can be delivered to the new high-rise buildings.

The energy gateway is not only a geothermal power plant, but also a bridge that connects neighbourhoods, a winter garden and co-working space for start-ups. But above all it is a symbol for energy transition: an energy cathedral.

Gateway the Biopolus: urban irrigation system with wadis, water squares, canals and waterfalls

In Socio-Technical City the Biopolus forms another gateway, a circular system that provides local food and water supplies. The Biopolus ensures that the waste water from the new part of the city is purified and the nutrients

that are released are used for the cultivation of crops.

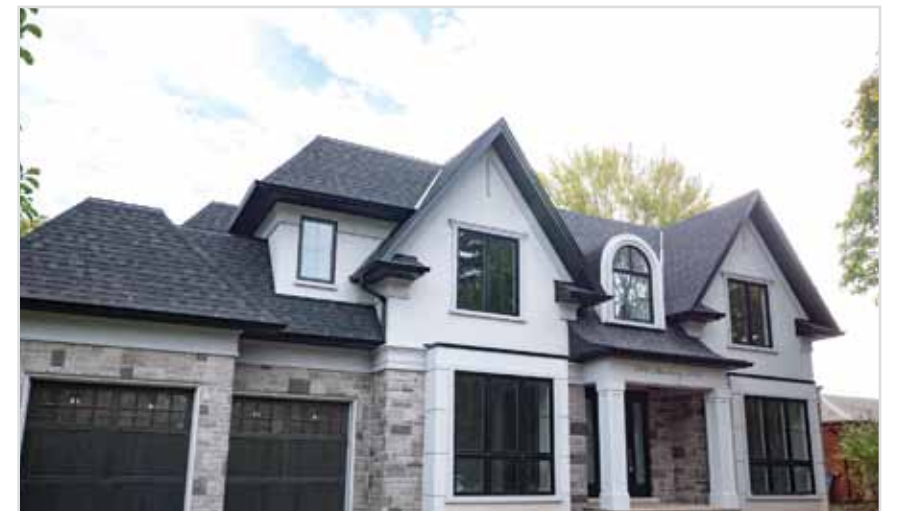
Waste water is pumped through tubes to the highest level, after which it flows to the lowest level via various purification processes, producing drinking quality water which then enters the system again. The localized cycle is complete.

The Biopolus is however not merely a water purification plant, it is also an urban farm, a vertical park and an emblem of the circular economy.

Gateway Climate Adaptation: Water plazas

Climate change presents significant risk factors for the area, such as flooding and overheating. Where currently rainwater, waste water and grey water are all disposed of through one drainage system, in the Socio-Technical City this is separated into different systems. Waste water is drained through underground pipes, however the relatively clean rain water is re-used and made visible in the form of water features in public spaces: an irrigation system of canals, water plazas and waterfalls.

People do business with people they know, like and trust.



FERRELL
 BUILDERS' SUPPLY LTD

Dina H. Jaghoub
 B. Arch.
 Architectural Sales Representative
 Tel: 905-598-0766
 E-mail: dina@ferrellbrick.com

www.ferrellbrick.com



Every step of the way, the Icon Homes' team is there to inspire, educate and problem solve for the client or the homeowner. From initial design and concept to the finished product, Icon Homes takes care of every detail. It takes decades of knowledge and experience to know what truly makes the perfect home. The enhancements selected will be seamlessly integrated to create a unique home that is as beautiful as it is functional.

Trusted since 1963, Icon Homes combines expert craftsmanship, quality product and unparalleled customer service. The company strives to reflect the highest ethical standards in its relationship with homeowners, and has built a reputation on excellence, respect, trust and integrity.

The customer satisfaction process is three-pronged: A commitment to com-

munication, exceptional building quality and a longstanding pledge to consistent service.

And here's what that means:

A commitment to communication / Icon Homes provides streamlined communication with all its clients to better the homebuying experience from point of sale to after move-in. Each homebuyer receives a dedicated 'Icon ambassador' to create a strong buyer/builder relationship;

Exceptional building quality / Icon Homes is committed to building quality homes that exceed the expectations of local building codes. Quality craftsmanship and construction methods include the implementation of home details that add long-term value to a property;

SATISFACTION GUARANTEED

Icon Homes has displayed a commitment to customer service for over 50 years



INDUSTRY LEADING SERVICE SINCE 1976

Spanning over four decades and across Ontario, Nelmar Drywall has been a pillar in the industry. Since inception, the vision and principles of our founder remain true today. A profound legacy that exemplifies the benefits of a family business while integrating a unique process and procedure that lends an advantage to Builders, Developers and General Contractors across the province.

905.738.7256

www.nelmardrywall.com

68 Romina Drive, Vaughan, Ontario, Canada L4K 4Z7

When it comes to customer satisfaction, Icon Homes doesn't pull any punches.

Icon Homes focuses on unparalleled customer service – and that's not grandstanding or baseless boasting. According to the award-winning Toronto developer, customer satisfaction is not only its top priority, but it's a trait that "drives us to be a better builder."

At Icon Homes, they know buying a new home is not a decision one makes every day. It's a unique opportunity full of many exciting and important decisions. And choosing the right builder is the first and most important decision of all. That's why Icon Homes has created an entirely fresh approach to making homeowners' dreams a reality.



10275 Keele Street
Maple ON L6A 1S7

Tel: 905.832.2251
Fax: 905.832.0786
www.argolumber.com



*Proud of our association with
Icon Homes*

Central Office:
5 Paisley Lane
Stouffville, ON L4A 7X4
P: (905) 642-3515 x 216
F: (905) 640-7352

West Office:
4 Abacus Road, Unit 6
Brampton, ON L6T 5J6
P: (905) 794-2369
F: (905) 794-1316

info@trudelandsons.com • www.trudelandsons.com



COMMITMENT TO TIMELINES | QUALITY OF WORK | LOYALTY



Serving Ontario
Residential & low-rise commercial

905-617-2901 • E-mail: info@upscalestucco.com
www.upscalestucco.com



89A Connie Crescent, Unit 2
Concord, ON L4K 1L3
Tel: 905.206.9674 • www.idealrailings.com



A longstanding pledge to consistent service / Icon Homes is dedicated to providing a positive homebuying experience for all homeowners. The company recognizes that its reputation is built on happy homeowners and strives to provide consistent, reliable service to all Icon homeowners.

But there's more. With Icon Homes, if customers have any questions or concerns about their homes home during the construction and move-in process, all they need to do is contact an Icon customer service representative to get all the answers needed.

Icon homeowners can also rest easy knowing that every home the company builds is protected by a comprehensive home warranty from the Tarion Warranty Corporation.

A breakdown includes:
Smart design /

Icon Homes works with leading architects to create the finest residences in the GTA;

Superior craftsmanship /

Icon homes are constructed to the highest standards of quality and durability;



This developer has built upon its legacy of excellence since the 1960s. Despite being one of the more experienced developers in the GTA, they have always ensured that their approach keeps fresh. This freshness has built upon their reputation of integrity. They make sure to be as available and transparent as possible so new homeowners can feel like they have a say in their new homes. By providing a checklist, the home-buying process is kept smooth and simple.

www.iconhomes.com

Top customer service /

Icon Homes supports the client through every stage of the home ownership journey, to guarantee 100 per cent satisfaction.

There's a handy checklist on the Icon Homes' website that will make moving into a new home a breeze. There are also examples online of the company's many accolades, including being recognized by their peers and winning the Best New Home Design Award at the 2015 BILD Awards for The Majesty floor plan at their Royal York Towns development in Mimico.

Icon Homes strives to create the finest family communities anywhere in the GTA. That's why the developer carefully selects the locations and parcels of land on which to build, to ensure that all of its homebuyers get an ideal balance of convenience, atmosphere and exceptional value. Icon Homes works with a dedicated team of architects and community planners to give homeowners a lifestyle experience unlike anything else. And customer satisfaction is foremost. The innovative home designs at Icon Homes offer the ideal blend of fashion and aesthetic excellence to qualify as some of the GTA's most unforgettable family residences.



T: 416-488-1174 • F: 416-488-7843
E: ap@apsurveyors.ca • www.apsurveyors.ca



A REPUTATION
BUILT ON SOLID WORK

STRUCTURAL ROOFING & WATERPROOFING LTD.

29 Gormley Industrial Ave,
Gormley, Ontario L0H 1G0

Office: 416-291-7576 • Fax: 416-291-1267
www.thestructuralgroup.ca

ELECTRIC CARS



Rimac C_Two: The crown jewel of electric hypercars

Established in 2009, Croatian company Rimac Automobili has quickly evolved into industry leaders when it comes to performance electric car technology. In recent years, Rimac Automobili has supplied some of the world's most power-hungry car companies with vital components which are able to fulfill their highly specific demands.

Among others, Rimac developed a powerful 500 kW battery pack and associated systems for the revolutionary Koenigsegg Agera, the

most powerful production car in the world with a combined power output of 1,340 kW or 1,797 horsepower thanks to twin-turbo-charged V8 and Rimac Automobili's potent 75 kg, 4.5 kWh 800 volt battery pack. This system is currently the world's most power-dense battery pack in a production car, taking Rimac Automobili to the forefront of new automotive technologies.

With electric cars gaining mainstream momentum, Rimac Automobili gained global

visibility and international recognition, which prompted big industry players to take interest in a boutique Croatian company.

In June 2018, Porsche AG invested in Rimac Automobili, becoming the minority shareholder with 10 per cent share in the Croatian startup. That way, both companies got their own set of benefits, with Rimac getting a much needed official recognition and financial backing in further endeavors, and Porsche getting exclusive insights straight from the testing grounds.

To showcase the latest in cutting edge electric car technology, Rimac Automobili presented the C_Two concept in 2018. Built as a follow up to the 2013 Rimac Concept One, the new halo car shows just how much the electric car industry has progressed in a short period of time.

Just like its predecessor, the C_Two is an aerodynamically effective two-seater coupé built on an impressive carbon fiber monocoque that weighs under 200 kg. Some drama was added to the sleek silhouette thanks to butterfly doors, a must have in the competitive hypercar world where sensational looks are as equally important as mind-bending performance.





In addition to being a low slung, low drag car which creates the foundation for effective use of air flow, the Rimac C_Two also benefits from active aerodynamics in form of active hood, front splitter, air brake and rear flap, all working together to achieve optimal results in every situation, be it hard acceleration, hard braking or tackling the sharpest corners.

Regardless of undoubtedly impressive exterior, the most important feature of the C_Two lies underneath the bodywork. It's the all-electric powertrain comprising of four electric motors powering each individual wheel. Working together, these motors have a total of 1,914 horsepower and they instantly deliver whooping 2,300 Nm of torque. Thanks to immense power and specially developed Pirelli tires, the C_Two

has a lightning fast 0 to 100 kph time of 1.85 seconds while the 0 to 300 kph sprint takes 11.8 seconds.

As that's not impressive enough, the battery that powers the Rimac C_Two certainly is. Its capacity is 120 kWh, and it produces 1.4MW of power. The power-dense pack enables the autonomy of 550 km when driven in WLTP cycle.



The battery pack itself is integrated in the monocoque chassis and it sits in the middle of it, enabling perfect weight distribution and also adding to the impressive torsional stiffness of 8,000 kgm/deg.

The technology controlling Rimac's latest halo car is as astonishing as its powertrain. Rimac All Wheel Torque Vectoring ensures perfect driving dynamics by addressing the right amount of torque to each wheel. The powertrain can be configured to transform the Rimac C_Two into a rear-biased silent hypercar as well, making it a proper challenge even for the most skillful drivers.

The technology doesn't end there, as the C_Two is loaded with even more gizmos. In a place where technology meets gaming-like experience the C_Two can load selected racetracks into its on-board systems thanks to the 'Driving Coach' function. That way, the driver is presented with perfect racing lines with braking and acceleration guidance and additional steering inputs.

At this moment, the Rimac C_Two is in its prototype phase, but the most discerning believers in electric car technology have something to look forward to since Rimac Automobili plan a very limited run of production variants of their current crown jewel. Electric cars have certainly come a long way, and selected buyers will be lucky enough to reap the benefits of galloping progress thanks to the revolutionary Rimac C_Two.





COTTAGE IN THE CITY

Arnaud Marthouret,
Revelateur Studio Architectural
& Interiors Photography

The Don Mills Ravine Home takes full advantage of private urban oasis



The material palette was inspired by a rocky beach cottage, with soft greens, blues, and grays. Oak, walnut, fir, zinc, and stone compose the natural material finishes, and provide warmth and texture in contemporary spaces. Engineered wide plank white oak floors sit atop hydronic radiant flooring.

Ledgerock veneer wraps the main floor volume and elevator core, and slides from indoors to outdoors as a feature wall in the dining room.

Flat lock and standing seam zinc panels clad the upper volumes and cover integrated rainwater leaders.

On the exterior, fir wood elements serve as shades and privacy screens to protect banks of windows from the sun and shelter outdoor spaces; while significant overhangs with fir soffits mitigate solar heat gain on the large expanses of glass.

Large aluminum-clad Douglas fir operable windows, timber curtain wall, and sliding doors with glass guards acting as Juliet balconies, brings the outdoors in.



moses structural
engineers

Extraordinary outcomes for
extraordinary clients.

The new Don Mills Ravine Home serves as a “cottage in the city” for a couple that loves to host and entertain.

The generous lot falls away to a forested ravine and the design takes full advantage of the private urban oasis. Public spaces make up the length of the rear side of the house with expansive views and access to the backyard, pool, and terraces.

Development of the program and layout was driven by the owners’ desire to host large events as well as smaller groups of guests, while still maintaining the intimacy of a single family home from day to day. Amenities include an outdoor bar served from the kitchen, a backyard pizza oven and barbecue area, a changeroom and bathroom accessed via the lower level walkout for pool users, a game room on the uppermost floor with a treetop view, a wing of guest rooms at the second level, and a roof deck with gas fireplace.

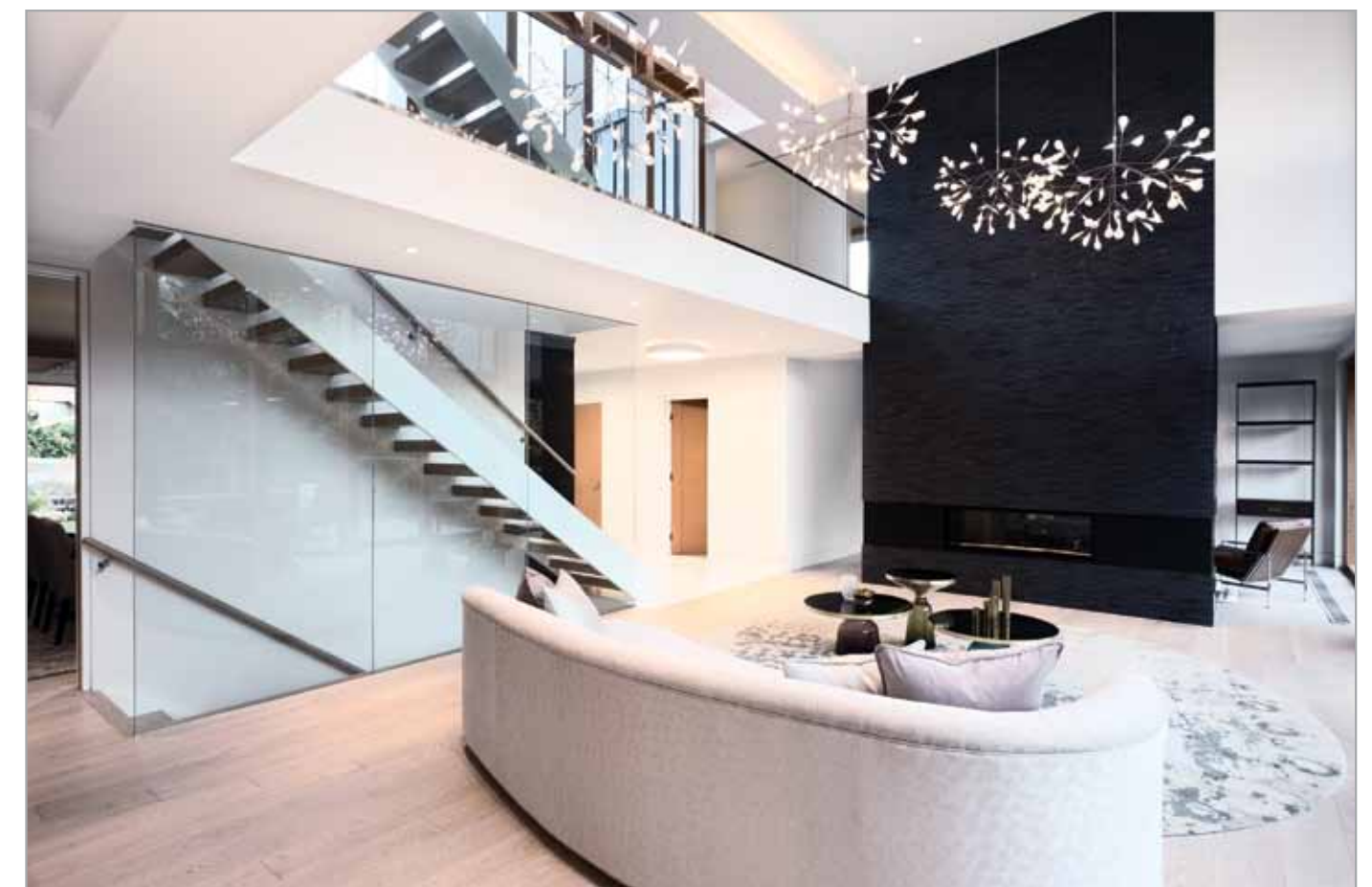
The primary spaces are generous, with the program revolving around a two-storey living room volume with a double height fireplace and curtain wall that connects the core of the building to the lush backyard and pool stretching back toward the ravine.

The open tread steel and wood staircase allows natural light to penetrate from the third floor down into the basement level, and at the second floor forms part of a bridge that divides the master bedroom suite from the guest rooms. A seamless connection to the outdoors is provided on all floors, including the basement with a stepped planter walkout.

Contact us for
your next project.

T: (416)255-3337
E: info@mosesstructures.com
www.mosesstructures.com

366 Adelaide Street West, Suite LL04, Toronto, ON M5V 1R7



Natural light is abundant due to large windows, shallow building volumes, and generous building setbacks, and minimal artificial light is required during the day in the main spaces.

The completed home is a warm and inviting space that connects its users to a lush urban oasis, and provides respite from the stress of city life.

www.altius.net

SUSTAINABILITY FEATURES

- Integration with the 'Natural Assets' of Site and Terrain
- Site Specific View and Vista Optimization
- Natural Daylighting
- High Performance Envelope Design
- Radiant Heating
- Heat Recovery Ventilation
- Solar Electric (photovoltaic or PV systems)
- Low Energy Lighting & Appliances (LED, CFL lighting and Energy Star appliances)



Loewen Window Centre or Oakville
2650 Bristol Circle, Suite 400
Oakville, ON, L6H 6Z7
Phone: 905.829.1310

Loewen is the premium window and door company focused exclusively on the architectural market.

ADVERTISEMENT

TALKING POINTS

With the climate change conversation, geothermal energy trending in a big way

The more people talk about climate change issues these days, the more we keep hearing about geothermal energy. And for good reason.

With concern over our future and the environment dominating the conversation, it only makes sense to zero in on the incredible benefits of geothermal when it comes to intelligent heating and cooling alternatives.

Some of the first major U.S. media attention came to geothermal back in 2012, in the aftermath of Hurricane Sandy in New York. The storm had cut a swath of destruction, with particular damage sustained when empty fuel tanks were unearthed, emerging from flood waters in the area.

With geothermal technology, those kinds of problems would be extremely mitigated.

Fast forward to today, where we are seeing even more natural disasters. And geothermal continues to take centre stage, as no fossil fuels are used with the technology and no mechanical systems are exposed to the elements – both key standards that are even more important to society in 2019.

The technology taps into the constant temperature of the earth to heat and cool buildings. With a network of underground pipes, extending to a depth where the earth regulates liquid or water passing through the system, a geothermal system can also significantly reduce a building's carbon footprint, another huge plus.

The list of advantages when incorporating geothermal is a long one, including:



Drilling the biggest residential geothermal district energy project in the world in Rome, Italy.

- System never affected by storm or floods, and the ground loop also not affected by fire;
- Marries well with net zero energy and net zero CO2;
- Ideal for multi-building campuses, already proven in the market;
- Natural underground thermal energy storage;
- Unlike solar or wind, hidden under the ground, or under buildings;
- Noiseless equipment;
- No need to reinforce roofs in commercial or institutional buildings;
- For commercial roofs and homes, no outside equipment;
- Very few installation limits, can be installed almost anywhere;
- No combustion or explosion to worry about, since no fossil fuels used;
- Quiet, with healthy air and independent temperature control;
- And financing is now available for larger projects, with residential financing expected soon.

Gino Di Rezze, an industry pioneer since 1979, helped commercialize the technology in North America, and feels there's no better time for builders and developers take a long look at incorporating more geothermal systems into their construction plans.

"Most discounted when hippies of the '60s sounded alarms and predicted polluted waters, climate change and other perils," says Di Rezze, P. Eng., President of Groundheat, a geothermal energy service provider with over 30 years exper-

tise. "Climate change is here and it costs money to repair. I made my life career as part of the solution and, since 1979, promoted and installed this technology across Canada and other parts of the world."

www.groundheat.com

About Groundheat / Groundheat is a pioneer in the geothermal energy industry. In 1985, the company started off servicing small homes, and quickly expanded to mansions of up to 62,000 square feet. Now, they take on large projects including district energy across North America, Europe and Asia. Groundheat has been a leader in renewable systems innovation, completing hundreds of small and large scale projects, developing superior proprietary technologies and methodologies, and providing unparalleled expertise to its strategic partners and clients internationally. In fact, Groundheat created the largest district energy source of its kind in Canada in 2018, a 604-apartment hub in Waterloo, Ontario. Groundheat also completed Mezzaroma, the biggest residential geothermal district energy project in the world in Rome, Italy, for more than 1,000 units in 22 high-rise apartment buildings. This was a design-build project managed entirely by Groundheat with a 10,000 square foot mechanical room. Groundheat also owns patented technologies in geothermal energy from its various research and development activities. Groundheat currently has operations in Canada, the United States and Italy with plans to start operations in the United Kingdom.

MORIYAMA & TESHIMA ARCHITECTS

The Arbour, George Brown College's tall wood, low carbon building



George Brown College envisions The Arbour as a landmark, tall wood, low-carbon building that will feature ecological innovation across its entire life cycle and be a model for 21st Century smart, sustainable, green building innovation

throughout Canada.

The design of The Arbour aspires to achieve net-zero building through a thermally efficient building envelope and natural ventilation systems, reducing reliance on mechanical system during entire life cycle.



The soaring solar chimney signals the sustainable systems within, while the angled apex of the Tall Wood Institute speaks to future advancement of tall wood technologies and development of low carbon building methodologies.

The building form has been shaped and refined to maximize access to natural light and fresh air. Two solar chimneys located on the east and west facades create natural convection, drawing air up and through the building to ensure that air flow from operable windows is continually refreshed. The solar chimneys provide the driving force to draw air through the building by absorbing the solar heat gain in wooden shade elements to create the stack effect.

The plan is organized using a tartan grid to establish three parallel bars of programmable space separated by a narrow line of circulation. The mass wood structure is laid out on a seven by nine metre grid. The outer bars house classrooms, labs and administrative offices, where an outward outlook is desirable. The large span, beamless structure, enables demising walls to expand and contract, providing flexibility of sizes for a variety of learning spaces.

The design seeks to inspire big changes through a careful and considered build-up of small ones, instilling generous spaces for wellbeing and sustainability into The Arbour, whose very name evokes green growth and shelter. The project seeks to diffuse "Breathing Room(s)" throughout the design:

STRUCTURAL BREATHING ROOM: An innovative structural approach will revolutionize the future of large span tall wood institutional buildings by increasing the spanning capabilities of cross-laminated timber structures.

SOCIAL BREATHING ROOM: Generous social spaces are incorporated into a compact footprint by finding room for interconnectivity, community social health and choice for the building user.

SYSTEMS BREATHING ROOM: Synergistic solar chimney systems ecologically capture and harness light and air for sustainable natural ventilation. This provides passive access to fresh air and light by allowing the building to act like a tree, a living thing that synergistically captures light and air and contributes to the earth's ecosystem in return.

www.mtarch.com

TOP ZERO ENERGY MEP FIRM

BASED ON NBI'S 2018 *GETTING TO ZERO* REPORT

INTEGRAL
GROUP



500+
FULL TIME IG EMPLOYEES

100+
ZERO NET ENERGY PROJECTS
COMPLETED OR IN DESIGN

09
MASS TIMBER PROJECTS
TORONTO OFFICE

TRUST | NURTURE | INSPIRE
INTEGRALGROUP.COM

SERVICES: MECHANICAL | ELECTRICAL | WATER | ENERGY | SUSTAINABILITY | REFRIGERATION |
COMMISSIONING | LIGHTING | FIRE ENGINEERING | TECHNOLOGY | INTEGRATION | MODELING

GREEN BUILDING

+ ARCHITECTURE

SUMMER 2019

WOMEN — IN GREEN

SPECIAL ISSUE

Celebrating women's contribution
to the green building industry



Jacinthe Nichols



Sophie Mastrokostas



Women of Enercare



Natascha Pieper

d COLLECDEV

Call for Nominations

WOMEN IN GREEN

*Celebrating women's contributions
to the green building industry*



**Know of
an outstanding
female candidate
to be featured in
Green Building
+ Architecture
magazine?**



This unique marketing opportunity will be enhanced
with your company's advertising participation,
which will complement each woman's profile.

This promotion will ensure that your company is seen by readers as an
innovative, industry leader and strong supporter of women in green.

SEND YOUR NOMINATIONS NOW!

**Women in Green feature is published now in every issue of
Green Building + Architecture magazine**

**E-mail your nominations to Giulio Marinescu - Publisher
at gbamedia@bellnet.ca or call 416.250.0664**

CONTENTS

SUMMER 2019



- 2 Cover Story**
NATASCHA PIEPER
Commitment to long-lasting, healthy urban
landscapes that improve quality of life
- 7 GROUP OF SEVEN**
Builder team at Enercare provides expertise with
innovative HVAC and Smarter Home initiatives
- 12 JACINTHE NICHOLS**
Cutting edge go-getter a game changer
at Dettson Industries
- 15 SOPHIE MASTROKOSTAS**
President of Seventynine Construction
proud to shake up the industry status quo
- 19 ONE AND COUNTING**
Success of first Canadian zero-carbon office
building paves way for second Cora Group project
- 22 SOM ARCHITECTS**
The Launch of "Burj Jumeira" –
The New Icon to Dubai Skyline



GREENBUILDING
+ARCHITECTURE

Volume 8, Number 2 – Summer 2019

www.gbplusamag.com

PUBLISHER: Giulio Marinescu

416-250-0664

gbamedia@bellnet.ca

2109-256 Doris Ave. Toronto, ON M2N 6X8

MANAGING EDITOR: Greg McMillan

editor@gbssmag.com

GRAPHIC DESIGNER: Tony Lomuto

Graphic Designs Unlimited

LTONY@sympatico.ca

Photo credits:

The Cora Group Inc.,
Dettson Industries, Collecdev,
G Photography, Hawthorn Films,
Seventynine Construction, SOM | ATCHAIN

Contributors:

Greg McMillan,
SOM Architects

Submit articles, event, news to
Giulio Marinescu
gbamedia@bellnet.ca

Canada Post Publication Mail
Agreement number 42332013

Undeliverable mail return to:
2109-256 Doris Ave.
Toronto, ON M2N 6X8

Printed in Canada by: CoFax Printing

© 2019 Green Building + Architecture
No part of this magazine may be reproduced
by any means, in any form, in whole or in part,
without the prior written permission
of the publisher. The opinions expressed in this
publication are those of the respective authors
and not necessarily those of this publication.
Green Building + Architecture does not specifically
endorse the editorial, products or
services presented in this magazine.

Subscription Rates

Canada: 1 year \$24, 2 years \$40, single copy \$6

United States: 1 year: \$32

International: \$36

Plus applicable taxes



Natascha Pieper

COMMITMENT TO LONG-LASTING, HEALTHY URBAN LANDSCAPES THAT IMPROVE QUALITY OF LIFE



When it comes to creating a more sustainable world, it's safe to say Natascha Pieper lives and breathes anything that pertains to that mindset.

As the vice-president of sales and marketing for Collecdev, a finalist for the Building Industry and Land Development Association (BILD) Green Builder of the Year award, and an individual who has won numerous green awards on national and international levels, Pieper provides a life-long passion when it comes to promoting viable, healthy urban landscapes that can improve the quality of people's lives.

"I have two daughters and every day I ask myself 'are the decisions I'm making today creating a better world for them?'" says Pieper, featured by Green Building + Architecture magazine in its Women in Green initiative. "How can I ensure the planet will sustain my daughters and the generations that come after?"

Powered by a professional zeal that matches her personal dynamic, Pieper embraces sustainable development in every possible way.

"I feel fortunate to be part of a team that truly practises what we preach," she says. "So many developers today use buzzwords like 'sustainability' or 'green' as part of their marketing efforts, without taking the time to understand or invest in what those things really mean.

"I am so proud to work with our team, led by Maurice Wager, the Collecdev president. I know we are all truly committed to creating stronger, more sustainable communities. That's what gets me excited to go to work every day."

Environmental stewardship, Pieper explains, is one of the key pillars at Collecdev and a guiding principle for everyone on its team.

Pointing out that urban development is an essential part of city growth, she says that does

not have to have a negative impact on the environment.

"Through responsible building practices, we can mitigate and, in many cases, even help combat, climate change through our developments," Pieper says. "Our buildings are designed and built to conserve more energy and resources than standard code compliant buildings, aiming for ecological balance and a better way to live."

Nowhere is that trait more evident than in the latest community offering by Collecdev – the TRETTI Condos in Wilson Heights, just north of Highway 401 near the Downsview Airport lands.

At TRETTI, Collecdev includes a full slate of features that address ecological and environmental concerns, utilizing responsive and renewable materials and systems to create a multi-layered community that not only looks good, but does good for the environment.



gh3*

55 Ossington Avenue, Suite 100
Toronto, ON M6J 2Y9
t 416-915-1791
f 416-915-1793

info@gh3.ca • www.gh3.ca



ALL THE BENEFITS NONE OF THE RISK

GEOHERMAL SIMPLIFIED

A Proven Geothermal Utility Model That Just Makes Sense.

With our geothermal utility model, our firm builds, owns and operates the geothermal ground loop. We convert the capital cost of geothermal into a long-term operating expense while providing a resilient, low risk renewable heating and cooling solution. Additionally, by displacing cooling towers and boilers, not only will we reduce construction costs but we also have a material impact on the maintenance, energy and carbon of each building. With over 25 years of combined experience and over 200 systems completed, our model is a great fit for commercial, multi-family and institutional projects.



A Geothermal Utility Company

diversoenergy.com
1.800.520.6340



Tretti Condos

TRETTI features include:

- An innovative geothermal energy system that reduces carbon emissions by up to 70 per cent, saves over five million litres of water each year, and provides residents with guaranteed performance and predictable utility costs;
- Green roofs that reduce the heat island effect and help manage storm water retention onsite;
- A high-performance thermal envelope that minimizes unwanted solar gain and heat loss;
- Electric car charging stations that can grow to accommodate future demand;
- And abundant bicycle parking to encourage a car-free commute.

"I try and be very conscious of how I can help support our mission to create 'human-centred' communities," says Pieper. "That means championing innovative technologies like the geothermal energy systems we're putting in place at TRETTI and Westwood Gardens in Richmond Hill. It means helping to educate our buyers about how those systems can benefit the earth and our residents.

"It means working with architects and designers to push the boundaries on design and deliver communities where



residents have access to great air quality, abundant natural light, and outdoor space.

It means pushing our marketing team and partners to come up with new ways to engage people and find out what's important to them so that we can deliver it."

TRETTI, inspired by Scandinavian sensibilities, is an ideal example of how Collecdev, and Pieper, value development that focuses on social sustainability, experiential design and environmental stewardship.

"I am constantly on the lookout for inspiration and ideas for Collecdev, and one of my greatest sources in travel," Pieper says. "We recently took a family vacation to Norway and I was blown away by the Scandinavian approach to sustainability and healthy living. I saw how important community, social connection, active living and a connection to nature are for quality of life. These are the same values we've brought to TRETTI, and they're key to creating a sustainable lifestyle."

While continuing to champion sustainability, Pieper has some advice for others interested in following her lead. The key, she says, is to stay curious, open and informed.

www.collecdev.com



enercare
Smarter Home

We're here to **serve you better**

- ▶ **Service & Value:** Experienced account managers offer you the best solutions for your needs. They are committed to providing exceptional technical and professional service.
- ▶ **Full Line of Products:** Extensive energy-efficient water heating and HVAC equipment, incl. air handlers, propane & electric water heaters, HRV's/ERV's and air conditioners.
- ▶ **Experience & Support:** Over 700 licensed, highly-trained technicians and a dedicated builder support phone line.
- ▶ **Same Day Service:** Call by 5 pm with no heat, no cooling or no hot water, we'll be there as fast as the same day.
- ▶ **Innovative Products:** Enercare Smarter Home is an integrated system which provides home comfort and peace of mind using one simple app. A comprehensive suite of leading smart products professionally installed.

Enercare's commitment is to offer you the best advice and solutions for your water heating and HVAC needs.



Contact one of our Account Managers for a free one-on-one consultation

Niagara, Hamilton, Halton
Laura Bonise | 647-227-1359

Southwestern Ontario
Morgan Chaffee | 519-520-2571

GTA North, GTA West, Barrie
Suzanne Pullman | 416-464-4329

Durham to Kingston, Peterborough & The Kawarthas
Gord McCrady | 613-803-7053

Ottawa & Valley, Cornwall to Kingston
Linda Oliveri Blanchard | 613-223-0189

GTA Central
Carole Solway | 416-347-9982

Builder Sales Coordinator
Emily Hanaka | 416-892-4481

National Director, Builder Division
June Thomson | 905-717-6264

National Sr. Sales Manager
Eric Byle | 416-937-8793

National Sales Engineer, Builder Division
Travis Brown | 519-808-2070

National Builder Sales Engineer Smarter Home
Batia Haber | 905-717-5511



Batia Haber



Carole Solway



Suzanne Pullman



June Thomson



Laura Bonise



Linda Oliveri Blanchard



Emily Hanaka

Group of Seven BUILDER TEAM AT ENERCARE PROVIDES EXPERTISE WITH INNOVATIVE HVAC AND SMARTER HOME INITIATIVES



Some might say that home is where the heart is, but the builder team at Enercare takes that way of thinking to a whole different level.

Proudly Canadian, Enercare is recognized for expert heating, cooling, water heating, and sub metering solutions, along with quality service and protection plans for HVAC systems and plumbing. Enercare leads the way when it comes to understanding what makes a home more energy-efficient.

This allows Enercare to provide innovative products that can benefit home builders' customers, and therefore help them provide better value when selling new homes.

In the builder market, Enercare's expanded product offerings include hydronic air handlers and furnaces, HRV's and ERV's, drain water heat recovery units, water heaters and boilers, heat pumps, air conditioners, and water treatment solutions.

Due to the strong increase in new building of higher density residential projects, includ-

ing stacked and back-to-back townhouses, new homes are increasingly moving to smaller mechanical rooms. As a result, combi systems and multi-zone systems have become extremely popular. By offering an assortment of high-quality, energy-efficient equipment, designed to do one thing – work so well you don't have to think about them – Enercare is proud to take a leading role in energy efficient HVAC offerings.

One example of this is Enercare's partnership with Radiant Hydronics to provide a complete line of leading-edge combination and heating-only wall-hung boilers and tankless water heaters. Radiant's introduction of Dual Tech® technology combines built-in storage for "tank-type" reliability, on-demand domestic hot water for endless comfort, and efficient central heating, all integrated in one compact, easy-to-install, wall-hung unit. These products paired with Radiant's low and high velocity hydronic air handlers, offer an innovative combi system.

Enercare places a high value on products that target the reduction of its customers' carbon footprint. High performance combined with reduced

emissions and low NOx, are attributes paramount to each Radiant product.

Exceeding some of the most demanding environmental laws in the world, Radiant continues to be a global leader in condensing technology, energy conservation, and environmentally friendly products.

At the same time, Enercare has raised the bar with its Smarter Home push, cementing its reputation as the premier provider of essential home and commercial services and energy solutions.

Crucial to the ongoing success of these endeavors with the builder group are seven women at Enercare being featured by Green Building + Architecture magazine in its Women in Green initiative – June Thomson, Batia Haber, Carole Solway, Suzanne Pullman, Laura Bonise, Linda Oliveri Blanchard and Emily Hanaka.

They bring decades of hands-on experience in the construction industry, and provide much needed expertise, especially when it comes to providing support for both the expanded HVAC and Smarter Home initiatives.

They are ideally positioned to lead in all aspects of the ongoing shift in construction parameters.

Take the Enercare Smarter Home program, for example – it's much more than simply relying on alerts from a mobile device. And that's because – when there's an alert – you can quickly get solutions to fix any issues in the home from any one of the 700 licensed technicians on hand. In short, from automated solutions with the mobile app to responsive technicians who can fix the issue, Enercare Smarter Home is the most complete solution for your home... period.

The Smarter Home Hub is the core of the whole network. The Smarter Home Hub is what collects and analyzes the data from all your home devices, making sense of the information, and then sending it out to your mobile app. No need to download multiple apps for all your home's connected devices. No need to try and interpret trends or graphs on your own. The Smarter Home Hub does the work so you don't have to. Included in your Smarter Home essentials package, it's the cornerstone of the app making sure you get the information you need when you need it.

In a nutshell, here's what comes with the Enercare Smarter Home program:

- Management of all Smarter Home products using one simple mobile app;
- System monitoring of heating and cooling equipment to identify possible issues before they happen;
- Discount on home insurance premiums;
- Comprehensive suite of leading smart products, professionally installed;
- Instant notifications to a mobile device and/or email when there is an issue in the home;
- Cellular connection for most products versus Wi-Fi for a constant connection from anywhere;
- Smart products using Z-Wave technology;
- Customizable automation settings that will fit a family's needs;
- Robust and secure communication network between smart products and hub;
- Video storage;
- And live agent support seven days a week.

All seven members on the builder team are keen to explain more about rental HVAC and water heaters, plus they provide the knowledge and know-how to make any homeowner's Smarter Home dream come true:

JUNE THOMSON

Prior to taking over as the building division's National Director at Enercare early in 2019, Thomson held several management positions dating back to 2014, when she joined the company. She has many years of progressive, professional experience within the HVAC industry, and has effective communication and interpersonal skills, ideal for facilitating productive working relationships and conflict management in a matrix environment.

BATIA HABER

Haber, National Smarter Home Sales Engineer, has been with Enercare since 2014. Prior to entering the builder division, she was working under the residential division as a District Sales Manager in the two largest regions in Ontario. Prior to Enercare, she worked in the home improvement division at Sears Canada for over 10 years, managing more than 25 sales and service teams across the country.

Haber has a wealth of knowledge concerning HVAC, great understanding of market conditions, consumer spending trends, business trends and new technology in the home – where she'll be able to help grow the Smarter Home business.

CAROLE SOLWAY

Solway, Territory Manager in the builder division, has over 30 years of experience in the home construction industry, including the past 19 years

with Enercare. Her personal approach and passion for the industry enables Solway to provide her builders with custom-designed water heater and HVAC solutions.

She keeps current by reviewing and investigating product changes and innovation as soon as they are launched. She often organizes product information and training sessions with industry partners, builders, and their trades.

This shared information ensures her builders are installing innovative and environmentally-recognized systems.

SUZANNE PULLMAN

Pullman is the newest member of the Enercare team. Pullman has over 25 years of experience in the commercial, industrial and residential construction industry.

She comes with a wealth of knowledge and understanding of the inner workings within the construction industry. Pullman is a sales and business visionary, highly accomplished, analytical and results orientated. Her career path has led her to have the ability to drive business growth through sales initiatives and her affiliations within the industry span both across both Canada and the United States.

She is an active member within the new construction home building community and is a member of BILD GTA, Simcoe & Greater Dufferin Home Builders Association.

enercare.ca/smarterhome

Alerts are Smart. Solutions are Smarter.™

Enercare Smarter Home is a simple, integrated system that puts home comfort and peace of mind in the palm of your hand, even when you're not at home.



From left to right: Emily Hanaka, Carole Solway, Laura Bonise, Batia Haber, Linda Oliveri Blanchard and June Thomson

LAURA BONISE

Bonise, Territory Manager in the builder division, started with Enercare in 1981. With over 38 years of experience, the knowledge she has acquired is of great value to builders, architects, mechanical and general contractors. She assists her clients with product selection, training, and technical support, and brings a great deal of credibility to the table. She is a member of many home builders' associations and volunteers for many industry events and fundraising projects.

LINDA OLIVERI BLANCHARD

Oliveri Blanchard, Territory Manager for Eastern Ontario, has been with Enercare since 2002. She has held various roles within the organization, but most recently has been in the new home construction market for the past 12 years. A licensed gas fitter, she has excellent product knowledge and technical expertise. A true advocate for the residential construction industry, Oliveri Blanchard is an active member of various local home builders' associations, and volunteers her time on multiple boards of directors, committees, Habitat for Humanity, and is the chair of the Ottawa Housing Design Awards. A recipient her-

self of several industry awards, her dedication to customer service is exceptional, working with her clients through every step of their projects, from planning, to production, to aftercare service.



EMILY HANAKA

Hanaka has been with Enercare, as a member of the builder group, for just over a year. As the Builder Sales Coordinator, she has had the opportunity to work with all territory managers and builders across Ontario, gaining exposure to multiple aspects of the business. She is a recent graduate from the commerce program at Dalhousie University, completing a double major in marketing management and logistics. The skills acquired throughout her degree, experience as a varsity athlete, and leader of multiple clubs and organizations, have been attributed to her success over the last year.

www.enercare.ca / radianthydronics.com

Enercare's builder program overview: Top-brand rental water heaters and HVAC equipment, personal account managers from Windsor to Ottawa, dedicated builder support phone line for delivery and services requests, extensive product inventory and quick turnaround times on delivery, engineering support services, expanded product offerings, professional services by one of over 700 licensed technicians, heating, cooling, water treatment.

Enercare delivers on the promise of putting its customers first and keeping millions comfortable every day.

BIG small spaces FEATURES

Radiant™ delivers big boiler comfort wherever clearance is a challenge.

Our 24KW series delivers 99,000 btu's of power with 12" venting clearances and fully removable cabinet panels means easy servicing in confined spaces.

Whether it's a true combi boiler you're looking for, or a hybrid-combi with on-board DHW storage, Radiant has the solution.



The Industry's First Truly Hybrid Combination Comfort Solution!

- Available in 99,000 and 116,000 btu
- 97% efficient
- 8 or 20 litres of onboard storage
- Combi-Tech® stainless steel dual coil heat exchanger
- 10:1 modulation
- Continuous flow rates to 267 gpm/hr
- 2" PVC vent approved
- Wi-Fi connectivity



heating technology since 1959

www.radianthydronics.com



THERMALhydronic
SUPPLY

www.thermalhydronics.com

Jacinthe Nichols



CUTTING EDGE GO-GETTER A GAME CHANGER AT DETTSON INDUSTRIES

Jacinthe Nichols has always made a difference at Dettson Industries – virtually from day one, as it turns out.

And the research and development (R&D) project leader at the HVAC powerhouse remembers what transpired then as if it happened yesterday.

“I was immediately exposed to some of the leading builders in North America,” says Nichols, featured by Green Building + Architecture magazine in its Women in Green initiative. “At the time, they explained to me the issues they were having with air stratification, uneven temperatures, loud systems and comfort ... all a direct result of an oversized furnace.”

So Nichols and her Dettson team went right to work.

“We developed a low BTU furnace that can modulate to 40 per cent of its capacity. I then took it another step further and developed a 10-by-23-inch, 15,000 BTU furnace. Then we got started on pairing these small units with heat pumps.

“The result was a heating and cooling system that would use the heat pump as primary heat source and switch to gas (or a small electric furnace) to help on the coldest days.”

That was a mission accomplished for Nichols, and the stage was set for a surging repeat of innovative tendencies in subsequent years.

Nichols found that she thrived in the Dettson workplace milieu, which places a strong emphasis on employees demonstrating independent thought and the pursuit of ideas.

“I’ve worked many evenings and weekends and worked closely in the field to help Dettson get to where it is now,” she says. “But, then, so has our entire team. You’ll find that engineering and HVAC, in general, are two industries that tend to be male-dominated, so I enjoy breaking down the barriers and showing that women not only belong here, but can lead it.”

There are many R&D endeavours at Dettson that have fuelled her passion; they range from Habitat for Humanity projects to the passive and net-zero home efforts.



“First off, I am very excited about the net-zero and passive home movement,” Nichols says. “It’s growing year over year. Companies like Natural Resources Canada (NRCan), the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) and the Canadian Home Builders’ Association (CHBA), are doing a fantastic job in promoting the benefits.

“Costs to build net-zero and passive continue to drop, further helping the uptake of builds. At the same time, it’s also very exciting to see the largest HVAC manufacturers beginning to develop smaller furnaces. It proves to us that we chose the right direction.

Besides her involvement with Habitat for Humanity projects across Canada and the United

States in building net-zero and net-zero-ready homes, Nichols has also participated in conferences, sessions and workshops, providing education to builders, contractors and wholesalers about the impact that building tighter homes has on their mechanicals.

For those interested in pursuing a similar career path, Nichols offers some sage advice.

“I think the first step for anyone is to find the right company to work for,” she says. “For me, I love the innovation and direction at Dettson. I have many people that I can lean on for assistance, but the bottom line is that Dettson does a great job at building independence and confidence to pursue ideas.

“I’ve put a lot of effort to find a career that makes me happy, but I realized it takes more than a great job to be fully happy. My husband and I are raising three kids and both working full-time jobs, but we still manage to be there for them and make them our priority.

“It’s a choice we made as a family, and it’s probably the best choice I’ve ever made.”

www.dettson.ca

Dettson, a member of the Ouellet Group, provides sustainable solutions to the HVAC (heating, ventilation, air conditioning) industry by offering systems designed to maximize residential comfort.

This commitment is made possible by both the undertaking of its employees and the contribution of its partners in innovation. Dettson is known for its agility in developing sustainable solutions that contribute to home comfort in each of the North American climate zones, taking into consideration the different energy challenges, while recognizing the specifications of the Canadian and of the HVAC replacement market.

This potential is realized through responsible innovation in collaboration with a distribution network and intelligent business partners. Dettson also provides its employees with the necessary tools to design, offer and manufacture these products in a safe and cost effective manner.

Congratulations Jacinthe on being featured
as one of the Women in Green.

Your Dettson family is proud to see you with
this recognition and are excited to see the products
you create become more in demand in the market.



www.dettson.com



Sophie Mastrokostas

PRESIDENT OF SEVENTYNINE CONSTRUCTION PROUD TO SHAKE UP THE INDUSTRY STATUS QUO



It's not a stretch to say that the construction industry is still seen as a male-dominated workplace.

But that trend is definitely changing and Sophie Mastrokostas, the president of Seventynine Construction, is happy to be doing her part.

"Traditionally, in this business, if a woman is involved it's generally focusing on the 'design' aspect, such as colours, floor finishes and furnishings," says Mastrokostas, featured by Green Building + Architecture magazine in its Women in Green initiative.

"I'm not saying that I am not involved in those things. On the contrary, I am. But there's a lot more to what I do."

Mastrokostas says she goes to a site, often when a home is being demolished, and stays

there right through the entire construction process.

"I am proud to say I have input on every step," she says. "I want, and feel the need, to be involved in every step. How is a woman going to improve herself and improve the product she can deliver if she only 'shows up' after drywall."

Her modus operandi fits in ideally with her company's Construction Management System policy, which aims to fulfil all client needs.

"Our experience in dealing with clients directly helps us create our unique Construction Managing System," says Mastrokostas. "It gives clients the freedom to be on top of their investments by having 24/7 access to the progress of the house – from budgeting to scheduling to step-by-step progressive photos."

Mastrokostas takes her green-motivated responsibilities very seriously. She urges clients, for example, to move towards higher insulation values, stressing that the previous norms are outdated.

"It seems basic but just because the drawings state a certain insulation value doesn't mean we have to go to the minimum," she says. "I am always encouraging clients to try and heat their homes with radiant heat utilizing high-efficiency boilers in their homes. And aluminum windows with thermal breaks are something I am trying to make a standard with our builds."

"In our climate today, we need windows that are more durable and better suited for the extreme fluctuations that we get. We tend to spend on all the frills in the house. We should be focusing on the 'core build' a bit more than we traditionally do at the moment."

A student of green building practices, Mastrokostas feels her role in that field will expand in the future. She spends a lot of time reading and researching, educating herself about the newest products and how to implement them.

"I see that we could be implementing a more strict company policy where we reduce waste to landfills and by building homes with materials that reduce waste or are recycled and non-organic," she says.

As a parent, Mastrokostas takes great pride in her Women in Green designation, and has definite ideas about what the future of the construction industry could look like in Canada.

"I am trying to slowly involve my children in the field," she says. "My eldest son is getting to an age where he'll be working and he is very excited to see how homes are put together."

"I am from Europe and I feel there is definitely a future in green building. There is a very different construction model there and, saying that, I would like to see more European-style construction implemented here in Canada."

www.seventynine.ca

Seventynine Construction is a proud member of the Building Industry and Land Development Association (BILD), the voice of the home building, land development and professional renovation industry in the Greater Toronto Area. SeventyNine Construction is one of the GTA's premier builders of quality homes. With expert craftsmanship, attention to detail, right materials and its Construction Management System made to fulfil client needs, SeventyNine Construction comes together to create an extraordinary experience, to create a unique dream home from traditional to contemporary.





51 Vernon Rd., Toronto, ON M1R1J1, Canada

Tel: (647) 880-3816
Email: info@seventynine.ca • Web: www.seventynine.ca

ONE AND COUNTING

Success of first Canadian zero-carbon office building paves way for second Cora Group project

Somebody had to be first ... and that somebody was The Cora Group.

Just over a year ago, the Waterloo-based developer cemented its reputation as an industry leader by receiving recognition from the Canada Green Building Council (CaGBC) for the completion of Evolv1, a multi-tenant commercial office building that was the first in Canada to meet the demanding new zero-carbon standard.

The certification positions Cora Group as an industry leader as the world transitions into the inevitability of a future where carbon will be far less accessible and accepted.

And now plans are in the works for the construction of Evolv2, right across the street in Waterloo's R+T Park.

"Evolv1 represents a project that goes well beyond 'building sustainably,'" says Adrian Conrad, Chief Operating Officer for Cora Group. "Now we proceed to Evolv2, which will have many tenant opportunities."

Evolv1 was one of 16 projects across Canada that the CaGBC picked to participate in a two-year pilot for the zero-carbon building standard. In order to receive the certification Evolv1 had to demonstrate zero-carbon design excellence, showing that it had:

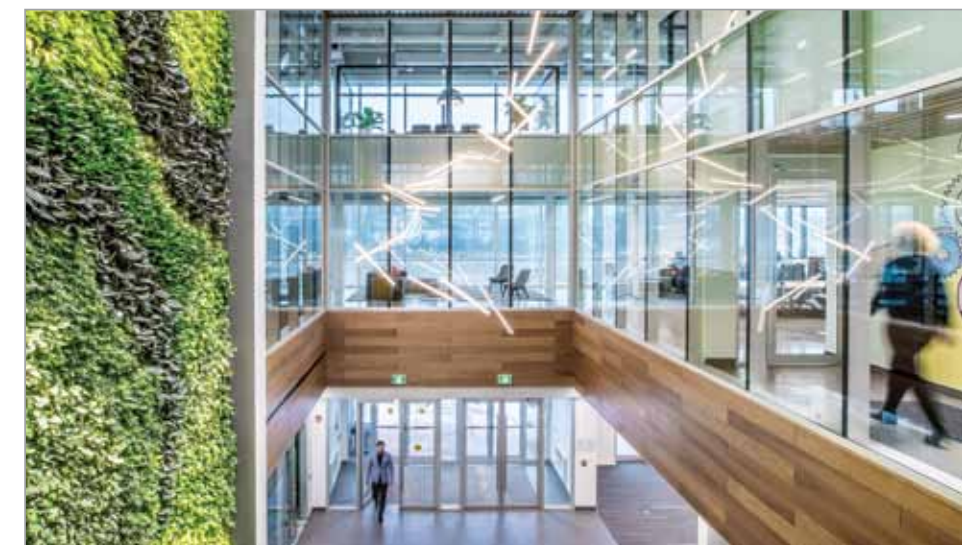
- Modelled a zero-carbon balance for future operations;
- Incorporated a highly-efficient envelope and ventilation system to meet a defined threshold for thermal energy demand intensity;
- And designed onsite renewable energy systems capable of providing a minimum of five percent of building energy consumption.

The CaGBC zero-carbon standard is seen as an innovative made-in-Canada solution that supports industry efforts to reduce greenhouse gas emissions and grow the low-carbon economy. Evolv1, then, has set a lofty example for both consumers and the industry, showing that zero-carbon buildings are technically feasible and economically viable.

Many insiders feel that the shift to zero-carbon buildings is a critical step in reaching climate change goals in Canada. With Evolv1, and Evolv2, Cora Group can lead the way in that struggle.



Developed and owned by the Cora Group Inc.



Evolv1 has targeted LEED Platinum designation, as well, and was constructed to produce more energy than it consumes. The building incorporates active and passive systems to optimize value against construction cost.

The high-performance building envelope incorporates triple glazing, a solar wall for preheated ventilation, a geo-exchange/VRF HVAC system, three-storey green wall, and a combination of photovoltaics.

In many ways, Evolv1 expands the definition of sustainability, advancing the business case and economic model for sustainable design in a multi-tenant building.

It's seen as a building that supports human health and wellness, which are important characteristics for today's top-tier tenants and their workforce.

Conrad points out that the Evolv1 and Evolv2 concepts serve as a microcosm for the overall core characteristics that give Cora Group a distinct advantage over competitors in the building industry.

He feels that Cora Group is the developer to work with and lists a number of tantalizing features showing how they deliver space that can be more desirable than conventional builds due to the sustainable elements.

They include:

- Great temperature control;
- Lots of natural light;
- No draft;



- Great air quality and comfort;
- Insulation from escalating utility costs;
- Zero-carbon footprint without compromise;
- Open canvas for tenants;
- And aesthetics, featuring a living wall, cutting-edge office spaces with unique features, an irresistible staircase and modern collaborative spaces.

"We believe that the national recognition we have received has set a new benchmark for green building design and construction," Conrad says

www.coragroup.com

About The Cora Group / The Cora Group Inc. is a premier developer and manager of Class A office space in the Waterloo Region in Ontario.

The company's properties, predominantly situated within Waterloo's emerging Idea Quarter, are built for sustainability using state-of-the-art LEED building principles. They are perfectly suited to entrepreneurs, growing technology and professional services companies and are tailored to the needs of today's millennial workforce.

Trust Mitsubishi Electric for Smart VRF, Net Zero Carbon Buildings

City Multi Water Source Heat Recovery VRF system will provide 100% of the heating and cooling to

evolv1

Owned and Developed by The Cora Group
Canada's First Zero Carbon Building-Design Certified Project

CITY MULTI
MULTIPLE SPLIT-TYPE VRF SYSTEMS

- World's first 2-pipe VRF heat recovery system
- Air-Source, water-source, heat pump and heat recovery solutions
- Available in 208/230V, 460V and 575V

Each project you complete helps build your reputation and having the right HVAC partner will ensure your success. With products developed specifically for the Canadian marketplace, and with dedicated national support, you can rely on Mitsubishi Electric for any project, from concept to completion.

Heating and Cooling
National Sponsor of the CAGBC

VRF575.ca
1.800.268.9828 ext. 5710



POWERING YOUR ENERGY FORWARD.

Proud solar developer for the award winning evolv1 building, Canada's first zero carbon commercial building, with over 760 kW of clean solar power.





Image © SOM | ATCHAIN

THE LAUNCH OF “BURJ JUMEIRA” – THE NEW ICON TO DUBAI SKYLINE

Following a record-breaking 2018 and its completion of 13 different high-rise buildings that are 200 meters and more, Dubai – the well acclaimed “World’s Capital of Modern Architecture”, is back and at it again, with the state-owned Dubai Holding recently unveiling plans for a new tower, design conceived by Skidmore, Owings & Merrill (SOM).

The Burj Jumeira will stand 550-meters-tall (1,804-feet) in the Al Sofouh neighborhood of Dubai, home to popular Dubai landmarks, such as the Madinat Jumeirah, the Dubai Knowledge Village, and the Dubai Internet City.

Strategically situated between the world famous Burj Al Arab and the Mall of Emirates, the tower will offer top-notch amenities – nothing short of the luxury-living typical of the state. Also, the tower will be the highlight of the newly proposed urban district, a residential and commercial area that will be called “Downtown Jumeirah”.

“Burj Jumeira is bold, elegant, and dynamic,” said SOM Design Partner Mustafa Abadan. “It will tower over Jumeirah as the centerpiece of the neighborhood, and will feature a synthesized architectural and structural design.”

The tower’s flowing design emulates the

regional dunes and oases of the United Arab Emirates, while its spherical observation deck is evocative of the native gulf pearl.

The upper stories will have world-class sky lounges, restaurants, and observation decks with glass viewing platforms offering a unique 360-degree panoramic view of Dubai’s breathtaking scenery and the Arabian Gulf waters.

The panelized metal façade system of the tower blends seamlessly into the structural system, and the central void will be used to host “social, cultural and artistic events and activities”.



Image © SOM | ATCHAIN

The split-volume tower's overall shape is similar to that of its future neighbor – the proposed 135-meter high Dubai Lighthouse of the 2017 launched Dubai Harbour project, split along the middle by a vertical void into two curvilinear masses, so much so that the supertall Burj Jumeira when completed might easily be tagged the world's tallest standing twin towers – a position currently held by the Malaysian Petronas Towers, which stretch 452 meters (1,483 feet) into the sky.

Perhaps the most notable feature of the tower would be its base – designed completely from the outline of the real fingerprint of His Highness, Sheikh Mohammed Bin Rashid Al Maktoum.

A large reflective pool and water fountains will highlight the base's relaxing alfresco space and the walkable covered paths linking the tower to the array of retail outlets, the Sharaf DG Metro Station and other points surrounding the site.

The tower comes among the distinctive urban projects being set up in Dubai for the approaching expo 2020 and will be an architectural wonder that will proffer a daring new vision on Dubai's landscape.

Construction began January 31st, the same day the project was announced, with the first phase set to be completed by 2023. The new mega-project is arguably Dubai's biggest architectural marvel yet, which will offer the highest standard of luxurious homes, office spaces, and hotels while arousing more curiosity and intrigue from residents and tourists alike.

Skidmore, Owings & Merrill is the architect and structural engineer of the building, also designer of the master plan of Downtown Jumeira. With a portfolio spanning thousands of projects across 50 countries, SOM is one of the largest architectural firms in the world. Their primary expertise is in high-end commercial buildings including Burj Khalifa - the world's tallest building - 152 story-tower soaring 828 meters above the metropolis of Dubai.

www.som.com

