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AWARD OF EXCELLENCE

# Alberta Consulting Engineers Honoured at National Awards Gala

(OTTAWA) October 23, 2018 – From improving water supply delivery, and waste and sanitation services, to the design of innovative and sustainable structures that bring communities together, consulting engineers from Calgary and Edmonton were celebrated for these outstanding achievements Tuesday night in Ottawa at the 2018 Canadian Consulting Engineering (CCE) Awards gala. Recognized as the industry's highest honours, the awards are presented to projects by Canadian firms that showcase the most remarkable engineering feats. "Tonight, we not only celebrate this year's incredible projects, we celebrate the extraordinary work of consulting engineers over the past 50 years and the important role they have on the social, economic and environmental quality of life of all Canadians," said ACEC President and CEO John Gamble. Firms from Calgary and Edmonton with projects across Alberta earned five of the twenty **Awards of Excellence**.

Model for sustainable design, construction and a focal point for the Centre for Water Intelligence.

Commissioned in 1971 and upgraded in 1987 and 2007, the *Drayton Valley Water Treatment Plant* reached the end of its service life. As it could no longer provide potable water to the town's existing population, and deemed unfit to sustain further population growth, **ISL Engineering and Land Services Ltd.** was tasked with designing and delivering a facility that could meet the current and future demands of the community.

The town desired a facility that would encapsulate the true basics of sustainable design, which included improving efficiencies and performance, lowering operating costs, streamlining environmental and material impacts, measuring short and long-term payoffs, and redefining the status quo. In response, ISL designed a state-of-the-art plant with several high-performance and efficient sustainable features.

While public awareness and engagement were not initially outlined as goals for the project, the design was adapted to create a multipurpose space to accommodate public education tours. This unique use of the plant

was widely applauded by the judges. "ISL's commitment to innovation, the consideration of the needs of the client and the environment and water resource education were definitely key factors in our success at this year's CCE Awards," said Jason Kopan, ISL's Project Manager and Manager of the Edmonton office. "To deliver a project that both our team and our client are proud of and be recognized for this achievement on a national stage is truly an honour."



High degree of creativity and innovation result in a true testament to structural engineering

Nestled within the foothills of northwest Calgary lies **RJC Engineers'** 284,000 sq. ft *Shane Homes YMCA at Rocky Ridge* project. Currently recognized as the world's largest YMCA, Rocky Ridge provides collaborative spaces to meet the community's needs. The facility features North America's largest single wood roof, an innovative design solution that greatly impressed the judges. Developed by RJC and GEC Architecture to

achieve the architectural demands of the building's irregular, contouring shape, the use of one common beam shape came to define every main roof beam. This repetition became the solution in reducing costs and improving efficiency, while maintaining the allure of the building's interior focal point.

When presented with various structural challenges the project team carefully revised the overall approach to meet design demands. During construction, to minimize potential conflicts, errors and site change orders, the project team took on a clash detection approach, allowing for improved efficiency and better overall team coordination. A fully synchronized three-dimensional building information model (BIM) was produced, allowing every sub-trade to embrace the use of a global working model, ultimately improving project coordination and efficiency throughout. "RJC Engineers are honored to receive this award,



recognizing the accomplishments of the entire team in delivering this iconic facility for Calgary. We greatly enjoyed working with GEC Architects and The City of Calgary – their passion for this facility is exceptional and the perseverance of their vision was a true gift to the entire project team," said Mark Ritchie, Associate, Structural Lead, RJC Engineers.

An outstanding example of sustainability, innovation, and originality of design

**Stantec's** *Terwillegar Park Footbridge* holds several distinctions. With a span of 262 m it is, "Canada's longest stressed ribbon bridge, second longest in the world, and connects communities with an extensive multi-use trail system on both sides of the North Saskatchewan River," said Reed M. Ellis, Bridge Sector Lead, Stantec and Project Director.

The unique three-span, continuous concrete stressed-ribbon bridge design, while sleek and simplistic in form, required complex engineering analysis and design. The design team was able to predict the sags and shape of the structure with remarkable accuracy during the various erection stages, often within tens of millimeters of accuracy, for a variety of load and temperature conditions while allowing for movement to occur within the handrails. The footbridge provided economical up-front cost, long-term durability and an

elegant solution which is aligned with the City of Edmonton's "vision for sustainable use of the beautiful North Saskatchewan river valley" added Ellis. The jury appreciated the design's remarkable shape and form, as well as its ability to stretch in response to changes in temperature.

**Stantec** was also recognized with two additional **Awards of Excellence**, first, in the Buildings category for their *Calgary Compost Facility*, and next for their *Sanitary Grit Treatment and Recovery Facility* in the Water Resources category.



## Setting the bar for innovation and sustainability in sanitary and waste processing

The largest of its kind in the country, the *Calgary Compost Facility* has greatly impressed clients and municipalities around Canada, elevating Calgary's reputation as a national leader in innovation and sustainability. It's the first commercial building in Alberta registered under LEED® v4, with several sustainable design features that complement its function. Processing over 145,000 wet tonnes of organic waste and biosolids per year, it diverts 85 million kg of organic material from landfills by converting it into a marketable product: compost.

Stantec's interdisciplinary team of mechanical, electrical, structural, architectural and sustainability engineering consultants designed the complex systems and the structure housing them. Their solutions included advanced systems for water recovery, odour control, and scrubbers that convert ammonia from exhaust into a valuable fertilizer. The project's consolidation of several technologies to solve two common problem-odours from food waste and residue from sewage waste was praised by the judges. "It's been an honor to help the City of Calgary surpass sustainability and waste management status quo and lead the way

on what's possible. To have this project recognized with such an important award is a win for all of us-Stantec, the Cityeveryone who worked on the project," said Jeff Rent, Senior Associate, Stantec

In addition to the many environmental benefits, the Calgary Compost Facility Education Centre, housed within the facility, offers a variety of educational programs and tours providing students and the public with the opportunity to learn about city waste diversion programs, composting, and how to reduce their own waste.

**EXCELLENCE** 



For the *Sanitary Grit Treatment and Recovery Facility*, **Stantec**, "in collaboration with EPCOR and PCL, is honored to be recognized [with this award]," said Nick Szoke, Regional Practice Leader. "This purpose-built facility, the first of it's kind in North America," is a state-of-the-art facility that utilizes a technology that provides a reusable and marketable product from sanitary waste. There are numerous grit treatment and washing technologies on the market being used throughout North America; however, the HUBER technology is the first of its kind to effectively remove up to 70% of 100

micron material from the sanitary waste stream, while also effectively reducing the organics content to less than 3%. Other existing technologies on the market can accomplish one or the other, but not both.

The facility can process and wash up to 3 m³ per hour of sanitary grit suitable for reuse within road construction or trench backfill applications within the community. This innovative solution of reusability greatly impressed the judges. In addition, due to the facility's close proximity to neighbouring residential area, special attention was paid to air handling and noise modelling in order to effectively reduce the odour and noise emanating from the plant. By addressing these issues, and implementing advanced technologies the facility provides an environmentally sound, safe, and clean method of disposal while lessening its impact on the local community.



In November, follow the #20DaysOfExcellence in engineering campaign on social media and at <a href="https://www.acec.ca/20daysofexcellence">www.acec.ca/20daysofexcellence</a> to watch videos of other award-winning projects like these and to learn more about the impact of consulting engineering on our quality of life.

### About award-winning firms

**ISL Engineering and Land Services,** is an award-winning, full-service engineering consulting firm that is committed to inspiring sustainable thinking in transportation, land and water projects for the public and private sectors. <a href="https://www.islengineering.com">www.islengineering.com</a>

**RJC Engineers** - Specializing in structural, building science, parking facility and restoration engineering services, RJC Engineers is one of Canada's leading engineering firms. With a staff of over 500 in 11 locations across the country, we offer highly personalized service at the local level with the expertise, depth and resources of a large national firm. <a href="www.rjc.ca">www.rjc.ca</a>

**Stantec** - Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind. We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe. <a href="https://www.stantec.com">www.stantec.com</a>

### About Awards co-sponsors

**ACEC** represents companies in Canada that provide professional engineering services to both public and private sector clients. These services include the planning, design and execution of all types of engineering projects, as well as providing independent advice and expertise in a wide range of engineering and engineering-related fields. For more information about ACEC and the 2018 Canadian Consulting Engineering Awards, please visit <a href="https://www.acec.ca">www.acec.ca</a>.

**Canadian Consulting Engineer** is a bi-monthly magazine for engineers in the construction industry. It is a division of Annex Publishing & Printing Inc. The award-winning projects are described in full in the October-November 2018 issue of *Canadian Consulting Engineer* at <a href="http://www.canadianconsultingengineer.com/digital-edition/">http://www.canadianconsultingengineer.com/digital-edition/</a>.

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#### Multimedia (photos, project descriptions, videos)

ISL Engineering and Land Services Ltd. project photo
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RJC Engineers project photo RJC Engineers project page Stantec (Calgary Compost Facility) project photo Stantec (Calgary Compost Facility) project page Stantec (Sanitary Grit Treatment and Recovery Facility) project photo
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Stantec (Terwillegar Park Footbridge) project photo Stantec (Terwillegar Park Footbridge) project page

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