



ASSOCIATION OF CONSULTING
ENGINEERING COMPANIES | CANADA
ASSOCIATION DES FIRMES
D'INGÉNIEURS-CONSEILS | CANADA

CANADIAN | CONSULTING
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Engineering Achievements Recognized at National Awards

(Ottawa) October 24, 2014 – Twenty-one Canadian consulting engineering firms received the highest recognition for engineering excellence last night at the 2014 Canadian Consulting Engineering Awards Gala. The awards, which are presented jointly by the Association of Consulting Engineering Companies – Canada (ACEC) and *Canadian Consulting Engineer* magazine, recognize consulting engineering firms across Canada for their work on complex engineering projects that enrich Canadian society, the economy and the environment.

“Now in their 46th year, these awards showcase the outstanding expertise and innovation of Canadian consulting engineering firms,” said ACEC President and CEO John Gamble. “By recognizing these firms and their projects with national awards, we are showcasing the positive contributions our industry makes to enhance Canadians’ lives every day.”

Twenty-six awards were handed out at the “starry night” themed event, including twenty Awards of Excellence in a range of categories. Of these projects, five were recognized with Special Achievement Awards for demonstrating a high level of technical innovation, environmental stewardship, Canadian expertise abroad, engineering that enhances Canadians’ quality of life, and company benevolence in Canada or internationally.

In addition, ACEC gave its *Beaubien Award* posthumously to Allen D. Williams, P. Eng. The *Beaubien Award* is an honour bestowed on an individual each year for exceptional service to the association and the consulting engineering industry.

Award winners were selected by a panel of 12 independent jurors with varied backgrounds and knowledge of the industry.

ACEC represents companies in Canada that provide professional engineering services to both public and private-sector clients. These services include planning, designing and executing 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 2014 Canadian Consulting Engineering Awards, please visit www.acec.ca.

Canadian Consulting Engineer is a bi-monthly magazine for engineers in the construction industry. It is a division of BIG Magazines LP of Toronto. The award-winning projects are described in full in the October-November 2014 issue of *Canadian Consulting Engineer* at www.canadianconsultingengineer.com/issues/de.aspx.

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For more information, please contact:

Laura Allardyce, Communications Specialist
Association of Consulting Engineering Companies – Canada
lallardyce@acec.ca
613-236-0569

Bronwen Parsons, Editor
Canadian Consulting Engineer
bparsons@ccemag.com
416-510-5119

BACKGROUNDER: 2014 Canadian Consulting Engineering Awards

SPECIAL ACHIEVEMENT AWARDS

SCHREYER AWARD - presented to a project that best demonstrates technical excellence and innovation:

CH2M HILL

Canadian Museum for Human Rights, Winnipeg, Manitoba

The architectural design for the Canadian Museum for Human Rights, located in the geographical centre of Canada, was selected by way of an international competition. With a design that draws inspiration from Canada's natural scenery and open spaces, the museum is envisioned to be an iconic national symbol – a magnificent and unique structure, showcasing a world class experience that will be a true testament to the importance of Canada as a nation and an inspiring place for dialogue on human rights and the diversity of human experience. CH2M HILL provided structural engineering consulting services for this complex and unique project.

TREE FOR LIFE AWARD - presented to a project that best demonstrates outstanding environmental stewardship:

CBCL Limited

New Victoria Mine Water Treatment Plant, Cape Breton, Nova Scotia

Enterprise Cape Breton Corporation retained the services of CBCL Limited for the design and implementation of a mine water treatment scheme to control and treat rising contaminated water from several former coal mines. Plant design, location selection and innovative mine pool hydraulic connections presented a means to treat several separate mine pools using a single treatment plant. The benefits included reduced capital and long term operating costs, thereby avoiding an uncontrolled surface discharge.

AMBASSADOR AWARD - presented to a project constructed or executed outside of Canada, which best showcases Canadian engineering expertise:

MMM Group Limited

New Quito International Airport, Quito, Ecuador

MMM Group Limited was prime consultant for the Phase 1 development of the New Quito International Airport. Located on a 1,400-hectare plateau sitting 350m above surrounding rivers within the Andes Mountains, the project was undertaken in one of the most seismically active areas in the world. While many design challenges were encountered, as a result of careful planning, due diligence, best practice strategies and dedication to detail, the project was successfully completed on time and on budget.

ENGINEERING A BETTER CANADA AWARD - presented to a project that best showcases how engineering enhances the social, economic or cultural quality of life of Canadians:

BBA Inc.

Detour Lake Gold Mining Project in Ontario, 185km northeast of Cochrane, Ontario

Detour Gold Corporation engaged BBA to complete a feasibility study, detailed engineering, equipment purchasing and technical support for an open pit gold mine complete with “greenfield” gold recovery process installations, conceptualized to become the largest Canadian gold mine with a capital of \$1.5B. BBA's design exceeded operating expectations and implemented industry-leading innovations while providing effective

environmental solutions. Today, the Detour Lake Mine is the largest regional employer, creating sustainable opportunities for the local communities and the region.

OUTREACH AWARD - presented for a company's role in donating their time and/or services for the benefit of a community or group either in Canada or on the international stage:

Dillon Consulting Limited

Dillon's Environment and Community Investment Fund, Canada-wide

Dillon's Environment and Community Investment Fund (ECIF) operates as a part of Dillon's overall Corporate Sustainability Strategy (CSS). The fund, which amounts to over 1% of pre-tax profits, encourages employees to develop and participate in community and environmental initiatives of their choosing. The funding serves as a catalyst for activities that encourage a culture of volunteerism, community engagement, and environmental sustainability. In operation for five years, total investment has amounted to almost \$500,000.

AWARDS OF EXCELLENCE

Buildings:

Blackwell

Residence for the Sisters of St. Joseph of Toronto, Toronto, Ontario

The Sisters of St. Joseph of Toronto required a new, smaller and greener urban home to decrease their operating costs, better suit their aging population, foster health and welfare and their collective beliefs, and allow closer proximity to their ministries and outreach programs. Blackwell designed supporting structure for the resulting unique building form and configuration. Several innovative, long span thin structural systems allow natural day lighting, accommodate large efficient mechanical systems, and provide an open plan that fosters community interaction.

Pasquin St-Jean et associés

Redevelopment of the Casino de Montréal, Montreal, Quebec

In order to restore the Casino de Montréal's world class image, Loto Québec selected Pasquin St-Jean to design the complex structural systems, including the addition of a mechanical floor, the building's seismic rehabilitation with dynamic braking systems, and several unique structures for the building's modernization. All the work was carried out while maintaining 100% of the casino's activities and revenue.

Transportation:

Buckland & Taylor

John James Audubon Bridge, St. Francisville to New Roads, Louisiana

South-central Louisiana is now home to the longest cablestayed bridge within Canada and the United States of America, the 482m John James Audubon Bridge which crosses the storied Mississippi River. The cable-stayed unit is comprised of five spans, symmetrically arranged about the navigation channel. Buckland & Taylor's scope of work included the detailed design of the cable-stayed main span structure above the foundations and the detailed construction engineering for the structure.

Fast + Epp

Bow River Pedestrian Bridge and Utility Crossing, Banff, Alberta

Bow River Pedestrian Bridge and Utility Crossing, by Fast + Epp with StructureCraft Builders, is an iconic timber design-build project that spans the Bow River in Alberta. Featuring an 80m clear span, it facilitates foot and emergency vehicle traffic. In order to accurately assemble and erect the bridge, the individual elements were prefabricated and shipped to the project site as a kit of parts. A minimal, unimposing design was used to blend the bridge into the natural beauty of the park.

Harbourside Engineering Consultants

Strandherd Armstrong Bridge Erection, Ottawa, Ontario

Horseshoe Hill Construction, the contractor awarded the Strandherd Armstrong Bridge project, required an erection plan that satisfied strict project requirements while remaining practical and affordable. Harbourside Engineering Consultants were approached and embraced this challenge, developing a unique construction and erection plan which involved building 90% of the bridge superstructure on land, then launching it across the Rideau River. This plan minimized disruption to recreational river users and lessened the environmental impact on the site.

Hatch Mott MacDonald and MMM Group (H5M joint venture)

Port Mann/Highway 1 Improvement Project – Onshore Works, Vancouver, British Columbia

The Port Mann/Highway 1 Improvement Project is the largest transportation construction project in British Columbia's history. This signature project improves transit connections and the movement of people and goods through Metro Vancouver. Hatch Mott MacDonald and MMM Group's H5M joint venture successfully designed the project's onshore works which, valued at \$1.6 billion, widened 37km of Trans-Canada Highway 1 between Vancouver and Langley, included 45 new structures, and upgraded 14 interchanges.

Read Jones Christoffersen Ltd.

Glacier Skywalk, Jasper National Park, Alberta

Brewster Travel Canada sought a unique experience to attract people from around the world. Read Jones Christoffersen, as prime consultant and structural engineer, delivered this experience with Glacier Skywalk, a thrilling and dramatic structure featuring a 30m curved glass walkway extending 35m from the cliff face and 280m above the Sunwapta Valley. One doesn't have to be an engineer to appreciate the technical complexities of this project. Even before it was built, the Skywalk gained international attention with a World Architecture Award.

Water Resources:**SMA Consulting Ltd. and Cybertech Automation Inc.**

Gold Bar Thickener/Fermenter Operational Improvements, Edmonton, Alberta

EPCOR's Gold Bar Wastewater Treatment Plant treats over 100 billion litres of sewage per year and will receive more as Edmonton expands. Overflows impact the North Saskatchewan River, but process complexity and environmental and regulatory constraints make upgrading difficult. Cybertech Automation, SMA Consulting, and EPCOR developed a strategy that has significantly increased capacity, deferring up to \$15 million in potential capital costs for at least five years. Simulations showed reduced risk and cut the schedule by 40%.

Environmental Remediation:

PINTER & Associates Ltd.

Groundwater Denitrification Using a Permeable Reactive Barrier, Northern Alberta

Viterra Inc. required an innovative solution to prevent groundwater nitrate concentrations from traveling towards sensitive receptors at a fertilizer facility in northern Alberta. PINTER & Associates Ltd. successfully designed and installed a permeable reactive barrier (PRB) to remove nitrates in situ through biological denitrification. The design is durable, maintenance-free and cost savings of more than 50% were achieved compared to conventional treatments. The system is effectively removing more than 95% of the nitrate from groundwater.

Natural Resources, Mining, Industry & Energy:

Hatch

Developing Hydroelectric Potential in Northern Ontario, Northern Ontario

Hatch was retained by the Ontario Waterpower Association, supported by the Ministry of Natural Resources and Forestry, Ontario Power Authority and the Ministry of the Environment and Climate Change, to identify the most cost-effective waterpower sites situated along six major watersheds in northern Ontario.

Development will benefit off-grid First Nation communities and the Ring of Fire mining region through the supply of clean, reliable energy. Hatch developed a first-of-its-kind geographic information system (GIS) to screen and evaluate the energy potential and implementation costs and determine optimum development schemes. The screening study results are being used by the Province of Ontario to support power planning.

Hatch Mott MacDonald in association with Hatch

Niagara Tunnel Project, Niagara Falls, Ontario

Ontario Power Generation wanted to increase power production at its Niagara hydroelectric generating facility. Hatch Mott MacDonald and Hatch, as Owner's Engineer, provided services from concept to completion of the world's largest machine-bored hard rock tunnel, diverting an additional 500 cubic metres per second of river water and generating an additional 1.5 terawatt hours of clean renewable energy. Hatch Mott MacDonald and Hatch employed several firsts including the world's largest hard rock tunnel boring machine, an electrically testable waterproof membrane, and laser measurement of unreinforced concrete liner deflection during the prestressing process.

WSP Canada Inc.

Mount Pleasant Substation, Vancouver, British Columbia

The Mount Pleasant Substation is the only publicly visible portion of BC Hydro's Vancouver City Centre Transmission Project and an integral part of the most significant investment in central Vancouver's electrical system in 30 years. Located in a residential neighbourhood, the 400 Megavolt Ampere substation provides reliable power, satisfies complicated urban design issues and features an aesthetically pleasing and sustainable design to meet a LEED® Silver target.

Special Projects:

Kerr Wood Leidal Associates Ltd.

Heat-Seeking Sewer Model, Vancouver, British Columbia

A significant amount of renewable heat can be recovered from the sewer system and used to heat buildings. Metro Vancouver retained Kerr Wood Leidal Associates to examine the viability and implications of implementing sewage heat recovery projects. The resulting Heat-Seeking Sewer Model finds waste heat,

matches it to recovery opportunities, and answers the question of how much heat can be safely recovered without endangering sewage treatment processes, both now and in the future.

Project Management:

Morrison Hershfield Limited

North Channel Bridge Replacement – Three Nations Crossing, Cornwall, Ontario

Federal Bridge Corporation Limited (FBCL) required the existing North Channel Bridge to be replaced due to excessive maintenance costs and age. Morrison Hershfield was retained to provide contract management services. A new type of concrete was used during construction and a very precise “launch” technique was implemented for installing the bridge girders. Significant consultation with the Mohawk Council of Akwesasne and other stakeholders was ongoing. The new bridge helped eliminate the expensive ongoing operation and maintenance costs for the aging structure, creating opportunities for neighbourhood renewal and redevelopment.

SNC-Lavalin inc.

Ambatovy Nickel Project, Madagascar

The Ambatovy Nickel Project comprises the development of mine processing facilities and infrastructure in Madagascar, positioning Ambatovy as one of the world’s largest producers of nickel and cobalt from lateritic ore. Ambatovy represents the largest foreign investment and one of the most ambitious and complex industrial undertakings in Madagascar’s history. SNC-Lavalin successfully provided comprehensive engineering, procurement, and construction management (EPCM) services for this US\$5.3 billion project which, apart from its sheer size, represented significant location, infrastructure, labour, environmental and climatic challenges.

BEAUBIEN AWARD - for exceptional service to ACEC and the consulting engineering industry:

ACEC’s 2014 Beaubien Award is conferred on the late **Allen D. Williams, P.Eng.**, in recognition of his outstanding contributions to ACEC and to the advancement of consulting engineering.

In 1978, Allen Williams opened A.D. Williams Engineering Limited, a mechanical and forensic engineering firm in Edmonton, Alberta. The firm soon grew to include civil and structural departments followed by geotechnical, environmental, and eventually electrical, building science, and municipal planning services.

With a focus on bringing engineering expertise to remote, northern communities, the firm built its business through the use of strategically located corporate and branch offices, company aircraft, and above all, a high standard of business integrity.

In addition to growing his own firm’s success, Allen also had a vision for the future of consulting engineering. Seeing the need to attract more young people to the profession, he set out to raise awareness of consulting engineering among university and college students through the Alberta recruitment program.

Allen served as a member of the Board of Directors of Consulting Engineers of Alberta from 1998 until 2006. From 2001 until 2006, he served on ACEC-Canada’s Board and was Chair from 2004 to 2005. In 2009, Allen’s dedication to the industry was honoured by ACEC with the creation of the Allen D. Williams Scholarship, which is presented annually to a young professional in an ACEC member firm who has made significant contributions to the association and the industry.