

Building Things That Matter

Winter 2008, Vol. 4, Issue 4



Aecon
Infrastructure

INSIDE THIS ISSUE:

- Groupe Aecon Québec Ltée / Aecon Infrastructure Québec
- Delivering for the Dawn Deliverability Project
- Highway 10 Widening Project
- Meet Eddie Yantha

Aecon's mission:

To safely

and profitably

deliver best-of-class

services and products

to meet our customers'

construction,

development and

infrastructure needs.



INSIDE THIS ISSUE

Groupe Aecon Québec Ltée / Aecon Infrastructure Quebec	4
Delivering for the Dawn Deliverability Project Aecon Utilities' Largest Pipeline Project.....	9
Head For the Hills Highway 10 Widening Project	13
Good Barriers Make Safe Roads Miwel's Slipforming Business	16
High Rise Goes High Definition QX Technology's High Rise Installs.....	20
Meet Eddie Yantha	24
Aecon's Fourth Annual Safety Day Introduces a New Tool Box Talk.....	26

Cover photo: Union Gas pipeline construction and gas compressor station at Dawn Township

Above: QX Technology satellite installation for Bell ExpressVu

Building Things That Matter is a quarterly magazine published by
Aecon's Infrastructure Group for its employees and clients.

For more information about Aecon, visit our website at www.aecon.com

The information in this magazine includes certain forward-looking statements. Although Aecon believes that the expectations reflected in forward-looking statements are reasonable, it can give no assurance that the expectations of any forward-looking statements will prove to be correct.

Bienvenue à Groupe Aecon Québec / Welcome to Aecon Québec

When Aecon's Québec Civil Division became part of the Aecon Infrastructure Group in June it brought with it two important business fundamentals that far outweigh its current size and scope – a past that involves a long tradition of building civil works and a future of significant potential.

In the fifty years that Groupe Aecon Limitée and its predecessors has been involved in major civil construction projects in Québec it has built a reputation as one of the foremost heavy construction companies in the province and developed the resources to carry it proudly into the future. And given the huge investments that the province and its resource-based industries are making to improve and expand its infrastructure, that future is promising.

Becoming a part of the Aecon Infrastructure Group will help Québec's Civil Division achieve that potential. It will gain access to a broad range of expertise and resources that will make it an even more formidable competitor than it is today and it will also gain access to new markets and new opportunities.

But a successful merger of businesses is never a one-way street and the Infrastructure Group will gain as much as it gives. The recent agreement between Ontario and Québec for the free-flow of labour between the two provinces creates new opportunities for companies working in both provinces and Aecon Québec's resources and expertise will add significantly to the capabilities of our entire division. Some members of its management team, for example, have already been working in Ontario on power and mining projects.

Perhaps most important of all, our new Quebec wing transforms Aecon Infrastructure into a national entity with operations that can span the country from east to west – something that our clients, both public and private, expect from Canada's largest publicly-traded infrastructure company.

Given the tenor of the times and the uncertainty about the economy, it may seem a bit paradoxical to talk optimistically about expansion opportunities but Aecon Infrastructure is well positioned to meet what many expect will be some difficult times ahead. Aecon Group has a strong

balance sheet, Aecon infrastructure has a record backlog of project work on its books, and while there will undoubtedly be some cutbacks and slowdowns in the economy, the sectors in which we operate continue to hold up.



By Teri McKibbin

The federal and provincial governments across Canada have indicated that investment in infrastructure remains a top priority. The Ontario provincial government has told municipalities that they will receive a one-time payout of \$1.1 billion based on the 2007-08 budget surplus for infrastructure work and that it still plans to go ahead with its own major provincial infrastructure projects. The Quebec government is calling for infrastructure spending of \$37 billion over the next five years. Out west, investment in some of the oil sands projects is expected to slow as the price of oil drops but backed up by its enormous oil royalties, the Alberta government announced only a few months ago that it would be spending almost \$11 billion over the next ten years on infrastructure development.

The current economic crisis caught many people by surprise, which goes to show how difficult it is, even for economists, to predict just how severe this economic downturn will be. It will undoubtedly cause some severe hardships for many industries and in the long run, if economic difficulties continue, it will have an impact on our business as well. But heavy civil construction projects and infrastructure development work are measured in years not months and are a fundamental underpinning of our economy, which is why I remain optimistic about our future and excited about the opportunities that Aecon Québec brings to our group.

“Bienvenue à Groupe Aecon Québec. Nous allons faire une équipe formidable.” We will make a formidable team.

Teri McKibbin is CEO of the Aecon Infrastructure Group.



Construction at Montreal's Trudeau Airport

Groupe Aecon Québec Ltée / Aecon Infrastructure Quebec

With its head office in Montreal, Groupe Aecon Québec has been building and managing heavy civil construction projects for 50 years.

In June, its civil division became part of the Aecon Infrastructure Group - a move that Roger Arsenault, vice president of the business, says will give Aecon Infrastructure Quebec the resources and expertise it needs to become a major player in the rapidly expanding Québec infrastructure market.

From the Foundation Up: Groupe Aecon Québec has been providing construction services in Quebec since 1958 when it started in business as the Foundation Company of Quebec, a subsidiary of the Foundation Company of Canada.

The Foundation Company of Canada, perhaps best known for building the CN Tower and its work

building the St. Lawrence Seaway, was one of the dominant construction companies in the country for almost 100 years, building airports, highways, bridges, dams and tunnels. It became part of BFC Construction in 1987.

Armbro Construction and BFC, two of the biggest heavy construction companies in Canada,

started working together in 1994 on the construction of Highway 407. In December 1999, Ambro (now Aecon) acquired BFC.

In July 2008, Groupe Aecon Québec's heavy civil works operation became part of Aecon Infrastructure while the building division remains part of Aecon Buildings.

"Québec is investing heavily in upgrading infrastructure throughout the province," says Roger Arsenault, Vice President Aecon Infrastructure Quebec. "Becoming part of Aecon Infrastructure Group will give Aecon Infrastructure Quebec the resources it needs to become the obvious partner for infrastructure construction and maintenance in Quebec."

Aecon Infrastructure Québec Aujourd'hui

Aecon Infrastructure Québec provides project management services for major civil construction projects throughout the province.

"With 15 professional engineers on staff, backed up by a full complement of support services, we can co-ordinate and manage virtually every aspect of a project," says Roger Arsenault.

Some of Aecon Infrastructure Québec's notable projects include:

- A \$61 million project to build a 70-metre high, 500-metre wide rock-filled concrete-faced dam and a diversion tunnel and floodway for la Société d'énergie de la Baie James on the Toulustouc River (2002 - 2005).

continued

Division File

Groupe Aecon Québec Ltée / Aecon Infrastructure Quebec

Services: construction and project management of heavy civil works

Head Office: Montréal, Québec

Founded: 1958

Employees:

Field 50

Office 30

Major Clients

Ministère des Transports du Québec

Hydro-Québec

La Société d'énergie de la Baie James

Petro-Canada

Notable Projects:

- The Eastmain-1 Powerhouse (James Bay)
- The Toulustouc Hydro Electric dam
- Valleyfield water treatment plant improvements
- The Monseigneur Langlois Bridge

Awards:

- Armatura Awards for the use of reinforced concrete in modern construction projects.
- Decarie expressway project (2003)
- Toulustouc hydroelectric project (2004)

Key Personnel:

Roger Arsenault, Vice President

Aecon Infrastructure Quebec

Pierre Lafond, Vice President Estimates and

Business Development

Richard Brassard, Vice President Labour,

Health & Safety Manager

Michael Finnerty, Manager Finance & Administration

Christiane Lacroix, Contracts Manager

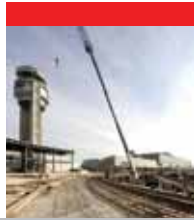




*A concrete abutment for the “Grand Rang” bridge construction project crossing Highway 20 near Montreal.
The unstable soil at the bridge approach requires lightweight fill.*



**GROUPE AECON
QUÉBEC LTÉE / AECON
INFRASTRUCTURE
QUEBEC**



continued from previous page

- Reconstruction of the concrete Monseigneur-Langlois Bridge and construction of a new 250-metre long four-lane bridge over the Soulanges canal (2003-2004).
- A \$108 million contract to build an 840 MW underground power station on the Eastmain River in Northern Quebec for Hydro-Québec (2004- 2006).
- A \$33 million contract for the reconstruction of 13 viaducts, concrete ramps and the retaining walls along six-kilometres of the Décarie Expressway (2002).

It is currently working on several projects for the Transports Québec (the Quebec Ministry of

Transportation) and the Montreal International Airport including:

- The relocation of the departures area at Pierre Elliott Trudeau International Airport in Montreal.
- Demolition and reconstruction of the overpass on Chemin Grand over Autoroute 20, south shore of Montreal and reconstruction of a bridge over Quinze Canal in La Présentation.
- Rehabilitation of a bridge on Pinard Avenue over Autoroute 20 in the municipality of St-Hyacinthe.

“In October 2007, the Québec government issued its Foundations for Success Infrastructure Plan, which calls for expenditures of \$37 billion for Québec infrastructure projects over a five-year period,” concludes Roger Arsenault. “This is a huge investment for the province and opens up some significant opportunities for heavy civil construction firms. Now that Aecon Infrastructure Quebec is part of the Aecon Infrastructure Group, we will have the additional resources and expertise we need to become a major player in this market.” **A**




AECON
 Utilities

Delivering for the Dawn Deliverability Project

Aecon Utilities' Largest Pipeline Project

Union Gas is Aecon Utilities largest client. Operating under a strategic alliance, Aecon Utilities installs about 400 kilometres of pipeline for Union Gas a year. This year Aecon Utilities has just completed its largest Union Gas pipeline project to date - the installation of a 4-kilometre large diameter transmission line in Dawn Township.

Jeff Rasberry is starting to think of Lambton County as his second home.

"We certainly spend a lot of time here," he says. "The Union Gas underground natural gas storage system in Dawn Township is the largest of its type in Canada and it is also one of the fastest growing storage and transmission hubs in North America so we do a lot of work installing pipelines and working on the compressor stations."

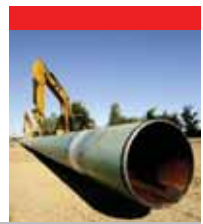
Aecon Utilities most recent project in Dawn Township is also its biggest to date, the installation of a 36-inch diameter pipeline for the Dawn Storage Deliverability project.

The Dawn Deliverability project, being built at a cost of about \$150 million, will give Union Gas the ability to deliver an additional 485 million cubic feet of natural gas per day – almost 25 percent more

continued



DELIVERING FOR THE DAWN DELIVERABILITY PROJECT



continued from previous page

capacity than it has today. The project includes 11 new storage wells and related gathering lines and the addition of up to 47,000 horsepower of natural gas compression.

Part of the contract involved designing the line in conjunction with Union Gas, which meant that Aecon Utilities Engineering started work on the project in October 2007.

“One of the design challenges we faced was the high pressure of the gas at the new facility,” recalls Grant Strachan, AUE’s project engineer. “Most Union Gas transmission pipelines operate at

Division File

Dawn Deliverability Pipeline Project

Scope: pipeline construction and gas compressor station work

Client: Union Gas

Location: Dawn Township, Ontario

Union Gas Storage Facility: 20 depleted gas pools with storage for more than 150 billion cubic feet of natural gas.

Pipeline:

3.5 km of 36-inch diameter pipeline
500 metres of 42-inch diameter pipeline

Aecon Divisions

Aecon Utilities – general contractor
AUE – inspection at 156 Compressor Station site, material control, design co-ordination
Aecon Industrial – building Plant I (separate contract)

Contract value: \$5 million

Timing: January to November 2008

Employees: 70 at peak

Key Employees:

Mark Scherer – Vice President Southwest
Eric MacDonald – General Manager Southwest
Jeff Rasberry – Superintendent
Lee Whitton – Pipe Foreman
Don Mineult – Ditching Foreman
Jett Janczak (AUE) – Project Engineer
Grant Strachan (AUE) – Engineering Support

Safety: No lost time injuries in 34,500 employee-hours

around 1,000 psig. The new pipeline was designed to operate at 1530 psig, which meant that the pipe wall had to be considerably thicker. In fact, at 22.2 millimeters thick, this was the thickest pipe we have ever worked with.”

The high pressure of the line also complicated the design of the termination of the pipeline at Union Gas’ 156 station. Since the new pipeline will push significantly more gas to the station, the station’s filters and measurement systems had to be replaced with larger equipment, which would have been difficult to install. The solution, Strachan says, was to use a different type of technology, replacing six orifice plate meters with four ultrasonic meters “but even with that space-saving solution we had to spend a lot of time making sure that once we started construction all the piping would fit.”

Aecon Utilities started site preparation in January 2008 for its portion of the project with one of its subcontractors clearing about 12-acres of bush along the right-of-way.

“Dawn Township is an ideal location for a pipeline,” notes Mark Scherer, Aecon Utilities vice president southwest. “The land here is almost per-

fectly flat and the ground has a thick layer of clay, which makes for relatively easy trenching. It is also almost entirely farmland so there are very few obstructions along the rights-of-way. In fact on this project we only had to contend with one creek and two small concession roads.”

By June, with the pipe in storage in a yard in Dawn Township, Aecon Utilities started construction in earnest. The Aecon crew finished preparing the 20-metre wide right-of-way, installed a temporary 16-metre long bridge over Booth Creek, and then strung the 40-foot lengths of large-diameter pipe along the line (each length of 36-inch pipe weighs about 4 tonnes, equivalent to a Toyota Camry, while each of the thick-walled 42-inch diameter pipe joints weighs in at a hefty 12 tonnes).

“This was a relatively straightforward project, not dissimilar from dozens of other projects we have done in the past with one exception and that is the size of the pipe - 36-inch diameter pipe for three and a half kilometres and then 42-inch diameter pipe for another 500 metres,” says Jeff Rasberry. “We have installed large diameter pipe before but not in this quantity.”

continued



DELIVERING FOR THE DAWN DELIVERABILITY PROJECT

continued from previous page



Averaging about 25 welds a day, it took the crew of 40 welders less than two weeks to weld the individual lengths of pipe together into a single line. Technicians using X-rays inspected every weld to ensure that there were no flaws.

Once the pipeline had been assembled, the excavator moved in to dig the trench, which ranged in depth from 2.5 metres to as much as 8 metres.

The final 500 metres were the most critical, Rasberry says. “The 42-inch line is being installed to feed a future compressor plant so the installation had to meet station specs which meant that it had to be perfectly level – no more than a centimetre deviation for the entire 500 metres.”

Trenching started on July 7 and within exactly one month the entire pipeline had been installed. All that remains to be done is to complete the back-filling and the restoration work along the right-of-way.

“This was new territory for us but we proved to ourselves and to Union Gas that we can do a large-diameter pipeline project as easily as we do the smaller lines,” concludes Scherer. “We beat the schedule and we came in on budget. Now we are ready for the next step – larger and bigger projects.”

The completion of the pipeline project marks an important step in the evolution of the partnership between Aecon Infrastructure and Union Gas, says Paul Pastirik, the group’s executive vice president of finance.

“Now in its ninth year, our strategic alliance with Union Gas is a perfect example of how this sort of alliance should work – two companies combining their resources and expertise to work for a common objective. If a new line needs to be installed or a new customer needs to be hooked into the system, chances are Aecon Utilities will be doing the work,” Paul says.

“Given its size and complexity, keeping Union Gas’ network in good operational condition is an enormous undertaking. As the largest pipeline installation we have done to date, this project showcased Aecon Utilities pipeline construction capabilities and, with the involvement of AUE and Aecon Industrial, the range of resources that Aecon has to support Union Gas.” **A**



Aecon
Construction and Materials

Head For the Hills Highway 10 Widening Project

"This is an unusual project for the Ministry of Transportation - a highway project that also includes sidewalks, curbs, traffic lights and street lighting," says Mike McMahon, Aecon Material's general manager of construction.

It is also a project, he says, that showcases the breadth of Aecon's services and its ability to handle every aspect of the project.

Nestled in the rolling country hills of the area less than an hour's drive northwest of Toronto, Caledon Village is at the heart of one of the most attractive and sought after residential communities in the Greater Toronto Area. But the village has, in one sense, become a victim of its own success. With the influx of commuters into the area, traffic has increased substantially. There are now more than 20,000 drivers a day using the section of

Highway 10 that runs through the village, which also happens to be the last section of the highway between Toronto and Orangeville that is still a two-lane road.

After years of planning and preparation, in June 2008 the province awarded Aecon Construction and Materials an \$8 million contract to widen the highway that runs through the village.

continued

HEAD FOR THE HILLS



continued from previous page

"This is an unusual project for the Ministry of Transportation," says Mike McMahon, Aecon Material's general manager of construction. "With downloading, municipalities are responsible for almost all urban roads but the road through the

village is still a provincial highway. So while this is a highway project, we are not only widening the road, we are also installing sidewalks, curbs, traffic lights and street lighting as well. At the same time, we are very aware of the sensitivity of this project. This is an old established village and we are working along side century old heritage buildings."

It is also a project that showcases the breadth of Aecon's services, McMahon says, using the skills and services of several of Aecon Infrastructure divisions to handle the entire project. Aecon Materials, the general contractor, is doing the bulk of the construction work. Aecon Materials Engineering is providing mix designs and quality control. Miwel will be building the concrete curbs and sidewalks and AGI will be installing the traffic lights and streetlights.

"We are also using all our own materials," Mike adds. "The hot mix will be produced just down the road at our plant in Brampton and our Pinchin Pit, just 6 kilometres west of the job site, is supplying all the granular material."

"Recycling is an important facet of this project and the materials we are using. The old concrete from the demolition of the culvert and the sidewalks goes back to Brampton to be reused as aggregate while the asphalt pavement from the old road will be used at the Brampton asphalt plant in new hot mix."

Project File

Highway 10 Widening

Location: Caledon Village

Owner: Ministry of Transportation of Ontario

Scope:

road widening from 2 to four lanes

- grading, paving, drainage, light installation, curbs and sidewalks
- bridge construction over Caledon Creek

Timing: July 2008 to August 2009

Bridge Dimensions:

rigid frame concrete structure 30 metres long by 20 metres wide

Road Length: 2 kilometres

Contract value: \$8 million

Aecon Divisions

Aecon Materials – general contractor, sewers, structures, grading and paving

AGI – electrical installation

Miwel – curb and sidewalks

AME – mix design and QC

Pinchin Pit – supply of granular material

Brampton Hot Mix Plant – asphalt supply

Quantities

Granular – 55,000 tonnes

Hot mix – 18,000 tonnes

Excavation – 26,000 cubic metres

Employees: 15 to 20 with 30 at peak

Key Employees:

Mike McMahon - General Manager, Construction

Barry Stein - Construction Manager

Frank Mailloux - Senior Superintendent

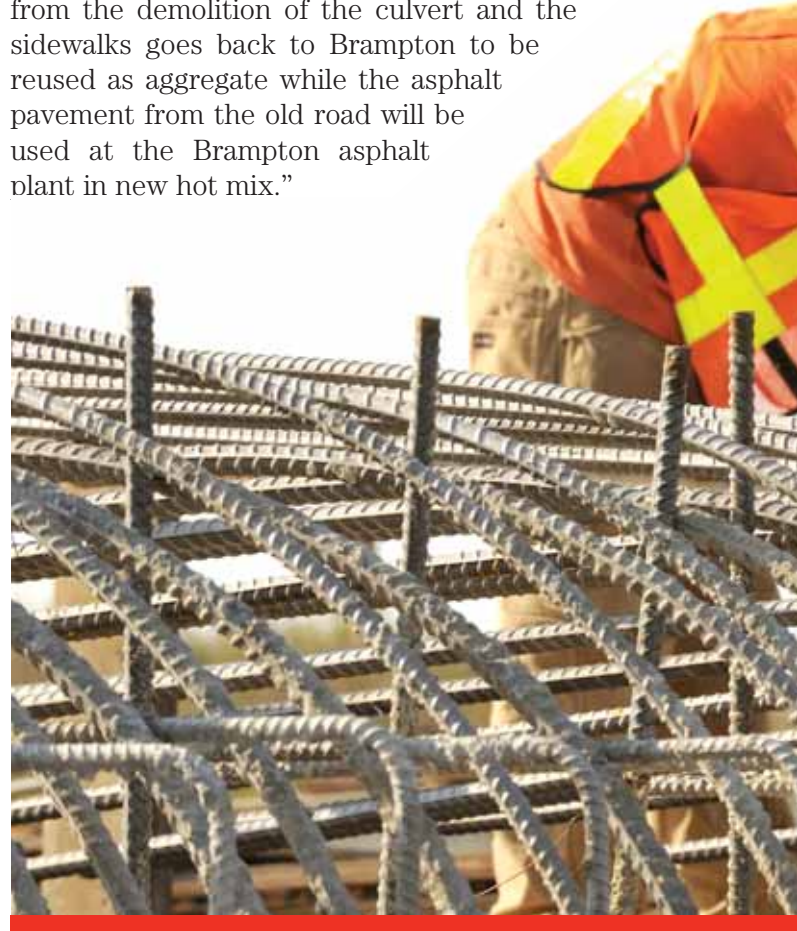
Guiliano Covassin - Senior Structure Superintendent

Matt Mayer - Manager, Engineering and Quality Control

Kevin Ghorbani – Grading Superintendent

Jamie DeSilva – Structure Foreman

Lubo Stepus – Project Coordinator



Construction Underway

Work started on the project in July with the construction of a 30-metre long concrete bridge that will take the road over Caledon Creek.

“To protect the fish habitat, we had to do the major construction work between July 1 and September 15,” explains Barry Stein, the construction manager on the project.

“The first thing we did was divert the stream with a temporary metal pipeline through the existing culvert. We then demolished the culvert and are now in the process of building the bridge, which will be done in two stages so that we can maintain two lanes of traffic open at all times.”

The first half of the bridge will be completed in December while the second half will be finished by July 2009. Tree planting and landscaping along the creek after construction is finished will help preserve the natural environment.

Like the work on the bridge, road construction is also taking place in two stages in order to keep traffic flowing at all times and, Stein adds, all the work at intersections will be done at night when traffic is at a minimum.

The two lanes on the east side of the road will be finished this year. The two west lanes will be completed in 2009.

Meanwhile, Miwel Construction is installing the concrete curbs and sidewalks using a coloured concrete on the roadway boulevards for a more aesthetically pleasing and pedestrian-friendly streetscape through the village. While the street lighting has to meet strict provincial highway standards, the light poles, being installed by AGI, will be painted black as part of the beautification improvements along the street.

Aecon expects the project to be completed by August 2009. **A**





MIWEL
Construction

Good Barriers Make Safe Roads

Miwel's Slipforming Business

When Miwel, founded by Weldon McEachen, bought its first slipform paver in the early 1970s, it was the first company to use this concrete forming process in Canada. Today as the acknowledged leader in slipforming construction for road construction in the province, Miwel uses enough concrete in its slip forming work in a year to build a 600-kilometre long sidewalk from Toronto to Montreal.

Project File

Slipforming

Slipforming – a technique in which concrete is poured into a moving form to form a smooth continuous structure

Division: Miwel Construction

Applications:

- Barrier walls
- Curbs and gutters
- Sidewalks
- Speciality concrete paving

Equipment: 4 Gomaco “Commander III” pavers

Cost of a Slipforming Machine:
about \$300,000

Key Clients:

- Ministry of Transportation of Ontario
- Ontario municipalities
- Private developers

Geographic Market:

Ontario with additional projects in New Brunswick, Quebec, Alberta and British Columbia

Notable Projects:

Highway 407
Highway 401
Highway 416 / 417
Don Valley Parkway (Toronto)
Red Hill Expressway (Hamilton)
Ottawa Transitway
Pearson International Airport
Highway 2 (Moncton, NB)

Key Personnel:

Wayne Bruce – General Manager
Luigi Quafisi – Senior Superintendent
John Ford – Superintendent
Barry Sullivan – Superintendent
Jerry Fallavollita – Concrete Manager
Nuno Da Rocha Vieira – Foreman
Filipe Ferreira – Foreman
Jeyawan (Bobby) Persad – Foreman
Pedro Brandao – Foreman

In 1995, the University of Western Ontario Accident Research Team published a report on fatal crashes on median-divided highways in southwestern Ontario. Of the 62 fatalities, 26 were a result of collisions after a vehicle had crossed the median.

For years, all that separated the dual lanes of Ontario’s expressways was a narrow median of grass but by the 1990s in an effort to improve safety the Ministry of Transportation expanded the use of solid concrete barriers. The barriers are now known around the world as Ontario Tall Walls and many of them have been built by Miwel Construction.

“Miwel Construction is a full-service contractor but slipforming has become a major part of our portfolio and accounts for about 35 to 40 percent of our annual volume,” notes Wayne Bruce, Miwel’s general manager.

“We use slipforming to build curbs and gutters, to pour sidewalks, for concrete paving and, of course, to build the median walls along our expressways.”

“It is an extremely efficient process that is not only quicker than conventional construction using fixed forms but also produces a better structure because you use a single pour to produce a continuous monolithic structure.”

Miwel’s slipforming crews not only work on the division’s own infrastructure projects but also along side other Aecon Infrastructure divisions and as sub-contractors to other construction companies across the province.

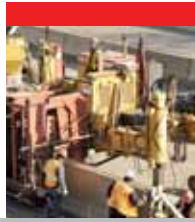
How to Build a Median Wall

Slipforming, which replaces fixed forms with a moving form, was originally developed for highway and road construction during the boom in expressway construction in the U.S. in the 1950s.

“When you build a wall using conventional techniques, you first build the forms, then you fill them with concrete, wait for the concrete to harden and then take the forms down,” explains Miwel’s general superintendent, Luigi Quafisi, who has been with the company for 40 years and is the acknowledged hands-on slipforming expert.

“With slipforming the form, or mould as it is called, isn’t fixed to the ground. It is fixed to the machine and you pour the concrete into the mould as the machine moves along.”

GOOD BARRIERS



continued from previous page

It is a technique that relies on some extremely sophisticated equipment. Barry Sullivan, one of Miwel's superintendents is currently using one of Miwel's four \$300,000 Gomaco "Commander III" pavers to build a four-kilometre barrier wall on the Highway 416 / 417 project in Ottawa. Another of Miwel's slipforming supervisors, John Ford, is using a second machine to form the median wall on the Red Hill Expressway in Hamilton.

"This barrier wall, like most barrier walls, is about a metre and a half high, with a two-foot wide base tapering up to ten-inches wide at the top," says Ford. "And like all concrete structures, it needs a solid base so we start by excavating a footing and then filling it with compacted aggregate to about four-inches below ground level."

But it is once the slipforming starts that things really move into high gear. It is a much faster technique than conventional concrete forming, he notes. "You can't stop once you start because you are building a continuous wall without any joints, which means that you need a continuous stream of ready mix trucks to deliver the concrete to the slip forming machine."

As the slipforming machine travels along at about walking speed, ready mix trucks roll up two at a time alongside and pour the concrete into the machine's hopper (Miwel was one of the first companies in North America to offload multiple trucks in unison). The slip forming machine's augers remix the concrete (a special low slump concrete mix that sets up quickly) and move the precise quantity of concrete needed to match the speed of the machine from the hopper to the mould. Vibrators in the mould ensure that the concrete in the wall is well compacted and consistent.

It takes a crew of up to ten people to build a wall: an operator on the machine, two labourers to feed the concrete and the rest to do the clean-up and finishing work.



“The machines are really good because they make everything automated and accurate but because everything is happening continuously you still have to have a good feel for the concrete and the conditions to do a good job. You really have to depend on the skill of your crew and Miwel has been fortunate to have some of the best crews around over the years,” adds Luigi Quafisi.

After each section of the wall has been formed and the slipforming machine has moved on, the crew gives the raw concrete a hand finish, applies a curing compound, and cuts vertical control joints (about an inch deep) every four metres.

Within seven days, the concrete is cured and the wall is complete.

More Than Just Walls: While median walls are the largest type of the slipforming work that Miwel does, the technique can also be used to build curbs and gutters, footings, parapet walls, and sidewalks, many of which call for unique designs and innovative construction techniques.

“The technique is the same. It just depends on the size of the machine and the shape of the

mould,” says Jerry Fallavollita, Miwel’s concrete manager. “Every city and town seems to have a slightly different variation for its curbs and gutters, for example, and we need a mould for each one.”

Miwel now has more than 50 moulds in stock, each one custom made and each one costing up to \$100,000 to fabricate.

By extending the width of the machine to do a single pour from three to six metres wide, slipforming can also be used for concrete paving. Miwel has used slipforming for a variety of projects including paving the taxiways at the airport at North Bay and Toronto’s Pearson international Airport and to build military helicopter pads in Quebec.

Miwel is currently slipforming the median walls along the Red Hill Parkway in Hamilton as well as working on the QEW project near Oakville and on the Highway 416 / 417 project in Ottawa with Karson Konstruktion.

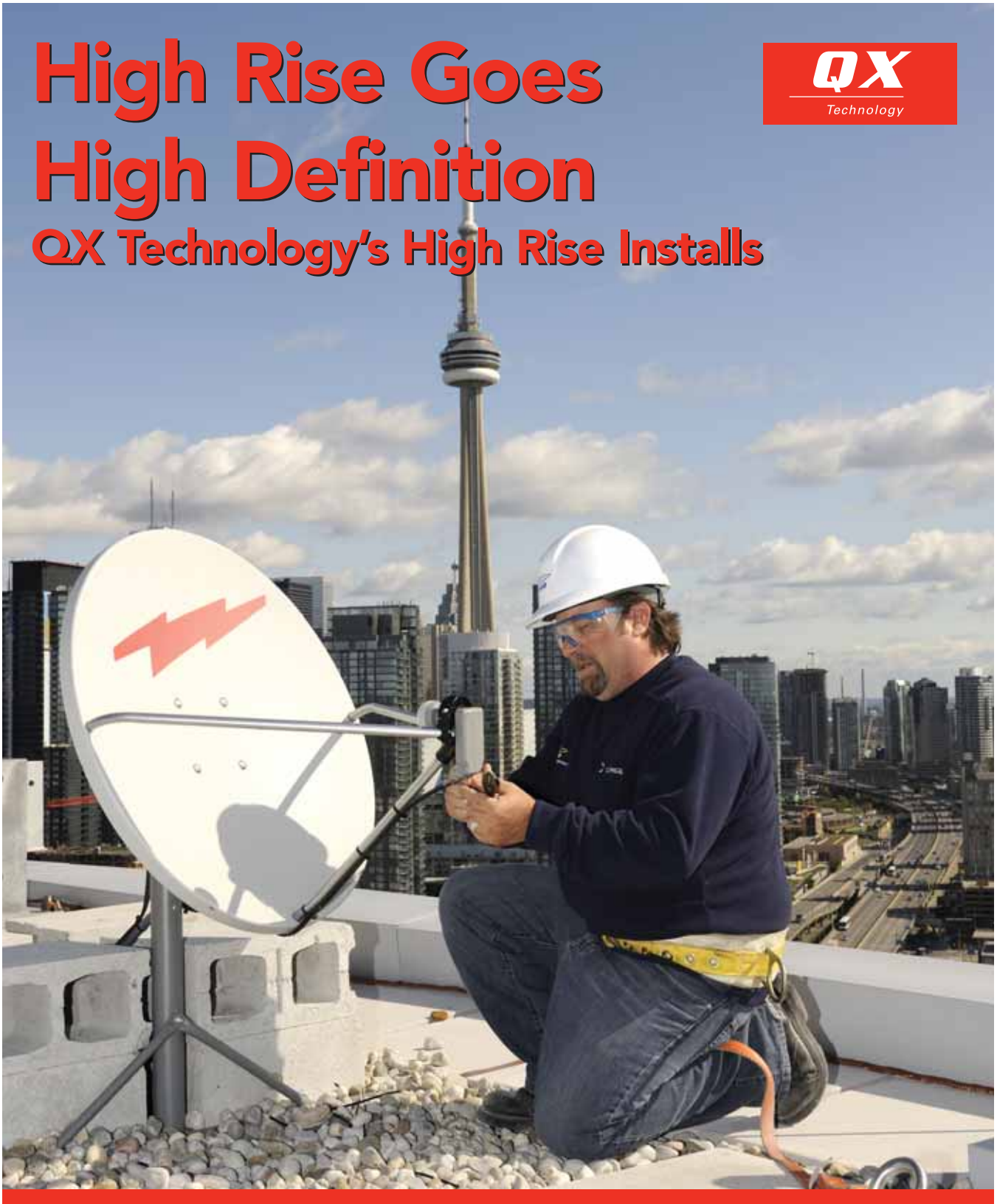
In the spring, one of the slipforming machines and crew will be travelling to Edmonton to work with Aecon Infrastructure’s new western operation on a project on Highway 21. **A**



High Rise Goes High Definition

QX Technology's High Rise Installs

QX
Technology



People living in the Marina Del Ray condominiums had just about everything they could want – spacious modern apartments in an award winning building, a beautiful view of the lake, tennis courts, a fitness club, an indoor pool and 11-acres of green space. But the one thing they didn't have was access to satellite TV. That was a job for QX Technology.



If you live in a house, getting satellite TV is a relatively simple process. A technician mounts a dish on one of your outside walls, gives you a receiver for your TV and you are set to go. It is not quite so easy for the one in three Canadians living in

an apartment or a condominium. For most people living in a high rise, their only choice is cable TV provided by their landlord or condominium.

In 2003, Bell ExpressVu applied to the Canadian Radio-television and Telecommunications Commission to allow it more access to the high rise market and says Mike Henderson, the market is now starting to expand rapidly.

“Providing satellite TV access for high rise buildings is becoming a much larger part of our business,” says Mike, the general manager of QX Technology, which also does much of Bell ExpressVu’s residential home installation work.

“Condominiums don’t want to see a lot of individual satellite dishes cluttering up their balconies or struck haphazardly all over the side of the building. They want what we call ‘a single dish solution’ so when Bell ExpressVu signs a contract to provide satellite TV service to a multiple dwelling unit, we get the call to do the design and installation.”

A single dish solution is a bit of a misnomer. QX Technology actually installs two satellite dishes, which in a marvel of miniaturization provide TV

continued

Market File

High Rise Installs

The design and installation of satellite dish TV reception in high rise apartments and condominiums.

Division: QX Technology

Client: Bell ExpressVu (now Bell TV)

Markets:

Greater Toronto Area, Ottawa, Calgary, London, Regina, Winnipeg

% of residents in Toronto living in Multiple Dwelling Units: 40

QX revenue from MDU installations: \$4 million a year

Installation capacity: Up to 8,000 suites a month

of employees: 30

Key Personnel:

Mike Henderson – General Manager

Mohan Samlal – MDU Supervisor

Tim Trinca – Central Operations Manager

HIGH RISE GOES HIGH DEFINITION



continued from previous page

signals to an entire high rise even though each one is less than two-feet in diameter. One satellite is the receiver for the Nimiq 91 satellite, which provides the standard definition feed, and the other for the Nimiq 82, which provides high definition broadcasts and international programming.

After the technicians have installed the dishes on the roof, they connect them to a stacker, usually in a mechanical room of an electrical closet on the top floor, and then run a single cable from the stacker to the cable TV closets on each floor. For the most part, Henderson says, the technicians have the luxury of working inside but some high rises have wiring on the outside of the building (hidden under moulding) which means that the crew has to do the installation from swing stages. Once the main cable has been installed, individual apartments can tap into the TV signals through the local cable feed that is already installed. It typically takes between two and three days to do the installation for a 150-suite building, longer if the installation has to be done with swing stages.

QX Technology completed the installation of satellite TV at the Marina Del Ray condominiums in Toronto in 2007, a project that involved supplying TV signals to three buildings and 1,200 units from two dishes and one that Mike Henderson said pushed QX to the extremes of its technology. The division has also done high rise installs at the nearby Palace Pier condominiums, at a new condominium opposite Sherway Gardens mall and in the two Bellaria Residents towers in Vaughan. It is currently working at a new 400-suite condominium on Fleet Street in Toronto. By the end of September, QX Technology had completed high rise installs in about 200 buildings so far this year.

"This is an untapped market for Bell and with the rapid growth of condominiums, especially in downtown Toronto, a market we expect to see grow for the next few years," concludes Mike. **A**







Meet Eddie Yantha

Having worked for Aecon for 40 years, Eddie Yantha is one of the company's longest serving employees.

Edward has been the plant foreman at one of Aecon's portable asphalt plants for the past 14 years. We talked to him at his home in Wilno Ontario as he was just finishing one project and getting ready to start another.

Employee File

Eddie Yantha

Current Position: asphalt portable plant foreman

Location: Ontario (depending on project)

Experience:

Edward joined Armstrong Brothers in 1968 and has remained with Aecon throughout his career

1968 - 1977 labourer

1977 - 1984 paver operator

1984 - 1988 asphalt plant labourer

1988 - 1994 asphalt plant operator

1994 - present asphalt plant foreman

Born: Wilno, Ontario

Home: Wilno, Ontario

Family: married to Frances, 3 children, 2 grandchildren

Hobbies and Interests: hunting and fishing

How old were you when you first joined Aecon?

I was 18. I was living in Wilno Ontario, which is a small town about 150 kilometres west of Ottawa (I still live there). A couple of guys from home were working for Armstrong Brothers and they told me that a job was available so I applied.

What was your first job?

I was a labourer on a road construction project near Caledon and I have worked on road construction ever since.

It was a lot of fun and we had a good crew. I enjoyed working outside. I wouldn't want to do an inside job.

The only problem was that you were laid off in the winter when the construction season finished so I spent the time fishing and playing broomball and shovelling snow. I shovelled a lot of snow.

How did you get the job as a paver operator?

Back in those days you were taught to do everything – run a roller, run a paver. We had two pavers and they just told me one day that I was going to be an operator. But it didn't matter if you were a labourer or an operator it still involved a lot of hard work. If there was shovelling to do you picked up a shovel and got at it.

Did you do a lot of travelling to the various projects?

I've worked all across Ontario. You had to go where the work was.

I spent six years from 1974 to 1982 working up in Thunder Bay, which was tough because I had only been married a couple of years when that started. We lived in trailers in a camp but we worked from day-break until it was dark so you couldn't get up to too much trouble.

The company looked after us well. They gave us all our meals and flew us home every long weekend but it was tough on Frances. She raised the kids by herself for a long time.

What was your next job?

In 1984 I went back to being a labourer but this time it was at the portable asphalt plant, the same one we have today.

I still did a lot of travelling though and I spent a lot of time in the north.

How did you become the plant operator?

You trained on the job. Francis Benninger, the plant foreman at the time, taught me a lot. Since there were only five of us on the job and we were usually in a remote location, you had to know how to do everything. There were very specific rules about what went into the hot mix and if the equipment broke down it was up to us to fix it.

When did you become the plant foreman?

In 1992 and I have been doing it ever since.

I have probably annoyed as many people as I have made friends but Dave MacKay and Dave Bucher keep me in line and I have a lot of fun at work.

*You have been the plant foreman now for 16 years.**What makes a good plant foreman?*

You have to get along with people and you have to treat your crew as they are supposed to be treated, with respect. I am easy to get along with as long as everyone does their work.

It also helps to have a good crew. Everyone on the crew has been with Aecon for over 30 years. We must have more than 140 years experience between the four of us so we know what has to be done and how to do it.

What has changed over the last 16 years?

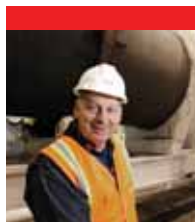
There's more emphasis on safety. You always have to be careful. I have never been in an accident or injured in all the time I have been here so I have been lucky.

The other thing that has changed is the emphasis on environmental responsibility. We don't often get complaints because we set up well away from houses

continued



MEET EDDIE YANTHA



continued from previous page

but you still have to make sure everything is running smoothly and watch out for spills. But as I said I have a good crew and they keep a good lookout for any problems. And when we finish a job and have to move the plant to the next project we restore the site as

best we can and if we need we can always bring other crews in to do the restoration work as well.

What project are you working on now?

I was in North Bay on the Highway 11 project until July. Then I went to Manitoba for a week to help move another portable plant from Fort Francis to Calgary.

Right now we are in the process of moving the plant to Highway 41 near Cloyne.

Even though you have been working for Aecon for 40 years, you still have a few years to go before retirement. Any plans?

Maybe in the next year or two. It all depends on my health whether I retire or keep working. **A**

Aecon's Fourth Annual Safety Day Introduces a New Tool Box Talk



By Mike Archambault
*Vice President of
Safety and Insurance*

For Aecon employees every day is a safety day but for one day a year, the term safety day takes on added significance. On October 9th, Aecon held its fourth Annual Safety Day, a day in which every Aecon employee, from the front line to the CEO, come together to hear about our latest safety

campaign and reaffirm their personal commitment to safety.

When I talk to people outside our company and tell them that safety is THE most important aspect of what we do here at Aecon, the reaction is often one of surprise and even disbelief. They all agree that safety is important (who could argue against it?) but what about profitability, share prices, satisfied clients, on-time delivery, and all the other demands that a successful company needs to do? Sure safety is important, they say, but let's keep things in perspective.

Well they are wrong. It is their perspective that is skewed, not ours. Of course all those things

THE SAFETY FIRST
MAINTAINING OUR GOLD STANDARD



We've raised the bar for safety in our industry with a zero-injury culture, ingrained into every level of our organization—from the front line to the CEO.

AECON

that they mention and many more are critical to Aecon's success, but project awards and financial prosperity mean nothing if we do not ensure that our workers carry out their daily work safely and securely.

Safety is the first of our core values. We are committed to seeing that at the end of the day every single employee can go home to enjoy their families and loved ones satisfied in the knowledge that their work has been a job well done.

Our annual Safety Day reinforces our commitment to safety, both as an organization and for each of us personally - a zero-injury culture, ingrained into every level of our organization—from the front line to the CEO.

Aecon would like to thank its clients and business partners who supported Safety Day and contributed to its success. Safety is Aecon's most important priority but that does not mean that it applies only to Aecon employees. As a basic principle that applies to everything we do, we rely on the support and active participation of our clients, sub-contractors and partners to make safety the number one priority for everyone.

Tool Box Talks – Material Handling Safety

Our Annual Safety Day also introduces a new “Tool Box Talk” – this year on the theme of material handling safety.

People talk about the “virtual organization” but there is nothing virtual about the work that we do at Aecon. Almost everything we do, whether it is on a construction site or in a shop, involves moving and reshaping materials – transforming earth, concrete, wood, and metal from raw materials to finished products, buildings, and structures.

It is what we do and we do it well but because it is a part of our every day activities, it is easy to become complacent and forget basic safety rules. Every time we move, lift or transport materials, there is the chance that someone could get hurt.

So here are just some of the basic rules for handling materials and equipment safely:

Protect Yourself

- Wear appropriate hand protection (there are gloves for every purpose: cut resistant gloves, welding and rigging gloves, anti vibration gloves and special designed electrical gloves to protect against shock)
- Wear a hard hat.
- Wear safety boots to prevent injury to your feet from a dropped item.
- Wear eye protection.

- Wear safety vests so that you are visible in high traffic areas.
- Wear appropriate clothing to protect your body.

Don't Forget To Keep Fit

- Spend a few minutes each day before work to stretch and warm-up your body for your day's activity.
- Exercise regularly, eat right and drink plenty of fluids.

Lift Small Loads Comfortably

- Make sure you can carry a load comfortably. If not get help.
- Make sure your footing is solid.
- Lift properly: keep your back straight, center your body over your feet, and lift with your legs, not your back.
- Don't try to carry a big load alone. Work as a team. Lift, walk, and lower the load together.
- Move your feet to turn. Don't twist your back.

Handle Heavy Material and Equipment Properly

- Conduct a Job Hazard Analysis with your team to make sure the job is well understood, all hazards have been identified and all control measures have been implemented.
- When working with cranes and similar equipment use tag lines to control the load.
- Never place yourself underneath a load or in its path.
- Keep your hands, fingers, arms and legs away from any pinch point and away from where the load is going to land.
- Use proper rigging techniques.
- Make sure attachment points are designed and rated for the material or equipment being handled.

Use Tools and Special Equipment Safely

- Use the appropriate tool for the appropriate task
- Don't use a tool if you haven't been trained in how to use it or if you don't understand how to use it properly.

BUILDING THINGS THAT MATTER



SEAMLESS CONSTRUCTION

Aecon Infrastructure offers the Canadian Construction Industry diversity, innovation and an unparalleled safety record, nearly 100 years long. Dams, tunnels, roads, bridges, airports, and marine projects. Energy generation facilities, rail and rapid transit. Utility infrastructure including gas, hydro, telecom and district energy systems. All fully supported with a complete line of material resources.

Our infrastructure divisions work together to offer a seamless solution from engineering to completion. Combined, we bring expertise and a passion for innovation. Aecon Infrastructure is delivering the results demanded in today's world.



www.aecon.com

Aecon
Infrastructure