The Top 100

2009 Canada's Biggest Infrastructure Projects















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The Infrastructure Renewal Magazine

The Top 100 - 2009a supplement to ReNew Canada's Jan./Feb. 2009 issue.

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Colborne Communications is a publishing services company based in Toronto. For almost thirty years, they have been providing editing, writing, proofreading, and research services to a variety of individual, corporate, and

government clients, including all of Canada's major publishers.

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ReNew Canada is published six times a year by Actual Media Inc.



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ReNew Canada subscriptions are available for \$39.95/year or \$69.95/two years.

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Printed in Canada on Supreme Gloss FSC certified paper, (10 percent post-consumer) manufactured acid-free and elemental chlorine-free (EFC).

ISSN 1715-6734

This is the Top 100 Infrastructure Projects of 2009.

An annual supplement to ReNew Canada, the infrastructure renewal magazine, it is distributed nationally to over 10,000 readers. This is our fourth edition of the list. Developed with input from key industry players, it's the culmination of 12 months of research with our partners at Colborne Communications, and with input from hundreds of companies (see index on pages 33-34). The list represents \$61 billion in capital.

The ranking is based on project value or cost and the projects on the list must have reached financial close or be currently under construction. There are a handful of projects we took a chance on because they're in the EA process and we feel confident they have a project champion who will make it happen. A prime example is the Spadina Subway Extension, a project supported by the Toronto Transit Commission's Adam Giambrone.

Energy projects dominate this year's top 25, with two mega-projects filling the number one and two spots on the list. The majority of the projects in this year's top 25 are in the energy and transportation sectors—mostly located in Alberta and British Columbia.

Alberta has the most top 25 projects, with a variety of sectors represented, from ports/airports to transportation to energy. British Columbia is close behind, with most of its projects in the transportation or port/airport sectors.

Ontario still came out on top overall, with 41 out of the Top 100 projectsthat's largely due to the wealth of hospital/health care projects in the province. Out of the 23 hospital/health care projects on the list, 15 were in Ontario.

Remediation and development on Toronto's waterfront also helped push Ontario to the top of the list. It's been years in the making, but construction is finally underway in Toronto's port lands. Three new projects have Waterfront Toronto and TEDCO in our company index for the first time in Top 100 history.

Other companies making a mark on the company index include MMM Group and PCL Constructors Inc.—they were each involved in 14 of the Top 100 projects. Cohos Evamy Integrated Design worked on ten projects, making them the top architect for this year's list. But it's EllisDon Corporation that shows up most often list, with involvement in 15 projects.

Part of the reason heavy hitters like PCL and EllisDon are so prominent on the list is the rising popularity of public-private partnerships. As Canada's infrastructure deficit increases (Macquarie estimates it could get up to \$1 trillion within 60 years) investors in the private sector are taking advantage of the opportunity. At Macquarie Power & Infrastructure Income Fund's annual Investor Day on November 20, 2008, CEO Gregory Smith talked about how investors can benefit from adding infrastructure assets to their investment portfolios—it seems he wasn't telling them something they don't already know. About one third of the projects on this list are financed by the private sector.

There are 36 projects on this year's list that will be completed in 2009, as well as a number of projects waiting to get started that could take Top 10 spots— Montreal's mega-hospitals and the Clarington nuclear facility to name a few. That means next year the list will be repopulated with new, exciting projects. If your company is involved in one of those projects, we want to hear about it. Visit top100projects.ca to submit project information for next year's list. *

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Romaine Hydroelectric Complex Project

Capital Cost: \$6.5 billion

Project Type: Energy

Location: Havre-Saint-Pierre, Ouebec

Key Players: Hydro-Québec

Status: The Environmental Assessment (EA) has been referred to a panel. Construction is slated to begin in mid-2009 and completed in 2020. The first commissioning is planned for 2014.

Financing: Hydro-Québec is not yet ready to release details about project financing.

Owner: Hydro-Québec

The estimated \$6.5-billion project involves four new generating stations with a total installed capacity of 1,550 megawatts to be developed on the Romaine River in the Mingan area. Hundreds of engineers, scientists and local stakeholders, including Innu community members, worked for four years to produce a 2,500-page environmental impact study, complemented by 50 background reports.



2

Bruce A Nuclear Generating Station Restart Captial Cost: \$5.25 billion

Project Type: Energy

Location: Kincardine, Ontario

Key Players: AMEC NCL (project management); Atomic Energy Canada Limited (fuel channels), SNC-Lavalin, Babcock & Wilcox Canada (steam generators); Siemens, E.S. Fox Ltd. (turbine generators); ASLF, RCM-Fox (feeder pipe, fittings, huns); Aecon Group Inc.; MMM Group and Golder Associates (Environmental Assessment)

Status: Progress on the original scope of the project has encouraged Bruce Power to extend it by another \$1 billion to install a new steam generator in Unit 4, which will extend its

working life to 2036. Completion is still scheduled for 2009.

Financing: Private

Owner: Bruce Power (TransCanada Corporation, BPC Generation Infrastructure Trust—an investment entity of OMERS, the Power Workers' Union and the Society of Energy Professionals)

Bruce A Units 1 and 2 were originally brought into service in 1977 and were taken out of service in 1995 (Unit 2) and 1997 (Unit 1) by Ontario Hydro. Bruce Power Limited, which took over operation of the plant in 2001, is refurbishing and carrying out major maintenance on Units 1 and 2 with the goal of operation through 2043.





Eastmain-1-A/Sarcelle/ Rupert Project Capital Cost: \$5 billion

Project Type: Energy Location: Quebec

Key Players: Société de développement de la Baie James (project manager)

 $\textbf{Status:} \ \textbf{Completion is scheduled for 2012}.$

Financing: Public Owner: Hydro-Québec

The project, which involves construction of two powerhouses—Eastmain-1-A and Sarcelle—and diversion of part of the Rupert River to Eastmain 1 reservoir, will have an installed capacity of 893 megawatts, enough to service 500,000 homes.



Project Type: Transportation/Public Transit

Location: Toronto, Ontario

Key Players: Spadina Link Project Managers, a joint venture of MMM Group with Hatch Mott Macdonald and Delcan (project manager); Alsop Architects; AECOM—formerly Earth Tech; Arup Canada Inc.

Status: The project is expected to commence in April 2009 with an anticipated completion in 2015.

Financing: Private

Owner: Toronto Transit Commission (TTC)



Spadina Subway Extension

Capital Cost: \$2.63 billion

For the first time, the TTC subway network will go beyond the City of Toronto limits and link neighbouring communities in York Region. The 8.6-kilometre extension to the existing Spadina subway line will be underground, and will add six more stations, including a new station at York University. The TTC has contracted the \$100-million project to Spadina Link Project Managers Team and paid \$15 million to Alsop Architects, \$12 million to Earth Tech Canada and \$12 million to Arup Canada.

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Alberta Clipper Project Capital Cost: \$2 billion

Project Type: Energy

Location: Hardisty, Alberta

Key Players: Enbridge Energy Partners (Enbridge Inc.'s U.S. subsidiary); Hatch Mott MacDonald; Delcan; Bercha Group (support risk services)

Status: Completion scheduled for 2009.

Financing: Private

Owner: Enbridge Inc.

A new 36-inch diameter, 1,590-kilometre pipeline from Hardisty, Alberta to Superior, Wisconsin, will carry an initial 450,000 barrels of crude oil a day, rising eventually as high as 800,000 barrels a day. The Canadian portion of the project will cost about \$1.5 billion while expansion of the 42-inch diameter pipeline from Superior to Chicago will cost about \$800 million. This June, plans to reroute the pipeline to avoid the Thornhill burial mounds in southern Manitoba were announced.



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Canada Line Capital Cost: \$2 billion

Project Type: Transportation/ Public Transit

Location: Vancouver, British Columbia

Key Players: Canada Line
Rapid Transit Inc.—a subsidiary
of TransLink; InTransit BC—a
joint venture company owned
by SNC-Lavalin; Investment
Management Corporation
of B.C.; Caisse de dépôt et
placement du Québec; MMM
Group (project management);
PwC (financial advisor)

Status: Completion is scheduled for 2009.

Financing: InTransit BC won a DBFO contract for a period of 20 years.

Owner: South Coast British Columbia Transportation Authority (TransLink)

This 19.5-kilometre, north-south rapid transit line will link downtown Vancouver, Richmond City Centre and the Vancouver International Airport. The line has been under construction for more than a year. A section at the airport will be completed first and used for testing.



Port Mann/ Highway 1 Project Capital Cost:

\$1.6 billion

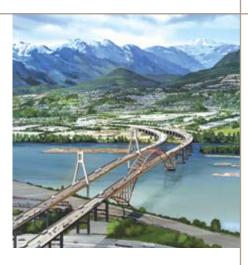
Project Type: Transportation/ Public Transit

Location: Vancouver, British Columbia

Key Players: Peter Kiewit & Sons with Flatiron Constructors Canada Ltd. (contractor); Macquarie Group; Transtoll Inc. (tolling); H5M—Hatch Mott MacDonald, MMM Group (design consultants)

Status: Completion is scheduled for 2013.

Financing: The Connect BC Development Group won the bid for a DBFOM contract.



Owner: Province of B.C.

The project involves a significant widening of 37 kilometres of Highway 1 (Trans-Canada Highway), which links Vancouver eastward to the rest of British Columbia and Canada, including twinning/replacement of the major Port Mann Bridge crossing of the Fraser River. The newly twinned Port Mann will be tolled.



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Keephills 3 Generating Plant Capital Cost: \$1.6 billion

Project Type: Energy

Location: Keephills, Alberta

Key Players: EPCOR (construction); TransAlta (operation)

Status: Site preparation began in February 2007 and the project is scheduled for commissioning in 2011.

Financing: Private—both TransAlta and EPCOR will market their share of the unit's electrical output. Owner: TransAlta and EPCOR

The 450-megawatt coal-fired generating plant will use supercritical boiler technology which features higher boiler temperatures and pressures and a high-efficiency steam turbine. Carbon dioxide emissions will be 24 per cent lower for the same amount of power produced by the Wabamum plants, scheduled to be retired by TransAlta in 2010.



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Autoroute 30 Capital Cost: \$1.5 billion

Project Type:Transportation/Public
Transit

Location: Montreal, Quebec

Key Players: Nouvelle Autoroute 30 S.E.N.C. (ACCIONA S.A); MMM Group (engineer); Arup Canada (design); Verrault Inc. (strategic partner); SICE (electronic toll system); KPMG LLP (completed Value for Money report); INSPEC-SOL; DJL Construction Inc.

Status: Only two sections of Autoroute 30 remain to be completed.

Financing: Nouvelle Autoroute 30 S.E.N.C. has a concession Design-Build-

Finance-Maintain-Operate (DBFMO) of the highway over the next 35 years.

Owner: Ministère des Transports du Québec (MTQ)

PPP Québec's Pierre Lefebvre will proudly tell you that Autoroute 30 was the last project to reach financial close once the financial crisis hit home. The section of highway between Chateauguay and Vaudreuil-Dorion will be a P3, while the Eastern section to the south of Candiac, Delson, and Saint-Constant will be completed by the MTQ using the conventional method. They may still assign the maintenance and operation of this section to a private partner.



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Edmonton Ring Road, Anthony Henday Drive NW Capital Cost: \$1.42 billion

Project Type: Transportation/Public Transit

Location: Edmonton, Alberta

Key Players: Alberta
Transportation
(liaison/manager);
NORTHWESTCONNECT
GENERAL PARTNERSHIP
(contractor); FlatironGraham-Parsons, a joint
venture comprised of Flatiron
Construction Corp., Graham
Construction and Engineering
Inc. and Parsons (design/build);
Carmacks Enterprises Ltd.
(operate and maintain); AECOM
(designer); Bilfinger Berger BOT
(main financer)

Status: The construction phase will be complete in late fall 2011.

Financing: Design-Build-Finance-Operate (DBFO) contract between the Province of Alberta and NORTHWESTCONNECT. According to Barry Day, deputy minister, Alberta Infrastructure, the winning bid was \$240 million lower than the public-sector comparator and construction is currently ahead of schedule.

Owner: Province of Alberta

The Alberta government signed a 30-year agreement with NORTHWESTCONNECT GENERAL PARTNERSHIP to design, build, operate, and partially finance Anthony Henday Drive from Yellowhead Trail (Trans Canada Highway 16) in Edmonton's west end to Manning Drive (Highway 15). The project includes 21 kilometres of four and six-lane roadway and 29 total bridge structure that include eight interchanges, five flyovers, and two rail crossings.



International Facilities Project Capital Cost: \$1.3 billion

Project Type: Port/Airport **Location:** Calgary, Alberta

Key Players: AECOM (project management consultant); Cohos Evamy Integrated Design (prime design consultant), EllisDon (construction manager)

Status: Completion is scheduled for 2015.

Financing: Public

Owner: Calgary Airport Authority

The overall program includes a number of projects including a temporary baggage hall expansion, terminal renovations as the new terminal expansion for the E Pier. There will be an addition to the existing terminal and extensive renovations to address projected passenger levels for both transborder and international travel.



Project Type: Energy

Location: Point Lepreau, New Brunswick

Key Players: Nuclearco, Atomic Energy Canada Limited (main contractor); Automation Tooling Systems (parts supplier); Arvin Machine Works Inc.; Opron Maritimes Construction; Sunny Corner Enterprises (electrical services); ADI Group (concept and design development) **12**

Point Lepreau Nuclear Generating Station Refurbishment

Estimated Project Spending: 1.4 billion

Status: The refurbishment outage is scheduled to be completed in September 2009. The main activities include replacing all 380 fuel channels, calandria tubes and feeder pipes, as well as other station maintenance work.

Financing: Public

Owner: New Brunswick Power

This project is East Coast through and through. "The process of shutting down the reactor went very well. There was a lot of pride amongst our employees as many of them were there and worked at the station when it was first built," Gaetan Thomas, vice president of NB Power Nuclear said shortly after the shutdown. The unit, which supplies about 30 per cent of the province's energy, was the first CANDU-6 to

be licensed for operation, and to begin commercial operation (in 1983). New Brunswick Power Nuclear Corporation is also the world's first nuclear operator to undertake a CANDU-6 nuclear reactor refurbishment. The project utilizes skilled local labour, as well as local companies. A few setbacks include the possible loss of three new replacement turbine rotors being shipped from the UK that toppled into the sea, as well as the lack of needed tools. Because this is a world's first, dozens of the necessary parts didn't even exist. According to Narinder Bains, director, Reactor Systems, there was a need to "design and develop over fifty first-of-a-kind tools for fuel channel and calandria tube replacement."



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Edmonton International Airport Expansion Capital Cost: \$1.1 billion

Project Type: Port/Airport **Location:** Edmonton, Alberta

Key Players: Key players have not yet been announced by the Edmonton Regional Airports Authority (ERAA)

Status: Scheduled for completion in 2012.

Financing: Public Owner: ERAA

Edmonton's most recent expansion, costing \$280 million, was expected to provide enough capacity until 2015 when it was completed two years ago, but passenger volumes have soared, moving the need for expansion ahead significantly. "To accommodate an estimated nine million passengers by 2012, EIA plans to spend another \$1.5 billion," says Jim Rudolph at Edmonton International Airport (EIA).

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Niagara Tunnel Project Capital Cost: \$985 million

Project Type: Energy

Location: Niagara Falls, Ontario

Key Players: Strabag AG, (design-build contractor); ILF Beratende Ingenieure, Morrison Hershfield, Dufferin Construction (major subcontractors); The Robbins Company (tunnel boring machine supplier), Hatch Mott MacDonald (owner's engineer and construction managers)

Status: Scheduled for completion in 2010.

Financing: Public Owner: Ontario Power Generation

This is the third tunnel project in Niagara Falls and is expected to be one of the largest tunnels built in North America. Currently, Sir Adam Beck Power Group generates 2,080 megawatts. Approximately 1,800 cubic metres (63,566 cubic feet) of water per second from the existing twin tunnels and the hydro canal supply the Sir Adam Beck Stations. The new tunnel will divert an additional 500 cubic metres (17,657 cubic feet) of water per second.



Project Type: Hospital/ Health Care

Location: Edmonton, Alberta

Key Players: HOK (prime consultant); Stantec Architecture Ltd. (architect); PCL (constructor); Structal (Canam Group Inc. – steel frame)

Status: Scheduled for completion in 2011.

Financing: DBFO contract with PCL.

Owner: University of Alberta and Capital Health

This will be an 80,000-squaremetre teaching and research centre. The building will have physical connections to the adjacent Edmonton Clinic South, and its design allows for future flexible growth. "Sustainability is a primary consideration for the design of the building, which is a LEED candidate," says HOK's Jennifer McGibbon.



Project Type: Transportation/ Public Transit

Location: Maple Ridge, Pitt Meadows, Surrey and Langley, British Columbia

Key Players: Golden Crossing General Partnership, a specialpurpose vehicle set up by Bilfinger Berger BOT Inc., CH2M Hill (design, construction); Depfa Bank PLC, Dexia Credit Local, Computershare Trust (lenders); V-Flow—a joint venture of Egis Projects and InTrans Group (tolling system)

Status: The project is half-complete, and should be finished in summer 2009.

Financing: The Golden Crossing General Partnership has a DBFO contract for a period of 35 years.

Owner: TransLink (South Coast British Columbia Transportation Authority)

This north-south crossing of the Fraser River, east of Vancouver, includes a six-lane bridge and connecting access arterial roads—in total, about 13 kilometres of infrastructure. It will have the first fully-electronic tolling system in western Canada. V-Flow will collect the tolls on behalf of TransLink, who retains responsibility for establishing the toll rates, vehicle classifications and tolling policies.





Prince Rupert Port Expansion (Phase 2) Capital Cost: \$770 million

Project Type: Port/Airport

Location: Prince Rupert, British Columbia

Key Players: Maher Terminals, CN Rail, Fraser River Pile & Dredge, Western Industrial Contractors, Babco Electric Group, BA Blacktop Ltd./Pennecon Ltd. (electrical construction), Ledcor Group of Companies, JACO Powerlines Ltd. **Status:** Scheduled for completion in 2015.

Financing: Private

Owner: Prince Rupert Port Authority

Expansion of existing facilities will create a state-of-the-art container terminal occupying 200 acres of land and capable of handling two million TEUs (Twenty-Foot Equivalent Units) a year.



Project Type: Port/Airport

Location: Saint John, New Brunswick

Key Players: Peter Kiewit Sons Co. (engineer-procure-construct for the terminal jetty); SNC-Snam—a partnership between SNC-Lavalin and Snamprogetti Canada Inc. (engineers, constructors); Acier Ecan (steel installation); Opron Maritimes Construction

Status: Construction has been accelerated on two storage tanks; the third will get under way in 2008 with final completion in 2009.

Financing: The City of Saint John voted to freeze property taxes

for the terminal site at \$500,000 for 25 years. Owners originally estimated the cost of the project at \$750 million, but recent decisions to add a third tank may push that number up.

Owner: Canaport LNG Limited Partnership, a Canadian limited partnership between subsidiaries of Irving Oil Limited (25 per cent owner) and Repsol YPF, S.A. (75 per cent owner)

The project includes three 160,000-cubic-metre storage tanks, a 350-metre off-loading jetty with mooring facilities for LNG carriers with up to 200,000-cubic-metre capacity and a closed loop unloading system.

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Portlands Energy Centre (PEC) Capital Cost: \$730 million



Project Type: Energy

Location: Toronto, Ontario

Key Players: SNC-Lavalin; Aecon

Status: The first 250 megawatts came into service in June 2008 and the final 300 megawatts will be in service in 2009.

Financing: Public—total cost of the facility will be \$730 million, of which \$470 million was spent in the Greater Toronto Area.

Owner: Ontario Power Generation and TransCanada Energy Ltd. (a subsidiary of TransCanada Corporation) This 550-megawatt natural-gas-fired plant near the former R.L. Hearn Generating Station on Toronto's waterfront will operate at a 56 per cent efficiency rating compared to the 35 per cent efficiency rating of a conventional single-cycle plant. This summer PEC will operate in "simple cycle" mode and create 340 megawatts to help meet the summer power demands of the city. The combined cycle plant will use heat to power a steam turbine. This also increases the efficiency of the plant. Joe Reid says the plant will "meet downtown Toronto's urgent need for electricity."

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West LRT Line Capital Cost: \$700 million

Project Type: Transportation/ Public Transit

Location: Calgary, Alberta

Key Players: Hatch Mott MacDonald (engineering pre-design); GEC Architecture (architects)

Status: Completion is scheduled for 2012.

Financing: The city is putting out an RFP for the Design-Build contract, but the line will be financed with public money.

Owner: City of Calgary

The City of Calgary will act as project manager through the design and construction of this expansion. Light Rail Transit (LRT) service will be available to more than 115,000 people by 2015. This is Calgary's first new LRT line in more than 20 years.



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Alberta Schools Alternative Procurement (ASAP) Capital Cost: \$643 million

Project Type: Educational

Location: Calgary and Edmonton, Alberta

Key Players: BBPP Alberta Schools
Ltd.—Babcock & Brown (project lead);
Graham, Bird Construction (Design-Build);
Barr Ryder Architects & Interior Designers
(architect); Honeywell (maintenance/
renewal); GEC Architecture

Status: The schools should be opened in 2010.

Financing: The Government of Alberta signed an agreement with BBPP Alberta Schools Ltd. to design, build, finance and maintain 18 state-of-the-art schools in the province through a Design-Build-Finance-Maintain public-private partnership. This agreement represents the largest-ever Canadian schools P3 transaction and Alberta's largest social infrastructure P3—and it reached financial close only one day before the Lehman Brothers' collapse.

Owner: Government of Alberta

The 18 energy-efficient schools will meet LEED-Silver design requirements. "We are on schedule to open 18 schools in September 2010 to serve students in high-growth neighbourhoods," said Minister of Education Dave Hancock in a statement to the media. Guy Smith, Alberta Ministry of Treasury Board, says the schools are a perfect example of how to use alternative financing effectively.

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Woodstock General Hospital Capital Cost: \$685 million

Project Type: Hospitals/Health Care **Location:** Woodstock, Ontario

Key Players: Integrated Team Solutions (ITS)—EllisDon, LPF Infrastructure Fund, Honeywell, CIT Canada, Sunlife Assurance Company, Great West Life and Industrial Alliance

Status: Construction started in November 2008.

Financing: ITS has a 30-year Build-Maintain-Finance contract with Woodstock General Hospital over a 30 year period. According to Infrastructure Ontario, the net present value is \$268.7 million

Owner: Woodstock General Hospital

Woodstock General Hospital will have a new state-of-the-art health care facility with capacity of up to 178 beds. At three-storeys high and 350,000 square feet, the new hospital will more than double the size of the current facility.





Chute-Allard et des Rapides-des-coeurs Capital Cost: \$680 million

Project Type: Energy

Location: Saint-Maurice River, Quebec

Key Players: Hydro-Québec

 $\textbf{Status:} \ \textbf{Completion is scheduled for June 2009}.$

Financing: Public Owner: Hydro-Québec

The project, which involves construction of two powerhouses in Haute-Mauricie—Chute-Allard and Rapides-des-Coeurs—will have an installed capacity of 138 megawatts. According to Hydro-Québec, the project will generate \$120 million in regional spinoffs.



24

Red River Floodway Expansion Capital Cost: \$665 million

Project Type: Brownfield/Environmental

Location: Winnipeg, Manitoba

Key Players: Dillon
Consulting Ltd.; KGS Group;
Earth Engineering Inc.; First
Canadian Engineers; SNCLavalin; Barnes & Duncan;
Strikiwshi Contracting; Nelson
House Forest Industries; PCL
Constructors Ltd.; Erickson
Construction; MD Steele; Lafarge
Canada Inc.; Barkman Concrete
Ltd.; Wardrop Engineering Inc.;
MMM Group (design of Sprague
Railway Bridge)

Status: Completion is scheduled for 2010.

Financing: Public

Owner: Province of Manitoba (Manitoba Floodway Authority)

The existing floodway is a flood diversion channel that was built between 1962 and 1968. But the Red River Flood of 1997 resulted pushed the limits of the original design. The Government of Manitoba established the Manitoba Floodway Expansion Authority to execute the expansion of the existing Red River Floodway and protect the City of Winnipeg from flood damage.

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East Toba and Montrose Run of River Project Capital Cost: \$660 million (\$500 million in construction costs)



Project Type: Energy

Location: Powell River, British Columbia

Key Players: Plutonic Power Corporation (developer); General Electric Energy Financial Services; Peter Kiewit Sons Co. (general contractor); Knight Piésold Ltd (engineering consultant)

Status: Operation will begin in 2010.

Financing: After securing an Energy Purchase Agreement with BC Hydro, Plutonic Power and GE Energy Financial Services formed a general partnership.

The project involves the construction of a 196-megawatt run-of-the-river hydroelectric project including development of two powerhouses with intakes, penstocks and transmission lines.

Calgary Ring Road, **Stoney Trail NE** Capital Cost: \$650 million

Project Type: Transportation/Public Transit

Location: Calgary, Alberta

Key Players: Stoney Trail Group; PwC (financial advisor); Flatiron Constructors Canada; Graham (construction and engineering) Parsons; Bilfinger Berger BOT; Carmacks; AECOM

Status: Completion is scheduled for sometime in 2009.

Financing: The Alberta government signed a 30-year agreement with the Stoney Trail Group to design, build, operate, and partially finance the project.

Owner: Government of Alberta

The ring road will go from Deerfoot Trail (Highway 2) to 17 Avenue SE (Highway 1A). The project includes 21 kilometres of four-and six-lane roadway and 23 bridge structures including six interchanges.

New Data Centre Project Capital Cost: \$650 million

Project Type: Public Building/Government Offices

Location: West of Toronto, Ontario

Key Players: Plenary Properties—Plenary Group, Adamson Associates Architects, PCL Constructors Canada and Johnson Controls

Status: Completion is scheduled for 2010.

Financing: Plenary Properties is responsible for the construction, financing, operation and maintenance and renewal for the facility for 30 years. Plenary Group took the equity stake to finance the costs for the construction.

Owner: Province of Ontario

This sophisticated mechanical and electrical building is the first of its kind in Canada and will host mission critical business systems to improve overall data quality services in the Province of Ontario. The project is created to support the present and future information system needs for the government to implement its e-government strategy.



28 Edmonton Remand Centre Capital Cost: \$620 million

Project Type: Justice

Location: Edmonton, Alberta

Key Players: O'Neill O'Neill Procinsky Architects (architect); Stuart Olson Constructors (construction manager)

Status: Site preparation and earthworks have begun and construction is expected to get under way in early 2008, with completion in 2011.

Financing: Public Owner: Province of Alberta

The 16-hectare site will house 2,000 inmates and involves construction of seven podular three-tier housing units to accommodate both male and female inmates. It will replace the 27-year-old Edmonton Remand Centre.





Interior to Lower Mainland Transmission Project Capital Cost: \$602 million

Project Type: Energy Location: British Columbia

Key Players: BC Transmission Corporation

Status: Approval has been granted by the BC Utilities Commission. An application for an environmental assessment certificate was filed with the BC Environmental Assessment Office on October 1, 2008 and a decision is expected in 2009. Pending environmental approval, construction would begin in 2009 and the project would be in service in 2014.

Form of Contract: Public Owner: BC Transmission Corporation

Construction of a new 500-kilovolt overhead transmission line from Merritt to Coquitlam would service the growing power needs of the Lower Mainland. This project will be the largest upgrade to B.C.'s transmission system in over 30 years.





Seymour-Capilano Water Utility Projects Capital Cost: \$600 million

Project Type: Water/Wastewater

Location: Vancouver, British Columbia

Key Players: Seymour Capilano Filtration Plant: SSBV Consultants Inc. (joint venture of Stantec, Amec and Black & Veatch), NAC Constructors Ltd., Graham. Capilano Pumping Station: SSBV Consultants Inc., Kingston Construction Ltd. Twin Tunnels: Hatch Mott MacDonald, Bilfinger Berger Canada. Energy Recover Facility/Break Head Tank: Knight Piésold Consulting, Kingston Construction Ltd.

Status: Completion is scheduled for 2011.

Financing: Public

Owner: Greater Vancouver Regional District

Projects include a new drinking water filtration plant, twin tunnels linking the Seymour and Capilano watersheds, a new communications tower at the Seymour Falls Dam, a seismic upgrade to the Seymour Falls Dam and a new water main twinning the existing main linking the Seymour plant to Burrard Inlet.



Bruce to Milton Power Line Capital Cost: \$600 million

Project Type: Energy Location: Toronto, Ontario

Key Players: Hydro One

Status: Completion scheduled for 2012.

Financing: Public Owner: Hydro One

Bruce Power is returning two nuclear units to service in 2009 and about 700 megawatts of wind development projects have been identified in the Bruce area to date. According to the Ontario Power Authority (OPA), there are another 1,000 megawatts of future renewable energy potential in the region. The 26-kilometre transmission line will take that between 600 and 700 megawatts of power south from Markham to the Port Lands in Toronto.



32

Sea-to-Sky Highway Improvement Project Capital Cost: \$600 million

Project Type: Transportation/ Public Transit

Location: Vancouver, British Columbia

Key Players: S2S Transportation Group—Macquarie North America Ltd., Peter Kiewit Sons Co., JJM Group, Hatch Mott MacDonald, MMM Group, Miller Paving, Capilano Highway Services

Status: Completion scheduled for 2009

Financing: S2S Transportation Group has a 25-year DBFO contract. **Owner:** British Columbia Ministry of Transportation

Upgrades include four lanes from Horseshoe Bay to Lions Bay; two, three and four lane sections from north of Lions Bay to Murrin Park; four lanes from north of Murrin Park through Squamish; three lanes from Squamish to Whistler. "Added passing lanes and other design innovations will reduce hazards and increase capacity," says B.C. Ministry of Transportation's Bruce Streigler.





Winnipeg James Armstrong Richardson International Airport Redevelopment Project Cost: \$585 million

Project Type: Port/Airport Location: Winnipeg, Manitoba

Key Players: Parsons, Wardrop Engineering (programme management support); Pelli Clarke Pelli Architects, MMM Group, Stantec (design); Man-Shield Construction, PCL Constructors Inc., Nelson River Construction, Mulder Construction, McCain Electric, Otis Elevators, EllisDon Corporation (contractors)

Status: After completion of the new terminal in 2010, phase two of the project, aimed towards developing the future airport terminal building, will begin.

Financing: The project is funded through an Airport Improvement Fee.

Owner: Winnipeg Airports Authority

The expansion has continued with the start of construction of a new two-level terminal building (phase one started in spring 2007). The new 51,000-square-metre terminal is located just northeast of the existing terminal with facilities to handle more modern aircraft such as the Boeing 787 and also the Airbus A380. The present terminal may be demolished, or converted into a commercial centre or a new aviation museum. Additional plans are now afoot for an airport hotel adjacent to the terminal, an office building, a new bus terminal and also a new Canada Post depot (on a 27-acre site). There will also be a reconfigured and expanded aircraft parking apron around the new terminal building.

34

2010 Winter Olympics (Southeast False Creek/ Vancouver's Olympic Village, and Whistler's Olympic Village)

Capital Cost: \$580 million



Project Type: Social

Location: Vancouver and Whistler, British Columbia

Key Players:

Millennium Properties Ltd. (design and build), Merrick Architecture and GBL Architecture (designers)

Status: Completion is scheduled for 2009.

Financing: Public financing for Whistler's Olympic Village (\$290 million from Government of Canada, and \$290 million coming from the Province of British Columbia) and private financing through a P3 for Southeast False Creek (SEFC)

Two of the major Olympic infrastructure projects include SEFC, which will become the site of Vancouver's Olympic Village for 2010, and Whistler Olympic Park. Millenium Properties Ltd. will pay the city of Vancouver \$193 million for the right to develop the sites and build market housing, commercial space, choice-of-use space, and underground parking facilities. The developer will also design and manage construction of 250 units of affordable housing, a child care facility, community centre, non-motorized boating facility, and related underground parking facilities. On November 1, 2009 the site will become Vancouver's Olympic Village and will be returned as SEFC on April 7, 2010. After the Games, the Olympic and Paralympic Village Whistler will be adapted to affordable residential housing.

36

Harrison Hydro Project

Capital Cost: \$500 million

Project Type: Energy

Location: British Columbia

Key Players: Cloudworks Energy Inc.; Connor Clark & Lunn Infrastructure Ltd.; Knight Piésold Ltd.

Status: Completion is scheduled for 2010.

Financing: Private

Owner: BC Hydro

The project involves six run-ofthe-river dams (Douglas Creek, Fire Creek, Stokke Creek, Tipella Creek, Lamont Creek and Upper Stave River) that will serve a new substation being built at the northern end of Harrison Lake. The dams are expected to produce 150 megawatts of power.



35

North Bay Regional Health Centre Capital Cost: \$551 million

Project Type: Hospital/Health Care

Location: North Bay, Ontario

Key Players: Plenary Health (Plenary Group, Deutsche Bank AG, PCL Constructors Inc., Johnson Controls Inc.); PwC (financial advisor)

Status: Already 60 per cent complete, the project will be done in 2010.

Financing: Plenary Health has a 30-year contract to build, finance, maintain and repair the health centre. The group will be

paid about \$35 million each year over 30 years after construction is complete.

Owner: North Bay Regional Health Centre; Northwest Mental Health Centre

The project will provide new facilities for both the North Bay General Hospital and the Northwest Mental Health Centre.

Wolfe Island Wind Project Capital Cost: \$450 million

Project Type: Energy Location: Wolfe Island, Ontario

Key Players: Canadian Renewable Energy Corporation— Canadian Hydro Developers Inc. (developer); SkyPower (stakeholder); Stantec (project manager); Siemens (turbines)

Status: Completion is scheduled for 2009.

Financing: Canadian Hydro has a 20-year Renewable Energy Supply II Contract with the OPA. In June, they raised the construction costs from \$410 million to \$450 million.

Owner: Canadian Hydro Developers Inc.

This 197.8-megawatt wind plant on Wolfe Island, in Frontenac County, Ontario, will include 86 2.3-megawatt wind turbine generators on the western portion of Wolfe Island.





39

Kelowna and Vernon Hospitals Project Capital Cost: \$432.9 million

Project Type: Hospital/Health Care **Location:** Kelowna and Vernon, B.C.

Key Players: Infusion Health—Bilfinger Berger BOT Inc., John Laing Infrastructure, Graham Construction and Engineering Inc., Stantec, Black & McDonald

Status: Scheduled for completion in 2012.

Financing: Infusion Health entered into a fixed-price DBFM contract for 30 years.

Owner: Interior Health Authority

Construction at Kelowna General Hospital and Vernon Jubilee Hospital is being completed under a single project management structure as a public-private partnership between Interior Health and the private-partner Infusion Health, as the combined P3 was determined to be the most effective procurement approach.



38

William Osler Health Centre Capital Cost: \$450 million

Project Type: Hospital/Health Care

Location: Brampton, Etobicoke and Georgetown, Ontario

Key Players: Dunlop Architects, Murphy Hilgers Architects (design), MMM Group (mechanical/electrical engineering); The Healthcare Infrastructure Company of Canada—Carillion, EllisDon (contractor)

Status: Completion is scheduled for 2012.

Financing: This project started as a P3 under the Harris government but was tied up in the courts until recently, when the McGuinty government tweaked some terms of the P3 deal with The Healthcare Infrastructure Company of Canada and changed the nomenclature to Alternative Financing Procurement (AFP). MMM Group's Pete Overton says, "This type of procurement method is the first of its kind in Ontario."

Owner: William Osler Health Centre

This Health Centre is undergoing redevelopment projects in Brampton, Etobicoke and Georgetown. The New Brampton Site will be a 716-bed facility (1.2 million gross square feet). The proposed square footage of the hospital has been used in estimating the cost of the new facility at around \$355 million, excluding parking and retail space. The Etobicoke Hospital Campus will have a budget of between \$80 million and \$100 million. The Georgetown Hospital Campus will have a budget of between \$10 million and \$15 million.



40

Calgary Ring Road, Stoney Trail NW Capital Cost: \$430 million

Project Type: Transportation/ Public Transit

Location: Calgary, Alberta

Key Players: AECOM (preliminary engineer, design); PCL-Maxam, a joint venture; CH2M Hill Canada Ltd.

Status: Scheduled for completion in 2009.

Financing: Public

Owner: Alberta Transportation

The Stoney Trail Expansion Project will connect Highway 1 (Trans-Canada

Highway) to Highway 2 (Deerfoot Trail) with a fourlane divided highway. It will extend the Calgary Ring Road from Country Hills Boulevard to Deerfoot Trail through intersections of Sarcee Trail, Shaganappi Trail, Beddington Trail, Panorama Hills Boulevard, Harvest Hills Boulevard and 11 Street NE. UMA (AECOM) led the consultant team responsible for the project's overall delivery.



Sault Area Hospital Capital Cost: \$408 million

Project Type: Hospital/Health Care **Location:** Sault Ste. Marie, Ontario

Key Players: Hospital Infrastructure Partners—Carillion Canada Inc., EllisDon Corporation, Labourers' Pension Fund of Central and Eastern Canada, CIT Financial

Status: Completion is scheduled for 2010.

Financing: Financing for the construction portion of the project was arranged by CIT Group Securities (Canada) Inc. A one-time payment will be made to Hospital

Infrastructure Partners at substantial completion followed by monthly service payments to cover construction, building maintenance, life-cycle repair and renewal and project financing.

Owner: Sault Area Hospital

The project involves the construction of a new three-storey facility of more than 580,000 square feet. The building will accommodate 289 acute care, rehabilitation, mental health and complex continuing care beds as well as support services and outpatient programs. It will consolidate the services of two existing sites.



42

Sydney Tar Ponds Cleanup Capital Cost: \$400 million

Project Type:

Brownfield/ Environmental

Location: Sydney, Nova Scotia

Key Players: AECOM; CBCL Ltd.; Jacques Whitford Ltd.; ADI Group (technical specialist, design); AMEC Ltd.

Status: Completion is scheduled for 2014.

Financing: Public

Owner: Province of Nova Scotia and Canada

The project involves cleanup of contamination left behind on four sites as the result of 100 years of steel and coke production—the tar ponds, the former coke ovens property, the old dump and the stream that carried contaminants from the coke ovens to the tar ponds. More than a million tonnes of material requires cleanup.



43

Durham Consolidated Courthouse

Capital Cost: \$334 million

Project Type: Justice

Location: Oshawa, Ontario

Key Players: Access Justice Durham (Babcock & Brown, PCL Constructors Inc., Johnson Controls LP and WZMH Architects)

Status: Construction, about 61 per cent complete, will end in 2009.

Financing: Financing for the project was underwritten by Babcock & Brown Infrastructure Group. Access Justice Durham is responsible for financing construction and capital costs for the project and providing facility management and life-cycle maintenance for the facility for 30 years. Annual payments of \$19.75 million (paid on a monthly basis) will begin upon completion of construction.

Owner: Ontario Ministry of the Attorney General

The new courthouse will consolidate justice services provided in eight locations across the region. Design will conform to LEED-Silver certification standards, with an emphasis on energy management and conservation.



Project Type: Water/ Wastewater

Location: Halifax, Nova Scotia

Key Players: Dexter Construction Company Ltd. (sewage collection); D&D Water Solutions Inc.—Dexter Construction Company Ltd. and Degrèmont SA (treatment plants); SGE Acres Ltd. (biosolids treatment plant); O'Halloran Campbell Consultants Ltd. (owner's engineer)

Status: Completion is scheduled for 2009.

Financing: Public—\$60 million from the federal government, \$30 million from the province, plus \$2 million in donated land; Halifax Regional Municipality (HRM) paid the balance of cost.

Owner: HRM, then Halifax Water

Capital Cost: \$330 million

According to Natural Resources
Canada, Halifax Harbour is home
to about 170 million litres of raw
sewage per day thanks to the
surrounding communities of Halifax
and Dartmouth. The cleanup has been
threatening to get under way for at
least ten years—in 2003, the HRM
backed out of a P3 deal to clean up the
area. Once public opinion polls showed
citizens ready to pay for results, the
Harbour Solutions Project got moving.



Centennial Centre for Interdisciplinary Science, University of Alberta (PHASE II) Capital Cost: \$312 million

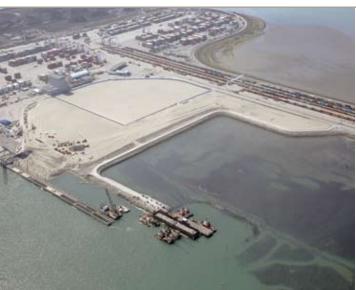
Project Type: Educational Location: Edmonton, Alberta

Key Players: Read Jones Christoffersen (structural engineer); Hemisphere, Stantec (mechanical engineer); Stantec Consulting Ltd. (project manager, electrical engineer); ONPA/Flad, a joint venture (architect); PCL Construction (construction management), Hazco, Canem Systems Ltd., DMI Services (contractor); Theakston Environmental (consultant)

Status: The \$17-million Phase 1 is complete. Phase 2 is scheduled for completion in November 2009.

Financing: Public Owner: University of Alberta

Phase 1 is a 4,373-square-metre, two-storey, basement structure while Phase 2 is a 52,227-square-metre, multi-storied building that will replace the existing Physics Building and V-Wing at the north end of the university's quad and serve as the central focus for the Faculty of Science.



46

Deltaport Third Berth Project Capital Cost: \$300 million

Project Type: Port/Airport

Location: Vancouver, British Columbia

Key Players: Terminal Systems Inc. (terminal operator); Deltaport Constructors Ltd.

Status: Completion scheduled for 2009.

Financing: Private

Owner: Port Metro Vancouver

"This is a joint venture," says Port Metro Vancouver's Naomi Horsford. "The Port is paying for the marine works portion and we will own the land. TSI is taking care of yard works and equipment." The expansion involves two projects—one at Roberts Bank Terminal and the other at Deltaport Terminal—to increase capacity to 1.8 million TEUs (Twenty-Foot Equivalent Units) from the current 900,000. The project includes constructing a third berth at the Deltaport Container Terminal as well as dredging and filling.



Foothills Medical Centre McCaig Tower Capital Cost: \$300 million

Project Type: Hospital/Health Care

Location: Calgary, Alberta

Key Players: Cohos Evamy Integrated Design (architect); EllisDon (construction manager)

Status: Completion is scheduled for 2010.

Financing: Public

Owner: The Calgary Health Region

The new tower, part of an extensive renovation of existing facilities, will provide a new west entrance to the hospital complex and will house an all new intensive care unit, new medical laboratories and inpatient units.



48

Union Station Signalling Contract Capital Cost: \$280 million

Project Type: Transportation/Public Transit

Location: Toronto, Ontario

Key Players: Siemens (contractor); Hatch Mott MacDonald (designers and program managers) **Status:** Completion scheduled for 2014.

Financing: The federal government will contribute \$90 million and the provincial government the remainder.

Owner: GO Transit

The project involves the design, supply, installation and commissioning of a new state-of-the-art control signals system for Union Station, replacing the system that has been in place since 1920. The benefits of the project include the possibility of bringing more trains in and out of Union Station, more reliable operation of trains, improved communications and increased scheduling flexibility.

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Peter Lougheed Centre Capital Cost: \$260 million

Key Players: HOK, Marshall Tittemore Architects (architects)

Status: Completion is scheduled for 2009.

Financing: Public Owner: Calgary Health Region

This major redevelopment involves both new construction and renovation. The new addition of 37,000 square metres and the renovation of 10,000 square metres will be built to LEED-Silver standards.



50

Glenmore and Bearspaw Water Treatment Plants Upgrade Capital Cost: \$235 million

Project Type: Water/Wastewater Location: Calgary, Alberta

Key Players: PCL-Maxam, a joint venture (contractor); Associated Engineering Alberta Ltd. (primary consultant)

Status: Scheduled for completion in 2012. Financing: Public Owner: City of Calgary

The project involves two water treatment plant upgrades, one a 500 million-litre-per-day plant and the other 400 million litres per day. The work includes pretreatment and residuals treatment facilities, filter rehabilitation, air scour systems, sodium hypochlorite facility, carbon dioxide systems, activated carbon and UV disinfection.



51

South LRT Extensions Capital Cost: \$228 million

Project Type: Transportation/ Public Transit

Location: Edmonton, Alberta

Key Players: PCL Construction Management Inc. (construction manager); EPCOR Technologies Inc. (overhead wire installation); Siemens (LRT vehicles)

Status: This June, the first 37 LRT vehicles were unveiled. The project should be complete in 2009.

Financing: The City of Edmonton provides funding for the South LRT Extension and LRT vehicles through local taxes and borrowing. The federal gas tax fund will be used to help repay this borrowing. The City of Edmonton also receives provincial

funding for its LRT project through the ongoing Alberta Municipal Infrastructure Program and the City Transportation Fund. In 2008-2009, the City of Edmonton will receive more than \$210 million from the Alberta Municipal Infrastructure Fund and the City Transportation Fund.

Owner: City of Edmonton

As part of Edmonton's Transportation Master Plan, more LRT lines will be opened. Several contracts on the South LRT involve some complex tunnelling and construction of more transit stations.

52

Nanaimo Centre Project/ Vancouver Island Conference Centre

Capital Cost: \$220 million

Project Type: Social

Location: Nanaimo, British Columbia Key Players: Triarc International Inc.

Status: Completion is scheduled for 2009.

Financing: Public and private financing are involved in the project.

Owner: City of Nanaimo

Phase one includes a conference centre; 20-storey, 140-room Marriott Hotel; 225-seat auditorium; and museum. Phase two includes development of former foundry and civic arena sites into twin condominium high-rises containing 300 units and two ice arenas.

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Bluewater Health Capital Cost: \$214 million

Project Type: Hospital/Health Care

Location: Sarnia, Ontario

Key Players: EllisDon (contractor)

Status: The project is over 25 per cent complete and

should be done in 2011.

Financing: EllisDon is committed to build and finance the project. Construction financing was arranged by Pacific & Western Bank of Canada. A portion will be repaid at completion of the new building and the remainder will be paid at substantial completion.

Owner: Bluewater Health

The project will add 325,000 square feet of new space and includes construction of a new seven-storey building and renovations to the existing Norman Street and Russell Street buildings. Approximately 130,000 square feet of existing space will be renovated and approximately 325,000 square feet of new space will be added.

54

London Health Sciences Centre North Toronto Capital Cost: \$212 million

Project Type: Hospital/Health Care

Location: London, Ontario

Key Players: EllisDon Corporation; KPMG

(VFM report)

Status: Completion is scheduled for 2011.

Financing: This is a Build-Finance contract

with EllisDon.

Owner: London Health Sciences Centre

London Health Sciences Centre (LHSC) has three sites: South Street Hospital, University Hospital and Victoria Hospital. North Tower fitout and renovations will consolidate all patient care and teaching services at the University and Victoria Hospitals, allowing for the closure of the aged South Street Hospital.

55

Autoroute 25 Expansion Capital Cost: \$210 million

Project Type: Transportation/Public Transit

Location: Montreal, Quebec

Key Players: Concession A25 S.E.C.—Macquarie Group (financing); Kiewit-Parsons (design-build construction); Miller Paving (long-term maintenance); St. Lawrence Cement; Genivar (engineering); TransCore (tolling); PwC (financial advisor)

Status: Completion is scheduled for 2011.

Financing: A 35-year design, build, maintain contract with the consortium paid through construction and availability payments. The government will collect tolls to cover those payments.

Owner: Quebec Ministry of Transportation

Quebec's first P3 in the transportation sector, a 7.2-kilometre, four-lane extension to Highway 25 will unite Highway A-440 at Laval and Henri Bourassa Boulevard in Montreal. A new six-lane 1.2-kilometre bridge linking Laval and Montreal Island across Riviere des Prairies is also included.

56

Residential Care and Assisted Capacity Initiative Capital Cost: \$210 million

Project Type: Hospitals/Health Care

Location: Vancouver Island, British Columbia

Key Players: The Ahmon Group, Baptist Housing Society of BC, the Capital Region Housing Corporation and Beckley Farm Lodge Society, Good Samaritan Canada, Jones Development Corporation and inSite, New Horizons Care Corporation, Retirement Concepts, Spoke Elderly Citizen's Housing Society, West Coast Native Health Care Society (private sector partners)

Status: Scheduled for completion in 2010.

Financing: The individual concessionaires have a contract to DBFO the facilities. The Vancouver Island Hospital Authority and BC Housing will fund each facility at an agreed-upon amount for a 20-year operating term.

Owner: Vancouver Island Health Authority

This project is intended to deliver 1,050 new units by 2008 and the capability of delivering an additional 180 units by 2010. They are located in Campbell River, Courtney/Comox, Duncan, Nanaimo, Parksville, Port Alberni, Sooke and Victoria.



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Montreal Port Expansion Phase I Capital Cost: \$200 million

Project Type: Port/Airport Location: Montreal, Quebec

Status: Construction has begun, with completion of Phase I scheduled for 2011.

Financing: The Montreal Port Authority (MPA) will engage public and private partners to finance these projects—the government will end up investing \$450 million to \$650 million. By 2020, MPA estimates these improvements will generate \$3.4 billion.

Owner: MPA

This is part of the MPA's \$2.5-billion infrastructure project, Vision 2020, that will unfold over the next 12 years and triple the port's container capacity to the equivalent of 4.5 million 20-foot container units. The first two phases will streamline and reorganize existing infrastructure, while phases three and four will involve new terminals, either in Montreal East or at Contrecoeur, 40 kilometres down the St. Lawrence Seaway, to expand container capacity.



Cariboo Connector Capital Cost: \$200 million

Project Type: Transportation/Public Transit

Location: Prince George, British Columbia

Key Players: Fletchers: Peter's Bros. Construction Ltd.; Plett Road: Integrated Contractors Ltd.

Status: Completion scheduled for 2009.

Financing: Public—the eventual cost of the total program will be \$2 billion.

Owner: BC Ministry of Transportation

This project is a series of smaller contracts, starting in 2005. Some are already completed, while others will continue through 2009.



Pitt River Bridge and Mary Hill Interchange Capital Cost: \$198 million

Project Type: Transportation/Public Transit

Location: Port Coquitlam, British Columbia

Key Players: Peter Kiewit Sons, MMM Group (Design-Build); ND Lea Inc.; Associated Engineering Ltd.

Status: Completion is scheduled for 2009.

Financing: The federal government is providing \$90 million through the Asia-Pacific Gateway and Corridor Initiative and the provincial government is providing \$108 million.

Owner: BC Ministry of Transportation

The new six-lane bridge, with an additional truck lane, will replace two existing bridges linking Pitt Meadows and Port Coquitlam.



Henderson General Hospital Redevelopment Capital Cost: \$198 million

Project Type: Hospital/Health Care

Location: Hamilton, Ontario

Key Players: EllisDon (contractor); Zeidler Partnership in partnership with Garwood Jones & Hanham (architect); PRISM Partners (project management)

Status: Scheduled for completion in 2012.

Financing: EllisDon is committed to build and finance the expansion and redevelopment project for \$198.1 million. The total cost of the project includes demolition of 70 Wing South and other design, furniture and equipment costs. Pacific & Western Bank of Canada are financing the project.

Owner: Hamilton Health Sciences

The redevelopment project consists of about 400,000 square feet of new construction and more than 25,000 square feet of renovations.

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Project Type: Brownfield/ Environmental

Location: Calgary, Alberta

Key Players: Calgary Municipal Land Corporation (developer); Progressive Engineering Ltd. (engineer); Stantec Consulting Ltd. (landscape architect); Moriyama & Teshima Architects (consultant); Volker Stevin Contracting Ltd., Marmot Concrete, Graham Construction (contractor) **Status:** Completion is scheduled for 2013.

Financing: A mix of public and private funds—public funds were expended through a \$700 million Community Revitalization Levy (similar to Tax Increment Financing).

Owner: Calgary Municipal Land Corporation

A total revitalization of Calgary's East Village, including improving infrastructure in the area (replacement of underground utilities, road raising due to flood plain issues, replacement of roadways and sidewalks and improvement of streetscapes and parks in the area), design and construction of the first phase of Riverwalk, building an underpass to connect East Village to Victoria Park, rehabilitating heritage buildings, and environmental remediation.

62

Edmonton Clinic South at University of Alberta

Capital Cost: \$185 million

Project Type: Hospital/ Health Care

Location: Edmonton, Alberta

Key Players: PCL Construction Management Inc.; Cohos Evamy (prime consultant)

Status: Completion is scheduled for 2012.

Form of Contract: Private

Owner: Capital Health

The Edmonton Clinic South (clinical) will be about 677,000 square feet and over eight floors, with a nine-storey, 1,200-stall parkade. The scope will also include demolition of the Aberhart Services Centre building and shoring in adjacent areas such as the LRT station.



Project Type: Social

Location: Edmonton, Alberta

Key Players: Cohos Evamy Integrated Design, Lundholm Associates Architects (architect); Reich + Petch Design International (exhibit master plan)

Status: Completion scheduled for 2011.

Financing: Public

Owner: Government of Alberta

Phase I of the project will include a 250,000-square-foot addition to accommodate new galleries, collections storage, offices and lab spaces, a number of new galleries, underground parking for 300 vehicles and modifications to the existing building to ensure it can support museum operations in the future.

Hôpital Montfort Capital Cost: \$173 million

Project Type: Hospital/ Health Care

Location: Ottawa, Ontario

Key Players: EllisDon (contractor); Stantec, Murphy Hilgers Architects (architect); MMM Group (design)

Status: Completion is scheduled for 2009.

Financing: Financing of the construction portion of the project was arranged through a syndicate led by BMO Bank of Montreal and including Caisse centrale Desjardins and RBC Capital Markets. Through this Alternative Financing Procurement (AFP) model, EllisDon is committed to building the facilities.

Owner: Hôpital Montfort

This renovation will more than double the size of the existing hospital, adding 420,000 square feet.



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East Windsor Cogeneration Centre (EWCC) Capital Cost: \$170 million

Project Type: Energy

Location: Windsor, Ontario

Key Players: Stantec Construction; Aecon (design, construction, commissioning); Pristine Power Inc., Fort Chicago Energy Partners L.P. (developer)

Status: Completion is scheduled for 2009.

Financing: Fort Chicago and Pristine (East Windsor Cogeneration LP) will provide power for a twenty-year period

through a Combined Heat and Power Contract with the OPA. Both Fort Chicago and Pristine has committed to provide \$17.5 million of equity capital.

Owner: East Windsor Cogeneration LP

Back in 2006, OPA's Paul Bradley said the proposed 84-megawatt natural gas-fired cogeneration facility "demonstrates the high-efficiency use of resources and it highlights the role that the private sector can play in our energy future." The EWCC should power 80,000 homes in the Windsor area and steam for Ford's Windsor operations.

66

Queen Elizabeth Way Widening

Capital Cost: \$167 million

Project Type: Transportation/

Public Transit

Location: St. Catharines,

Ontario

Key Players: Dufferin Construction

Status: Completion scheduled for 2011.

Financing: Public

Owner: Ontario Ministry of Transportation

Widening of 9.4 kilometres to six lanes from Seventh Street South to the Garden City Skyway.

67

The Credit Valley Hospital Phase II

Capital Cost: \$162.8 million

Project Type: Hospitals/ Health Care

Location: Mississauga, Ontario

Key Players: Bondfield Construction Company

Status: Completion is scheduled for 2011.

Financing: Bondfield Construction Company has a Build-Finance contract with the hospital.

Owner: Credit Valley Hospital

The hospital expansion includes approximately 270,000 square feet of new construction and 70,000 square feet of renovations.



68

Filmport Capital Cost: \$160 million

Project Type: Brownfield/Environmental

Location: Toronto, Ontario

Key Players: Quadrangle Architects Ltd. (design); Toronto Film Studios— Rose Corp. (developer)

Status: Phase 1 is now open for business and the first of the supporting facilities should be complete by 2010.

Financing: Toronto Film Studios and parent Rose Corporation won the rights to develop the site. A third shareholder,

Comweb, has since joined the private investment group.

Owner: City of Toronto Economic Development (TEDCO)

Filmport is Canada's newest and largest film and media business centre and part of the revitalization of Toronto's Portlands. The studio complex will include 550,000 square feet of film and television production space. Phase 1 sits on part of a 47-acre site in the Portlands with TEDCO as owner in a unique P3.



Project Type: Brownfield/Environmental Location: Toronto, Ontario

Key Players: Diamond + Schmitt (architects); Waterfront Toronto; TEDCO (developer); Aecon Group Inc. (construction manager); Halcrow Yolles (structural engineer); Smith and Andersen (mechanical engineer); Stantec (electrical engineers); Trow Associates Inc. (geotechnical and environmental engineering); Enermodal (LEED consultant); Morguard Investments Ltd. (co-developer and project manager)

Status: Estimated completion is 2009.

Financing: Financed by a construction loan from the City of Toronto of up to \$132 million and a \$12.5 million contribution by Waterfront Toronto.

Owner: TEDCO

TEDCO's Corus Building will serve as the Toronto headquarters for Corus Entertainment. A cultural, mixed-use community in Toronto's East Bayfront will include the 500,000-square-foot office and broadcast centre, targeting LEED-Gold certification. One of the key features is a multi-storey living green wall in the atrium. About 50,000 cubic metres of soil was excavated, treated and reused. A combined, engineered gas collection vapour barrier system below the building was incorporated into the overall building design.



70

Ashbridges Bay Treatment Plant Odour Control Capital Cost: \$160 million

Project Type: Water/Wastewater Location: Toronto, Ontario

Key Players: Aecon Group Inc.; Stantec; AECOM—formerly Earth Tech (design and project management)

Status: The original concept of a central biofilter has been revised and superseded by a revised design of a distributed odour treatment and dispersion.

Financing: Public Owner: City of Toronto

The construction contracts include odour control and process upgrades at raw sewage pumping stations, preliminary treatment area, aeration tanks and an existing biofilter.



Colchester Regional Hospital Capital Cost: \$155 million

Project Type: Hospital/Health Care

Location: Truro, Nova Scotia

Key Players: WHW Architects Ltd., Farrow Partnerships Architects Ltd. (architect); EllisDon (construction manager); Eastin Projects Ltd. (project manager); M & R Engineering, MMM Group (mechanical and electrical engineering)

Status: Scheduled to open in 2011.

Financing: Public

Owner: Colchester East Hants Health Authority

This will be a new 124-bed facility.



72

Canadian Museum of Nature Capital Cost: \$152 million

Project Type: Social

Location: Ottawa, Ontario

Key Players: Barry Padolsky Associates Inc.; Kuwabara Payne McKenna Blumberg Architects, Gagnon Letellier Cyr Architects (architects in a joint-venture consortium); PCL Constructors Canada Inc. (contractor)

Status: Completion is scheduled for 2009.

Financing: Public

Owner: Government of Canada

Renovation of the Victoria Memorial Museum Building.

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St. John's Harbour Cleanup Capital Cost: \$144 million

Project Type: Water/Wastewater **Location:** St. John's, Newfoundland

Key Players: Newfoundland Design Associates Ltd. (prime design consultant); CH2M Hill Canada Ltd. (design consultant); PHB Group Inc. (architect); Olympic Construction Ltd. (general contractor); G.J. Cahill & Co. 1979 Ltd. (major subcontractor); Pyramid Construction Ltd., Modern Paving Ltd., RJG Construction Ltd., Coady Construction & Excavation Ltd. (civil work)

Status: Phase I, including collection, redirection and screening of sewage flows from the Waterford Valley drainage basin, construction of a diffused outfall on the south side of the harbour and construction of a pumping station, has been completed. The rest should be completed in 2009.

Financing: The federal government contributed \$31 million; the Newfoundland

and Labrador government contributed \$31 million; the Cities of St. John's, Mount Pearl and the Town of Paradise contributed \$31 million (to Phase II).

Owner: City of St. John's

Phase II includes construction of a primary treatment plant, expansion of the pumping station, construction of a harbour interceptor sewer and additions to the existing diffused outfall.

The project involves the excavation of 800,000 cubic metres of rock to create a level site. The construction of a conventional primary sewage treatment plant (St. John's first) and the construction of a two-kilometre-long Harbour Interceptor Sewer to collect and divert sewage from all sewage outfalls that discharge directly into the St. John's Harbour to the new Riverhead Waste Water Treatment Facility.

74

Sunnybrook Health Sciences Centre Capital Cost: \$142 million

Project Type: Hospital/Health Care

Location: Toronto, Ontario

Key Players: Vanbots Construction (contractor)

Status: Completion is scheduled for 2010.

Financing: In yet another AFP healthcare project for Ontario, Vanbots Construction Corporation is committed to a maximum price contract for the project. Construction financing was arranged by Stonebridge Financial Corporation with payment at substantial completion.

Owner: Sunnybrook Health Sciences Centre

The Sunnybrook Health Sciences Centre expansion project will create four additional floors above the existing clinical services wing. Two of the new floors will accommodate an expanded Perinatal and Gynaecology Program, providing for 68 beds, 48 bassinets and approximately 4,250 births per year. A state-of-the-art Neonatal Intensive Care Unit will also be located in the new facilities.



Project Type: Hospital/Health Care

Location: Kingston, Ontario

Key Players: PCL Constructors

Status: Completion scheduled for 2012.

Financing: Private

Owner: Kingston General Hospital

The redevelopment project will create a more family oriented environment and improve patients' access to cancer care and kidney dialysis.

76

Algoma Steel Cogeneration Facility Capital Cost: \$135 million

Project Type: Energy

Location: Sault Ste. Marie, Ontario

Key Players: Algoma Energy LP (developer) **Status:** Completion scheduled for 2009.

Financing: Algoma Energy LP (a subsidiary of Algoma Steel Inc.) will build and operate a new cogeneration power facility at Algoma Steel's plant site, supported by a 20-year power purchase agreement with OPA.

Owner: ASI

The new 70-megawatt facility will be fueled by blast furnace and coke oven gases from Algoma's steel plant operations and will generate electricity and process steam.

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Kicking Horse Canyon Phase 3 Capital Cost: \$135 million

Project Type: Transportation/Public

Location: Golden, British Columbia

Transit

Key Players: The Focus Corporation (owner's engineer); Ledcor CMI Ltd. (contractor, Phase 3 East)

Status: Completion is scheduled for 2013.

Financing: DBFMO

Owner: BC Ministry of Transportation and Infrastructure

The third of four phases involves reconstruction and widening of 8.8 kilometres of highway between the 10 Mile Hill commercial vehicle brake check and Yoho Park, including a new crossing of Mount Hunter Creek (Phase 3 East), and 3.5 kilometres of improvements from Golden Hill to the West Portal, the location of a possible future highway tunnel in the Canyon (Phase 3 West).

Deh Cho Bridge Capital Cost: \$132 million

Project Type: Transportation/Public Transit **Location:** Fort Providence, Northwest Territories

Key Players: Atcon Construction Inc.; Deh Cho Bridge Corporation

Status: Completion is scheduled for 2010.

Financing: This DBFOM contract is unusual for the government of the Northwest Territories. The government will pay the corporation for the bridge over a 35-year period largely from toll revenues collected from the traffic crossing the bridge and savings from discontinuing the ferry operations and the winter ice crossing.

Owner: Government of the Northwest Territories

The Deh Cho Bridge will be a two-lane structure totaling 1,045 metres in length and will be built at the current ferry-crossing site. It will allow year-round access from the mainland to the community of Fort Providence, replacing the current ferry and ice bridge services.

79

Sudbury Regional Hospital Capital Cost: \$131.9 million

Project Type: Hospital/ Health Care

Location: Sudbury, Ontario

Key Players: EllisDon Corporation (contractor)

Status: Completion is scheduled for 2009.

Financing: Construction of the project was funded through a bond offering of senior secured bonds underwritten by RBC Capital Markets. EllisDon is committed to a guaranteed maximum price and the financing will be repaid at substantial completion.

Owner: Hôpital régional de Sudbury Regional Hospital

The renovation will consolidate three sites into one.



80

Queenston-Lewiston Bridge Crossing Capital Cost: \$130 million

Project Type: Transportation/ Public Transit

Location: Niagara-on-the Lake, Ontario

Key Players: CRH Build (project management)

Status: Phase one is almost complete and bids are currently under review for construction of phase two.

Financing: Federal funding though the Building Canada Plan's Gateways and Border Crossings Fund, plus provincial funding and funds from the Niagara Falls Bridge Commission (NFBC).

Owner: NFBC

Phase I of the redevelopment started in March 2007 and entailed the construction of new toll, parking and commercial inspection facilities. Phase II includes the construction of a new central building for the Canada Border Services Agency and a wall to separate traffic bound for Canada and for the United States.



Windsor Gateway Project Capital Cost: \$128 million

Project Type: Transportation/ Public Transit

Location: Windsor, Ontario

Key Players: Dillon Consulting (Environmental Assessment)

Status: A grade separation at Walker Road and the CPR rail line and improvements to Manning Road are under construction. Ontario is committed to a new river crossing, access road and inspection plaza by 2013.

Financing: Federal, provincial and municipal contributions.

Owner: Ontario Ministry of Transportation

The Windsor-Detroit border is one of the busiest connections between Canada and the United States but the infrastructure on the Canadian side leads to constant delays. The entrance to the Detroit-Windsor tunnel is located in a congested area in downtown Windsor while access to the Ambassador Bridge is by a non-controlled-access arterial road.



82

Nova Scotia Community College Capital Cost: \$123 million

Project Type: Educational

Location: Halifax, Nova Scotia

Key Players: Barrie & Langille Architects Ltd., Moriyama & Teshima Architects, William & Associates Ltd. (architects); Eastin Projects Ltd. (project manager); Costello Fitt Consulting, Fairwyn Developments Ltd. (development consultants); EllisDon Corporation (construction managers)

Status: Construction of Phase II is expected to be completed by 2010.

Financing: Public

Owner: Nova Scotia Community College

The college has 14 individual projects at various stages of development. The largest of these, a new campus on the Dartmouth waterfront is divided into two phases, the first \$50 million and the second \$29 million.



83

Marriott Hotel - Pierre Elliot Trudeau International Airport Capital Cost: \$120 million

Project Type: Port/Airport **Location:** Montreal, Quebec

Key Players: Société en commandite Adamax Immobilier Groupe Axor, Pageau Morel & Associates Inc. (mechanical and electrical engineers)

Status: Completion is scheduled for 2009.

Financing: DBFO Owner: Aéroports de Montréal

The airport's transborder departure area is being relocated to build a high-end, 275-room hotel with one floor accommodating the airport authority's head office.



84

Northwest LRT Extension Capital Cost: \$120 million

Project Type: Transportation/Public Transit

Location: Calgary, Alberta

Key Players: PCL (contractor); PNR Railworks (track); Enmax (electrical); Lafarge (interchanges)

Status: Completion scheduled for 2011.

Financing: On November 2007, Council approved \$120 million to fund the new Northwest LRT Extension to Rocky Ridge/Royal Oak and Tuscany (XRT). Of that budget, \$28 million was allocated for the purchase of train cars, with the remaining \$92 million reserved for construction.

Owner: City of Calgary

This station is intended to be a community station primarily serving those living and working in Rocky Ridge/ Royal Oak and Tuscany.





Queen's University, Queen's Centre Phase 1 Capital Cost: \$115 million

Project Type: Educational **Location:** Kingston, Ontario

Key Players: Bregman + Hamann Architects, Sasaki Associates Inc., Shoalts and Zaback (architects); PCL Constructors Canada Inc. (contractors)

Status: Completion is scheduled for 2009.

Financing: Public

Owner: Queen's University

The Queen's Centre (Phase 1) includes four buildings with a total area of 48,865 square metres.



Ottawa Hospital Regional Cancer Program

Capital Cost: \$113 million

Project Type: Hospital/Health Care

Location: Ottawa, Ontario

Key Players: PCL Constructors Canada Ltd.

Status: The Ottawa Hospital will be complete in 2011, the Queensway Carleton Hospital in 2009.

Financing: The Ottawa Hospital cost \$46.7 million and the

Queensway Carleton Hospital \$66.3 million.

Owner: Ottawa Hospital/Queensway Carleton Hospital

The project will include renovations and expansion of the existing cancer centre at the Ottawa Hospital's General Campus and the addition of a new satellite cancer centre and parking structure at the Queensway Carleton Hospital.



Toronto Rehabilitation Institute Capital Cost: \$112.1 million

Project Type: Hospital/Health Care

Location: Toronto, Ontario

Key Players: Aecon Group Inc.

Status: Completion is scheduled for 2011.

Financing: Infrastructure Ontario is working with Toronto Rehab and the Ministry of Health and Long-Term Care on this AFP project.

Term care on this first pro-

Owner: Public

This project includes construction of a new 13-storey patient care and research tower and further renovations to the existing 12-storey east wing and four-storey north wing.



Peace Canyon Turbine Upgrade

Capital Cost: \$112 million

Project Type: Energy

Location: Hudson Hope, British Columbia

Key Players: Mitsubishi, VA Tech Hydro Inc.

Status: Completion scheduled for 2010.

Financing: Public

Owner: BC Hydro

Upgrading the turbines of units 1 through 4 and refurbishing generator units 1 to 4.

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Highway 7 Expansion Capital Cost: \$106 million

Project Type: Transportation/ Public Transit

Location: Ottawa, Ontario

Key Players: Ministry of Transportation (engineer); McCormick Rankin Corporation (consultant project manager); Ecoplans Ltd. (environmental consultant)

Status: Completion is scheduled for 2011.

Financing: Public

Owner: MOT

Highway 7 from Ottawa to Carleton Place will be widened to four lanes. The roadwork will also include four interchanges, one new bridge, and two new park'n'ride lots. The first phase from Highway 417 to Jinkinson Road began in 2006. Phase II is to begin as soon as property acquisition and design work are completed.

90

Trillium Health Centre Capital Cost: \$104.1 million

Project Type: Hospital/ Health Care

Location: West Toronto and Mississauga, Ontario

Key Players: EllisDon (contractor)

Status: Completion scheduled for 2009.

Financing: EllisDon has committed to a guaranteed maximum price contract. Payments will be linked to the two portions of the project.

Owner: Trillium Health Centre

The project involves construction of a new sevenstorey west wing at Trillium Health Centre in Mississauga and renovations to west Toronto's Trillium Health Centre. 91

Twinning of TransCanada Highway Capital Cost: \$100 million

Project Type: Transportation/

Public Transit

Location: Banff, British Columbia

Key Players: Parks Canada

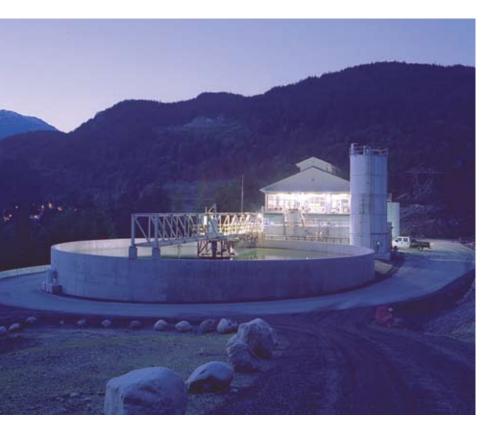
and Public Works

Status: Twinning has been a work in progress for many years. About 50 kilometres of the highway has already been completed, with final completion forecast for 2012.

Financing: Federal funding through the Building Canada Plan.

Owner: Publically owned

In August, 2008, the federal government had to provide another \$100 million from its Building Canada Fund to enable twinning work to proceed on a 14-kilometre section of highway west of Castle Junction. When completed, the entire highway between Banff and Lake Louise will be four lanes.



92

Britannia Mine Remediation Project Capital Cost: \$99 million

Project Type: Brownfield/Environmental

Location: Britannia Beach, British Columbia

Key Players: MacDonald Development Corp.; Golder Associates; AMEC; SRK/Klohn Crippen; URS; EPCOR Water Services Inc.

Status: Completion is scheduled for 2010.

Financing: Private—parts of the planned development are still in need of funding.

Owner: British Columbia Ministry of Agriculture and Lands

The mining community is being remediated to create a mining technology centre, a tourist destination and a single-family residential development. A water treatment plant has been completed and a small hydroelectric facility may be rebuilt.

Roy McMurtry Youth Centre Capital Cost: \$93.2 million

Project Type: Justice Location: Brampton, Ontario

Key Players: Bird Construction (contractor)

Status: Completion is scheduled for 2009.

Financing: Financing for the project was arranged by CIT Group Securities (Canada) Inc. with Bird Construction agreeing to a guaranteed maximum price. The financing will be repaid at substantial completion of the project.

Owner: Ontario Ministry of Children and Youth Services

The project involves the construction of a 192-bed facility on the Invictus Youth Centre site and includes demolition, new construction and renovation of existing facilities. Eight new buildings will be built while two of the existing buildings will be renovated and the remainder will be demolished.

94

Boundary Bay Airport Redevelopment Capital Cost: \$90 million

Project Type: Port/Airport

Location: Vancouver, British Columbia **Key Players:** Pryde Schropp McComb; Rush Contracting; MMM Group

Status: Construction has been completed on a new 48,000-square-foot hangar and CHC Helicopters has built a maintenance facility. The 15,000-square-foot terminal building is expected to be complete by fall 2009 and the overall project in 2013.

Financing: Private Owner: Alpha Aviation Inc.

The development will include a new terminal building and aviation-related commercial development on a 150-acre site.



David Braley Cardiac, Vascular and Stroke Research Institute Capital Cost: \$90 million

Project Type: Hospital/Health Care

Location: Hamilton, Ontario

Key Players: Parkin Architects Ltd. in partnership with McCallum Sather Architects (architect); ABE—AMEC, Black and McDonald and EllisDon (contractor)

Status: The first phase is scheduled for occupancy in February 2009 and the final phase in 2010.

Financing: A combination of federal government funding through CFI, provincial funding, a major donor (David Braley) and fundraising.

Owner: Hamilton Health Services

The six-storey building will provide 165,000 square feet of research space, housing the existing Population Health Research Institute and the Henderson Research Centre.



96

George Brown Waterfront Campus Capital Cost: \$90 million

Project Type: Educational

Location: Toronto, Ontario

Key Players: Waterfront

Toronto

Status: Completion scheduled for 2011.

Financing: The first building will cost \$90 million (the Ontario government is providing \$61.5 million, and George Brown College is covering \$15 million with the remainder to come from fundraising). The residences and

aquatic centre would see the total project cost up around \$200 million (George Brown is open to an AFP approach).

Owner: George Brown College

The new campus will house the college's Centre for Health Sciences, its first student residences and a recreational complex. The waterfront campus will be located on a 0.83 hectare (two-acre) parcel of land located on the south side of Queens Quay Boulevard between Lower Jarvis and Lower Sherbourne Streets. Eugene Harrigan, George Brown's VP of Operations, says the building will aim for LEED-Gold—"Waterfront Toronto is committed to bringing in district energy."

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Lakeshore West Rail Corridor Improvements Capital Cost: \$88 million

Project Type: Transportation/

Public Transit

Location: Mississauga, Ontario

Key Players: GO Transit (proponents); AGM Program Managers; Canadian National

Railway

Status: Completion is scheduled for 2010.

Financing: Federal government, \$29.3 million; Ontario government, \$29.35 million and the balance from municipalities. Part of the GO Transit Rail Improvement Program, which is funded through the Canada Strategic Infrastructure Fund.

Owner: Publically owned

Addition of a third mainline track between the Port Credit Station in Mississauga and Kerr Street in Oakville. Bridge upgrades will be made at Credit River, Southdown Road, Mississauga Road, Joshua Creek and 16 Mile Creek. Platforms will be extended at Oakville, Port Credit and Clarkson stations to accommodate 12-car trains.



York Archives Capital Cost: \$85 million

Project Type: Public Building/Government Offices

Location: Toronto, Ontario

Key Players: Plenary Group (project developer); PCL Constructors Canada Inc. (design-builder); Bregman and Hamann Architects (architect); Morguard Investments (property management)

Status: The podium and tower are under construction and will be completed in early 2009.

Financing: A team led by the Plenary Group was awarded a DBFO contract by York University.

Owner: York University

Located on York University's Keele Campus and envisioned as a hub of people and information, this project has three components: a threestorey, 127,220-square-foot podium containing the new Archives of Ontario; the six-storey, 121,750-square-foot York Research Tower; and a station entrance for the future Spadina subway line extension. The project is being built to achieve LEED-Silver certification.



George M. Shrum **Generating Facilty** Capital Cost: \$78 million

Project Type: Energy

Location: Hudson Hope, British Columbia

Key Players: Alstom Canada Inc.

Status: Completion is scheduled for 2010.

Financing: Public Owner: BC Hydro

Replacement of stators in units 1 to 4 beginning with units 3 and 4.



Mica Generator 100 Improvements Capital Cost: \$77 million

Project Type: Energy

Location: Revelstoke, British Columbia

Key Players: Alstom Canada Inc.

Status: Completion is scheduled for 2009.

Financing: Public Owner: BC Hydro

Improvements to the generators in a four-unit, 1,792-megawatt, earthfill dam facility. Stators will be installed in each of the four generating units over a four-month period each year.

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CONSTRUCTION LEADERS

PCL Constructors Inc.

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long term care and retirement centers, schools, college campuses, government and remote sites.

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