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B.C. Consulting Engineers Honoured at National Awards Gala

(OTTAWA) October 29, 2019 – From ground-breaking water treatment solutions to innovative bridge and platform designs, to reducing environmental footprints and fossil fuel dependency consulting engineers from Greater Vancouver and Kelowna were celebrated for outstanding achievements at the 2019 Canadian Consulting Engineering (CCE) Awards gala on Tuesday night in Ottawa.

Recognized as the industry's highest honours, the awards are presented to projects by Canadian firms that showcase the most remarkable engineering feats. “This is an opportunity to recognize the valuable contributions that Canadian consulting engineers make both here at home and around the world on a national stage,” said ACEC President and CEO John Gamble, “they highlight the role that consulting engineers play in our daily lives and the important impact that their work has on all Canadians.”

Combining new technologies and approaches to address water quality in remote communities



In addition to an **Award of Excellence**, North Vancouver’s **WSP** was presented with two **Special Achievement Awards** for its *Solving Small Community Drinking Water Challenges* project. WSP received the prestigious **Schreyer Award** for demonstrating the highest degree of technical merit and innovation. For donating its time and/or services for the benefit of a community or group WSP also received the **Outreach Award**.



After witnessing communities struggle with small drinking water systems - systems that are subject to 77% of the nation’s boil water advisories - WSP approached researchers at RES’EAU-WaterNET to investigate and pilot test an innovative organics removal process created specifically for small and remote communities.



By combining a new treatment technology and a collaborative project implementation approach, this work culminated in a ground-breaking treatment system and the world’s first BIEX treatment plant. This enabled the pilot community of Dzit’lainli (Middle River), from the Tl’azt’en Nation in British Columbia, to lift its 14-year boil water advisory.

Innovations developed and applied towards solving the water supply problems of the Middle River village can also benefit numerous other remote and small communities across Canada. The project was supported and funded by Indigenous Services Canada and the technological advances WSP led will ultimately improve environmental conditions and sustainability – alongside citizens’ lives, community, and prosperity.



The members of the jury applauded the transformational nature of this solution, the close collaboration between all parties, the respect for the community and expressed how this project is a shining example of how the engineering sector should work with First Nations communities. “At WSP, our teams are

constantly pushing the boundaries of innovation to support the communities where we operate. Being recognized for our work in the Transportation and Infrastructure sectors speaks to the world-class expertise and talent of our people” said Ryan Brain President and CEO, WSP in Canada.

Efficient and functional design reflects the best of Canadian know-how in complex bridge design



For best showcasing Canadian engineering expertise outside of Canada North Vancouver’s **COWI** was honoured with an **Ambassador Award** in addition to its **Award of Excellence** for its *Governor Mario M. Cuomo Bridge* project - one of the largest design-build transportation projects in the United States. The Governor Mario M. Cuomo Bridge in South Nyack to Tarrytown, New York is a 5 km long Hudson River crossing north of Manhattan and the largest bridge construction project in the State’s history. COWI* performed the design and erection engineering of the twin east and westbound cable-stayed main spans and durability design of the associated approach structures.



After overcoming project challenges and complexities COWI completed the durability design using a probabilistic 100-year service life design approach, a first for a major North American bridge. This approach provides the project with significant environmental benefit, ensuring non-replaceable bridge components can reach their design life, thus limiting the environmental consequences of premature bridge replacement. For the jury, the elegant, efficient and functional design of this project places it first in its class and reflects the best of Canadian know-how in complex bridge design. “This is a huge milestone, not just for the project team, but for COWI overall. As a company we take great pride in our contribution to the development of innovative infrastructure solutions to connect sustainable communities...I am very proud of our team and their work on this landmark project” - Don Bergman, P.Eng., Senior Vice President, Major Projects.

*This project was completed by Buckland & Taylor International, Inc., which is a COWI affiliated company and a professional corporation registered and licensed to perform engineering services in the State of New York.

Expanding tourist infrastructure on challenging terrain with innovative design solutions



For its *Cloudraker Skybridge and Raven's Eye* project Burnaby area’s **Morrison Hershfield** received an **Award of Excellence**. Whistler Blackcomb wanted to expand its tourist infrastructure with a safe yet thrilling attraction. As Lead Engineer for the Design-Build Team with Axis Mountain Technical, Morrison Hershfield designed a 130 m long steel pedestrian suspension bridge leading to a 12.5 m cantilevered viewing platform to do just that. At over 2,100 m above sea level, the Cloudraker Skybridge and Raven’s Eye are thought to be the highest pedestrian structures in North America.



Capable of year-round operations, the structures provide an eco-tourism and economic boost to the resort, attracting a whole new set of visitors to Whistler’s peak. The jury found this to be a remarkable project and were impressed by the ingenious and effective solutions put in place to address logistical challenges and the innovative modular deck design to tackle the issue of snow removal. “The Cloudraker Skybridge and Raven’s Eye project is a perfect example of exceptional collaboration and teamwork. The design-build team went ‘above and beyond’ to achieve a uniquely-designed solution to suit the challenging terrain at the peak of Whistler Mountain. We are grateful to be recognized with a CCE Award of Excellence and share it with the entire team” said Catherine Karakatsanis, P.Eng., Chief Operating Officer, Morrison Hershfield.

Delivering alternative cost saving solutions to meet project objectives and water regulations



For its *Shedding UV Light on Greater Vernon's Water System* project Kelowna’s WSP received an **Award of Excellence** for its ability, as prime consultant, to engineer and deliver an innovative \$7 M ultraviolet disinfection facility in order to meet drinking water regulations at the Duteau Creek Water Treatment Plant.

By leveraging its expertise in UV disinfection, the team delivered the project on-budget and successfully met the Ministry of Health’s treatment objectives that would normally be achieved by filtration on an extremely tight design schedule imposed by the funding criteria of the Canadian Water & Wastewater Fund. For the jurors, this project was a great example of problem solving. The team identified a \$7 M solution for a \$30 M project that the community could not afford and addressed the additional regulatory review required because of its first time use in that jurisdiction. “Being recognized for this project speaks to the world-class expertise and talent of our people” said Ryan Brain President and CEO, WSP in Canada.



Aligning energy consumption with community values by reducing dependency on fossil fuels



The second **Award of Excellence** that BBA received was for its *Old Crow Solar Project*. Located in Yukon the community of Old Crow, home of the Vuntut Gwitchin First Nation, is located 800 km north of Whitehorse, inside the Arctic Circle. Wanting to align energy consumption with the community’s values by reducing its dependency on diesel the Nation’s leadership hired BBA and Beyond Consulting to design a solar farm, the largest in the Yukon and the first of its kind in the Territory.



Using software analysis to determine the number, size, location and orientation of panels, the result was a unique back-to-back design that optimized panel angles, maximizing energy from the arctic sun’s low trajectory. The project’s 900 kW of solar panels and 350 kWh of battery storage will decrease carbon dioxide emissions through reducing diesel usage by 190,000 litres per year. The project is also forecasted to generate

close to \$400,000 a year, revenue that will be reinvested into the community once financing is repaid. As the first to embark on an Independent Power Producer (IPP) venture in the Yukon, creating the agreements, templates and government directives required to allow sale of power, the Vuntut Gwitchin First Nation paved the way for other First Nations in the Yukon and across Canada who are interested in reducing their dependence on diesel fuel. The level of community engagement and the respect of traditions were two aspects of the project that impressed the jury. They were also excited with the potential replication of this project in other remote communities. “We take great pride in working with eco-conscious communities like the Vuntut Gwitchin First Nation. By being the first to embark on this type of venture, they’re paving the way for other First Nations interested in becoming almost entirely independent of diesel—in Yukon and across Canada.” – André Allaire, President

In November, follow ACEC’s national and international award winning [#20DaysOfExcellence](#) in Engineering campaign on social media. Visit www.acec.ca/20daysofexcellence to view videos of the winning projects and to learn more about the impact of consulting engineering on our quality of life.

About award-winning firms

BBA, - At BBA, engineering, environmental and field experts team up to quickly and accurately pinpoint the needs of industrial clients. www.bba.ca

COWI in North America is a leading bridge, tunnel, and marine engineering consulting group built on over 80 years of international experience. With Canadian headquarters in North Vancouver, BC and US headquarters in Seattle, WA, COWI provides their clients with innovative and sustainable solutions to the most complex engineering challenges worldwide from their 10 offices across North America. www.cowi.com

Morrison Hershfield is a multidisciplinary, employee-owned engineering and management firm that prides itself on contributing to the social well-being and economic prosperity of the communities it serves. Founded in 1946, the company has grown through its emphasis on ethics, technical excellence and client service, to become a leader in the Buildings, Mission Critical, Municipal Infrastructure, Telecommunications, Transit, and Transportation markets. www.morrisonhershfield.com

WSP, a Canadian company and one of the world's leading professional services firms, provides technical expertise and strategic advice to clients in the Transportation & Infrastructure, Property & Buildings, Environment, Industry, Resources and Energy sectors. WSP is uniquely positioned to deliver successful and sustainable projects wherever their clients need them. www.wsp.com

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 2019 Canadian Consulting Engineering Awards, please visit www.acec.ca.

Canadian Consulting Engineer is a privately-owned magazine for professional engineers working as consultants in the construction field. It is a division of Annex Publishing & Printing Inc. The award-winning projects are described in full in the October-November 2019 issue of *Canadian Consulting Engineer* at <http://www.canadianconsultingengineer.com/digital-edition/>.

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Multimedia (photos, project descriptions, videos)

BBA (Old Crow Solar Project) project page & photo	COWI project page & photo
Morrison Hershfield project page & photo	WSP (Shedding UV Light on Greater Vernon's Water System) project page & photo
WSP (Solving Small Community Drinking Water Challenges) project page 1 , page 2 , & photo	

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