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BACKGROUND: 2015 Canadian Consulting Engineering Awards

SPECIAL ACHIEVEMENT AWARDS

Note: Special Achievement Award-winning projects have also been presented with an Award of Excellence



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

Stephenson Engineering Ltd. with CAST CONNEX
Queen Richmond Centre West
Toronto, Ontario

The Queen Richmond Centre West is a brilliant example of adaptive re-use of two existing heritage buildings in the construction of a new 11-storey office building. The new tower springs from a tabletop that spans over both buildings 21 m above street level and is perched atop three architecturally exposed structural steel mega delta frames. The innovative mega delta frames create a soaring open air atrium that sets this development apart from any other.

[Project photo \(click to download\)](#)

[Stephenson Engineering Ltd. with CAST CONNEX project page on acec.ca \(video and more information\)](#)



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

Hatch
Forrest Kerr 195 MW Hydroelectric Power Project
Northwest of Stewart, British Columbia

The Forrest Kerr project had clear objectives which were to design and construct a 195 MW hydroelectric facility on time and on budget in a safe and environmentally responsible manner. AltaGas recognized Hatch as industry leaders and Hatch accepted the challenge. Through the application of innovative design concepts at both the headworks and underground powerhouse, the success of the Forrest Kerr project represents a triumph not only in multidisciplinary engineering coordination, but also in First Nations collaboration and sustainability.

[Project photo \(click to download\)](#)

[Hatch project page on acec.ca \(video and more information\)](#)



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

Buckland & Taylor | COWI

Milton-Madison Bridge Replacement Project
Milton, Kentucky to Madison, Indiana

The existing Milton-Madison Bridge was functionally and structurally obsolete, and Owners Kentucky Transportation Cabinet and Indiana Department of Transportation required a replacement. Buckland & Taylor | COWI provided a cost effective solution that required only a few weeks of traffic interruption (as opposed to the predicted 365 days) and culminated in the world's longest lateral bridge slide. This approach reduced the impact to the local economy and travelling public, cut costs and resulted in a wider, safer crossing.

[Project photo \(click to download\)](#)

[Buckland & Taylor | COWI project page on acec.ca \(video and more information\)](#)



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:

SNC-Lavalin Inc.

Halifax Central Library
Halifax, Nova Scotia

SNC-Lavalin Inc. was awarded the contract for structural and civil engineering for the Halifax Central Library project. The Owner, Halifax Public Libraries, mandated that the project requirements include provision for a civic landmark and centrepiece for the Capital District that would showcase a rich resource centre for knowledge, learning and personal growth. The new facility has met the Owner's criteria by meeting a LEED Gold standard for sustainability and contributing to the economic revitalization of Halifax's downtown.

[Project photo \(click to download\)](#)

[SNC-Lavalin Inc. project page on acec.ca \(video and more information\)](#)



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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:

Hatch and Hatch Mott MacDonald

Hatch and Hatch Mott MacDonald Canadian Outreach Program
Mississauga, Ontario

Hatch and Hatch Mott MacDonald's Canadian Outreach Program includes community relations, corporate giving, and the environment. The Northern Communities Outreach Initiative aims to inspire youths to pursue a career in sciences and engineering and build talent to support engineering projects in British Columbia and Ontario. In 2014, Hatch and Hatch Mott MacDonald donated more than \$300,000 towards community investments, raised \$300,000 for charity, created scholarships, and developed programs to better the environments surrounding the companies' offices and project sites.

[Project photo \(click to download\)](#)

[Hatch and Hatch Mott MacDonald project page on acec.ca \(video and more information\)](#)



AWARDS OF EXCELLENCE

Buildings:

Aercoustics Engineering Limited

Revitalizing the State of Courthouse Acoustics: Thunder Bay Consolidated Courthouse
Thunder Bay, Ontario

The vision for the Thunder Bay Consolidated Courthouse project was to revitalize the courthouse design and restore the grandeur of traditional civic buildings. Modern day courtrooms have been designed as black box theatres, where there is no natural light or natural acoustics. Aercoustics' role was to optimize the space to enhance the natural acoustics in the courtrooms. The project incorporated glass construction to allow natural light into every courtroom and resulted in acoustic performance in the courts equal to concert halls.

[Project photo \(click to download\)](#)

[Aercoustics Engineering Limited project page on acec.ca \(video and more information\)](#)



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Blackwell

University of Toronto Goldring Centre for High Performance Sport
Toronto, Ontario

Part of an extensive renewal project of the University of Toronto's Varsity Centre, the Goldring Centre for High Performance Sport is a \$58 million centre for sports research, sports medicine and recreation in the heart of Toronto. The 14,000 m² four-storey complex features teaching labs, a fitness centre, strength and conditioning centre, a state-of-the-art sport medicine clinic, and a 2,000-seat, international-rated field house for varsity basketball and volleyball. Built on an extremely tight site, the field house could only be located below grade due to set back requirements, requiring that the building be constructed as a bridge, with all other programs located over the playing surface. The project contributes to the quality and coherence of the university as a whole, bringing together researchers, graduate students, sport scientists, athletic therapists, coaches, and athletes to form Canada's leading Sport Institute.

[Project photo \(click to download\)](#)

[Blackwell project page on accc.ca \(video and more information\)](#)

Fast + Epp

Mountain Equipment Co-op Head Office
Vancouver, British Columbia

The new 4-storey 10,000 m² head office for Mountain Equipment Co-op features a central atrium space for gathering, open offices to encourage collaboration, an abundance of daylight and fresh air, an extensive green roof and exposed wood structure on the interior. Constructed with over one million board feet of timber, glulam beams and columns support solid sawn lumber floor panels, creating a warm visual aesthetic.

[Project photo \(click to download\)](#)

[Fast + Epp project page on accc.ca \(video and more information\)](#)

Transportation:

Associated Engineering and CH2M

Calgary International Airport Runway and City of Calgary Airport Trail Tunnel
Calgary, Alberta

Calgary International Airport's runway is the longest runway in Canada and expanded capacity at Alberta's busiest airport, allowing more economic opportunity for the city and region. The City of Calgary's Airport Trail Tunnel, built underneath the airport's runway, improved connectivity to the northeast quadrant of the city. Simultaneously delivering these large, complex projects on the same site for two clients, the Calgary Airport Authority and the City of Calgary, is a testament to the



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consulting team's project management and technical expertise. Project team collaboration by Associated Engineering, CH2M, AECOM, and Hatch Mott MacDonald resulted in completion of these projects on time and on budget.

[Project photo \(click to download\)](#)

[Associated Engineering and CH2M project page on acec.ca \(video and more information\)](#)

DIALOG

Edmonton International Airport Office and Control Tower
Edmonton, Alberta

The Edmonton International Airport is a significant Canadian transportation hub south of the city on the open Alberta prairie. DIALOG was challenged to design a new combined office and control tower atop the main terminal that would serve as a distinctive landmark for the Edmonton region. Showcasing the region's cultural vibrancy while providing an enjoyable, relaxing environment, the Central Tower has become a dramatic icon for both the Edmonton International Airport and visitors to the Capital Region.

[Project photo \(click to download\)](#)

[DIALOG project page on acec.ca \(video and more information\)](#)

WSP | Parsons Brinckerhoff and RFR

George C. King Bridge (formerly St. Patrick's Bridge)
Calgary, Alberta

The George C. King Bridge spans the Bow River in Calgary's East Village, linking St. Patrick's Island with mixed-use community development to the south and popular pedestrian paths and communities along the river to the north. It is a three-span, 182 m long network arch structure that resembles stones skipping across water. Given its slender and architectural uniqueness, the project team had to overcome several design and construction challenges, including the Calgary flood of June 2013.

[Project photo \(click to download\)](#)

[WSP | Parsons Brinckerhoff and RFR project page on acec.ca \(video and more information\)](#)

Water Resources:

Golder Associates Ltd.

Recovery and Resilience: Flood Mitigation Innovation
Calgary, Alberta

In June 2013, large scale flooding in southern Alberta rearranged river beds, moved material on a large scale, eroded banks and, in some cases, altered river alignment. Amid extensive recovery efforts, the City of Calgary challenged Golder Associates to improve existing methods of interpolating river data. A custom interpolation method and tool were created, where none



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previously existed. The resulting flood maps are an essential risk mitigation tool in managing future flooding.

[Project photo \(click to download\)](#)

[Golder Associates Ltd. project page on acec.ca \(video and more information\)](#)

Golder Associates Ltd.

Ruskin Dam – Right Abutment Seepage Control Upgrade, Mission, British Columbia

BC Hydro's Right Abutment Seepage Control Upgrade project was undertaken to address seepage issues and seismic performance. An innovative cut-off system was designed and installed by Golder Associates as the main contractor. The work included construction of a narrow, deep slot connecting a new plastic concrete cut-off wall system with the existing concrete dam, and development and installation of a custom designed flexible mastic asphalt membrane, the first known application in North America.

[Project photo \(click to download\)](#)

[Golder Associates Ltd. project page on acec.ca \(video and more information\)](#)

Stantec Consulting Ltd.

Orleans Watermain Link Horizontal Directional Drilling
Ottawa, Ontario

The water supply for 100,000 residents of Orleans, a suburb of Ottawa, was at risk. Serviced by a single, aging feedermain, a new 7,000 m-long watermain was needed that would cross Green's Creek, an environmentally sensitive watercourse. To reduce environmental impacts and expedite construction, horizontal directional drilling was used for a 600 m section of the 914 mm diameter watermain. This was one of the longest, deepest, and largest horizontal directional drilling pulls ever completed in Canada. Stantec provided complete design and construction review services.

[Project photo \(click to download\)](#)

[Stantec Consulting Ltd. project page on acec.ca \(video and more information\)](#)

Environmental Remediation:

Dillon Consulting Limited

Outboard Marine (OMC) – *In Situ* Environmental Remediation
Peterborough, Ontario

Outboard Marine Corporation of Canada operated a small-engine manufacturing facility in Peterborough, Ontario for nearly 75 years, prior to becoming insolvent. Dillon conducted environmental investigations that revealed legacy contamination from lubricating oils and degreasing fluids and identified impacted groundwater extending into a predominantly residential area. Acting as court-appointed receiver in addition to its technical role, Dillon completed the remediation using



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the first full-scale Canadian application of a remedial technology, significantly reducing environmental liabilities.

[Project photo \(click to download\)](#)

[Dillon Consulting Limited project page on acec.ca \(video and more information\)](#)

Natural Resources, Mining, Industry & Energy:

Golder Associates Ltd.

Giant Mine Remediation Project – Mine Support Services, Phase 1
Yellowknife, Northwest Territories

Golder Associates Ltd. was retained by Public Works and Government Services Canada, on behalf of Aboriginal Affairs and Northern Development Canada, to assist with the stabilization of underground openings at Giant Mine in Yellowknife, Northwest Territories. Mitigation focused on backfilling to address risks to public and worker safety and the environment. Development of an economical backfill approach required innovative methods because of complex underground geometry, limited surface working space, weather conditions, hazardous materials, and regulatory constraints.

[Project photo \(click to download\)](#)

[Golder Associates Ltd. project page on acec.ca \(video and more information\)](#)

Knight Piésold Ltd.

Kokish River Hydroelectric Project
Near Port McNeill, British Columbia

The Kokish River Hydroelectric Project is a 45 MW run-of-river facility near Port McNeill, British Columbia. As the lead design engineer, Knight Piésold Ltd. worked closely with Owner Kwagis Power Limited Partnership and EPC Contractor Peter Kiewit Infrastructure Co. to develop innovative and cost-effective solutions – that more than met the tough fisheries permitting requirements – by addressing migrating salmon and steelhead trout concerns during construction and commissioning through to operation. The design included a wrap-around vertical slot fish ladder, one of the largest capacity Coanda screen intakes in the world together with one of the smallest Obermeyer crest gates in the world, and a tailrace fish screen.

[Project photo \(click to download\)](#)

[Knight Piésold Ltd. project page on acec.ca \(video and more information\)](#)

Special Projects:

PINTER & Associates Ltd.

First Nation Land Management Regime: Environmental/Engineering Challenge
First Nation Reserves, Saskatchewan and Manitoba



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Several First Nations in Saskatchewan and Manitoba have joined the First Nation Land Management Regime. This process enhances sovereignty, protection and management of land, natural resources and people for each First Nation while facilitating sustainable economic development. PINTER applied technical engineering expertise for an environmental site assessment and remediation, an innovative, Nation-specific environmental management and protection program and environmental law system development. Benefits include a novel, integrated, reserve-specific, economic development climate, superior environmental protection measures and First Nation control over their land.

[Project photo \(click to download\)](#)

[PINTER & Associates Ltd. project page on acec.ca \(video and more information\)](#)

International:

R.J. Burnside International Limited

Improving Water Supply in Northern Mozambique
Mozambique, Africa

Mozambique needed to improve drinking water supplies in urban centres. Burnside developed 20-year master plans for water infrastructure in eight critically underserved cities, overcoming technical and cultural challenges unique to this seasonally dry, remote environment in Sub-Saharan Africa. Burnside designed immediate upgrades for each city, applied appropriate technologies and oversaw construction of works that doubled the water supply available to half a million people in the city of Nampula, improving health and saving lives.

[Project photo \(click to download\)](#)

[R.J. Burnside International Limited project page on acec.ca \(video and more information\)](#)

Community Outreach and In-House Initiatives:

Golder Associates Ltd.

Caring for the Past: Blackfoot Crossing Historical Park
Siksika Nation site near Cluny, Alberta.

Golder Associates lived up to a core value – caring – by bringing together the community, science and the company's social disciplines. By providing financial and volunteer support for the University of Calgary's Public Archaeology Program at Blackfoot Nation Historical Park, Golder aided research of a significant, archaeological site that is under consideration for World Heritage Site status. The result was a unique opportunity to engage the public, First Nations, the University of Calgary and archaeology.

[Project photo \(click to download\)](#)

[Golder Associates Ltd. project page on acec.ca \(video and more information\)](#)



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

Dale Craig, P.Eng. is the recipient of the 2015 Beaubien Award. The Beaubien Award recognizes individuals for their lifetime contributions to ACEC and to the advancement of the consulting engineering profession and industry.

Dale began his 43-year career with J.L. Richards & Associates in Ottawa in 1971. He became Chief Structural Engineer in 1978 and in 1990 was elected President, CEO, and Chairman of the Board. Prior to his retirement in 2014, he focused on mentoring staff, developing and nurturing client relationships, and helping to manage major projects.

Dale has represented the engineering profession in many capacities and, over the years, has generously given back to the community. He held key roles on numerous committees and boards, contributing to the sound business and fiscal management of organizations such as Carleton University, Algonquin College, the Ottawa Convention Centre and Hydro Ottawa. Dale developed a reputation for fostering teamwork, building consensus and getting complex projects built on time and within budget.

Dale has championed the interests of the consulting engineering industry through his participation in ACEC and other professional associations. He became involved in ACEC activities early in his career and served on a number of committees of Consulting Engineers of Ontario (CEO). Dale was elected to the CEO Board in 1994, was later Chairman, and in 2000 spearheaded the formation of CEO's Ottawa Chapter, serving as its inaugural Chair.

Dale joined ACEC's Board of Directors in 1991 and participated on a number of committees, all the while working tirelessly to improve the image of the consulting engineering industry, promote the use of Qualifications Based Selection (QBS) and campaign for fairer procurement methods. He co-founded the Federal/Industry Real Property Advisory Council (FIRPAC), represented ACEC on the National Steering Committee for Innovation in Construction and had many meetings with federal Members of Parliament through ACEC's Parliament Hill Day advocacy program.

[Dale Craig photo \(click to download\)](#)
[Dale Craig, Beaubien Award Recipient, page on acec.ca](#)