



Project Update



June 21 was Aboriginal Day in the NWT, and Fort Providence celebrated it with a community fish barbecue and games for the youth. Here, Elsie Lacorne serves up some tasty pickerel fresh off the wood fire.



Fort Providence Elders Visit the Project

Community elders were given an extensive tour of the Deh Cho Bridge site on June 20.

“They were keen about the project and asked many good questions concerning the design and construction phases,” said Dennis Hicks of Associated Engineering, who with Michael Owen hosted the afternoon. “They were all enthusiastic about the opportunity to visit again. And there were some great stories of working on the river from years ago.” Seen here near the North shore ferry landing (from left): Daniel Squirrel, Dennis Hicks, Irene Lafferty, Therese Elleze, Philip Elleze, Emily Squirrel, Sam Elleze, Margaret Rose, Phillip Bonnetrouge and Michael Owen (Associated Engineering).

www.dehchobridge.info

Big Bridge, Big Challenges

Review Makes For A Better Project



There is a poster in Kevin McLeod's office that summarizes his perspective on transportation infrastructure projects such as the Deh Cho Bridge. It says 'Without Bridges, We're All Islands'.

McLeod is the Project Director on the Deh Cho Bridge project – the largest capital project ever undertaken by the Government of Northwest Territories (GNWT). He looks forward to the completion of the Deh Cho Bridge, which will take over from the 52-year old ferry and ice bridge link that keeps the North Slave Region connected to the rest of Canada.

"It opens up a huge amount of opportunities," said McLeod. "We're going to have a 24 hour, seven day a week link spanning a kilometre of one of the biggest rivers in the world. What a magnificent opportunity."

In the years since the passage of the Deh Cho Bridge Act in 2003 and the start of construction in 2008, the Bridge has been challenged on a number of fronts.

The cost has almost tripled from its original \$65 million estimate, the completion date has been pushed back to the fall of 2012, and it has come under intense scrutiny at government and community levels.

The project was first set up as a P3 (Public-Private Partnership) where a community corporation based in Fort Providence would finance, build, and operate the bridge and, after a 35-year concession, turn it over to government. The government would pass on to the corporation a toll on commercial traffic, and a direct contribution equal to the cost of running the ferry and ice bridge. In return, the corporation would have earnings which would go back into community improvements.

When the Corporation suffered a series of setbacks, the GNWT took over the project in April, 2010, and McLeod was put in charge.

One of his first assignments was to work with Canada's Auditor General, Sheila Fraser, on a performance audit of the project. She was acting on a request from the Legislative Assembly to look at what caused the problems, and what should be done to reduce any further risk to the cost and completion of the bridge.

"We accepted the audit even as the project was still in full construction mode. We dealt with nine or ten auditors with huge appetites for detail. It was a very busy time, but in the end, the Auditor General and her team had access to the information they needed to do their job," says McLeod.

Construction Milestones

September to December 2011 (subject to change).

September

- North pylon installed
- North concrete abutment and roadworks complete

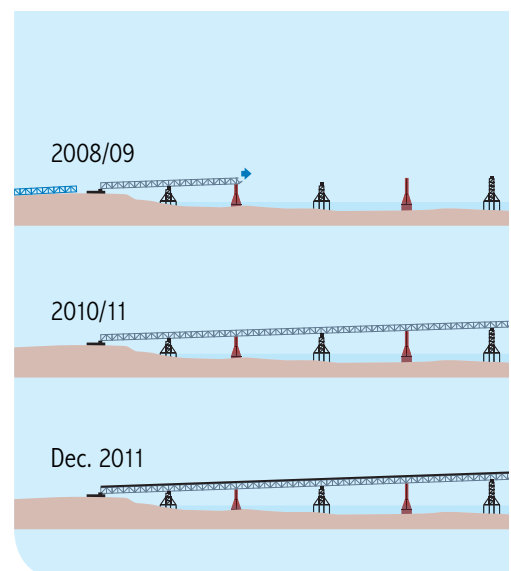
October

- North cables installed

November

- North and South trusses connected
- North concrete deck panels installed

(Look for the December 2011 newsletter for 2012 milestones)



The Auditor General reported back to the Assembly in March 2011 with three recommendations. Ms. Fraser determined that many aspects had not been fully worked out before committing to the project, and that instead of responsibility being shouldered by the corporation and its contractors, it had become “a publicly funded project with additional costs and significant risks to the GNWT.”

The Auditor General also said the project requires one overall engineering authority to ultimately sign off on the project and guarantee it is built to Canadian Bridge Code standards. She recommended that the project’s risk matrix – a continuous review of more than 30 key risk factors such as cost, scope, and scheduling, be maintained and closely monitored to reduce potential risks. Finally, for future major projects, she recommended that the GNWT establish a senior project oversight committee early in the planning phase to ensure good project management. The GNWT accepted all of the Auditor General’s recommendations.

The Legislative Assembly’s Standing Committee on Government Operations followed through in May of this year with a number of recommendations,

including providing additional information to the Legislative Assembly. The Department of Transportation has responded to each of the Committee’s recommendations.

For Kevin McLeod, a retired Canadian Armed Forces colonel who at one time commanded the whole of Canada’s Northern Region, the scrutiny is welcome. He and his team will continue to work through the task of completing the project safely and to the highest level of quality to meet Canada’s rigorous national Bridge Code standards.

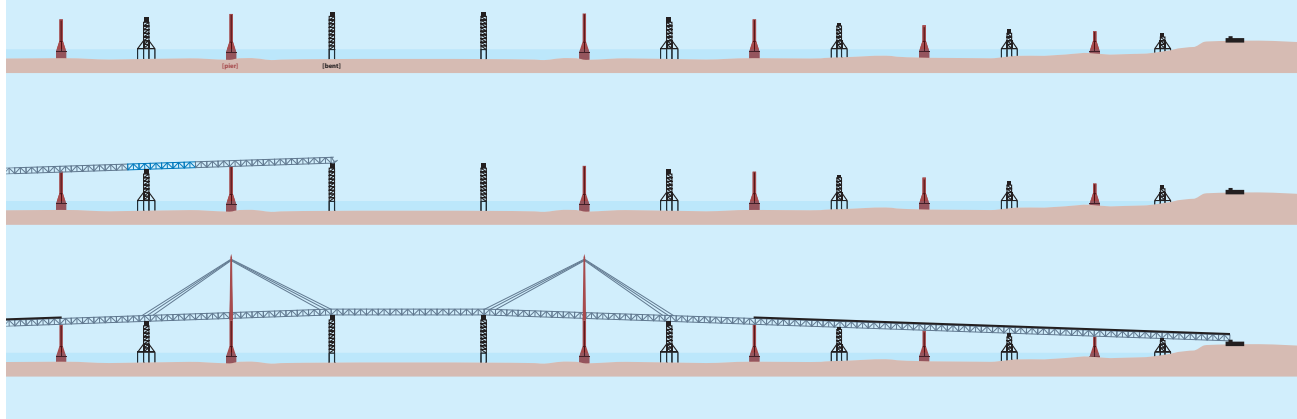
“The benefits are in the lessons learned,” he says. “Anytime a team can be assessed by a third party, I think it is very useful. This is a five-year, \$180 million project. My focus is to ensure that it’s built well, built safely, and will stand for the next 75 years.”

(See a link to the Auditor General’s Report at www.dehchobridge.info. The Standing Committee report can be found at www.assembly.gov.nt.ca under the “Committees” tab.)



Geoff Tomczyk is among the almost 40 workers on the Deh Cho Bridge during the summer.

Project Progress



Bridge Opening Targeted for Fall 2012

Delays in the manufacturing and delivery of critical components have pushed the expected opening of the Deh Cho Bridge into the fall of 2012. The delay, while disappointing, reflects the challenges of building major capital infrastructure in the North.

The Deh Cho Bridge project was originally planned as a three-year build to be completed late in 2010. It suffered a one-year setback with design changes, and a further delay by the late delivery of critical components. Now, the priority of the Department of Transportation is to ensure that the Bridge is built safely, to a high standard of quality so that it meets its 75 year design life.

While the steel superstructure is expected to be nearing completion by late 2011, builders will have to wait for the spring of 2012 to conduct final construction. That's because concrete grouting between the precast cement deck pads and the laying of more than a kilometre of asphalt on the approaches can't be done in the cold.

It's the kind of delay that hampers just about every project, regardless of its size, in the North.

"If you look at the overall construction season here, there's only about 105 days which are ideal for bridge construction. What you would normally do in the south in one year, takes us two to two and half in the north," says McLeod. "We do everything we can to gain construction certainty. It's a large complex project and there are many challenges and factors involved."

North side truss high above
the MacKenzie River, June 2010



Deh Cho Bridge... Nuts 'n' Bolts

Length (abutment to abutment):
1,045 meters

Road (Deck) width: 10.4 meters

Deck height from river: 30.55 meters

Pylon Tower height from river: 53.85 meters

Widest span between piers: 190 meters

Steel: 11,636 tonnes

Total structure: 49,923 tonnes
(Calgary Tower: 10,900 tonnes)

Metres of cable: 1,434 meters

Estimated Person Years to build: 150

Canadian manufacturing content: 98 %

Maximum traffic load: 2,000 tonnes
(equal to 48 Super B tankers)

Mackenzie River length: 1,738 kilometers
(2nd longest in North America,
11th in the world)

Mackenzie River flow rate: 10,700
cubic meters per second (4 Olympic
swimming pools)

**Temperatures at Ft Providence
(Max & Min daily mean):** +25 C to -44 C

Principal Contractor: Ruskin Construction Ltd.

Project Manager: Associated Engineering

Owner: Government of the NWT

Cost: \$182 million

Design Life: 75 years



Water Watchers

Brent Hed and Joe Lacorne are the environmental eyes watching for any sign of problems that might impact the Mackenzie River during bridge construction.

When any type of work involves the river bed (such as pile driving), they cruise the site in an 18-foot Lund, dropping measuring probes into the water every hour.

The computer on the boat gives them instant readings on the water's turbidity (amount of silt in the water).

Brent and Joe are both from Fort Providence, and are among some 75 community residents who have been trained over the past three years for work on the bridge project.



End of Mackenzie River Bottleneck Will be Welcomed by Carriers

When the Deh Cho Bridge opens to traffic next year, every bag of groceries and tank of gas is going to make the trip to Fort Providence, Behchoko and Yellowknife a little bit faster. That saving in time ranges from minutes to days, depending on water levels, weather, and ferry mechanical issues. It means trucking firms can save money on every kilogram they carry.

Trucks won't have to idle overnight or while waiting for the ferry to make its 30 minute round-trip crossing. This will reduce costs for both wages and fuel. Seasonal breakups for freeze-up and break-up will also be a thing of the past.

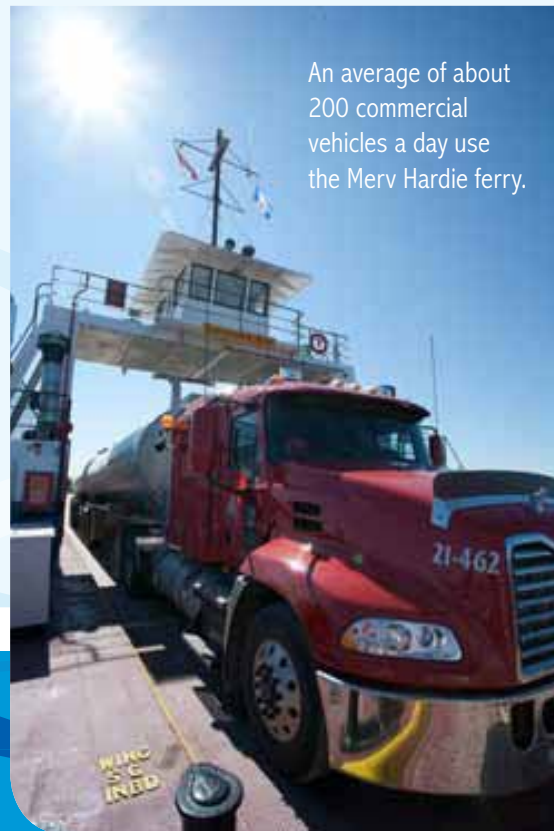
In addition, carriers can say goodbye to the need to inefficiently ship lighter loads at the start of the ice bridge season. They will be able to employ their drivers and fleets year round instead of idling them for the month-long spring breakup period.

Consumers should also see a trickle-down benefit as the very expensive spring break-up helicopter shuttle is retired. Grocery shelves won't be picked clean as clusters of trailers in store parking lots are emptied out.

Carriers will be subject to a toll, depending on the number of axles on the truck, but the toll was set at a level where operational savings should offset the cost impact.

As Ray Anderson, President of MATCO Transportation Systems, points out, the Bridge will eliminate the biggest bottleneck - the ferry, which can carry only four transport rigs at a time. Carriers will no longer have to time the dispatch of commercial vehicles to ensure arrival during the 18 hour operating day. "Uninterrupted service is the main bonus," Anderson says. "Any type of infrastructure progress promotes development and enhances the liveability of a community."

An average of about 200 commercial vehicles a day use the Merv Hardie ferry.



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