



From Beginning to End

Providing its clients with a consistent product and the ability to do so through all stages of a project's lifecycle, have allowed CCI to grow to become one of the top trenchless engineering firms in Canada.

CCI ranks 13th on *Trenchless Technology's* list of Top 50 trenchless engineering firms for 2015 and the company has consistently placed in the list's top 20 since 2009 — the first year CCI participated in the survey.

The ability to offer a consistent, quality product is something that was at the company's core when it formed as Complete Crossings Inc. in July 2004. After both leaving the same engineering firm for a variety of reasons, Dave Dupuis and Brent Goerz, P.Eng., realized they could offer a better engineered trenchless solution than others in Western Canada at that time.

"The vision, back then, was to be a company that could work through the life cycle

of a project," says Dupuis, CET, chief operating officer and principal. "Brent headed up the engineering component, all the planning, design, tenders and geotechnical and for me, it was more on the construction side of things and being able to concentrate on that aspect. We were adamantly focused on the life cycle of the project from the get go and that has evolved with us."

"I saw companies doing things poorly, not treating clients with respect and focusing on profit rather than creating a relationship with the client — one where you understand their challenges in terms of schedule and finance, and they understand your challenges with the technical aspect of the work including contractor relations," says Goerz, CCI president and principal. "For me, I saw things were not going right and I wanted to change them."

With Goerz handling things from his office in Edmonton and Dupuis from his Cochrane office, just outside of Calgary,

the duo started work for their first client, Devon Canada, in July 2004. At that time, most consulting firms either handled engineering or construction management. This gave CCI the edge with the total project life cycle approach. Dupuis and Goerz realized that with a typical trenchless crossing, issues would arise in the field and those issues, often technical in nature, would need both engineering and construction expertise to be completed successfully.

Consistency Is Key

It was Goerz and Dupuis working together for the first year and then with the addition of draftsmen and field workers, the company started to grow. From there, CCI has grown to employ 122 people, between three offices, on the trenchless side of the business. Clients have grown to include some of the largest players in the Canadian oil and gas industry — Kinder Morgan, Enbridge and TransCanada.



CCI Inc. Fills Niche in Trenchless Crossing Consulting

By Mike Kezdi

Goerz and Dupuis took a slow and steady approach to growing their company so the results that it achieved for its customers were the same across the board, as neither wanted to sacrifice CCI's quality for growth. Growth came and three years ago, the company re-branded itself from Complete Crossings Inc. to CCI Inc.— a move that better reflected the services the company now offers. These include the addition of geotechnical services, minor pipeline work, environmental engineering and even a rental arm.

CCI staff approach every project from a 360-degree view that encompasses engineering, project management, geotechnical, environmental work and construction management. The outcome is that decisions made a year before construction begins are followed through the construction phase making the project consistent throughout.

“Consistent, quality work throughout the last 11 years and being able to handle more and more scope,” Goerz says has helped the company grow. “We provide something that is consistent and repeatable on every project we do and after each project we retain additional work from that client as a result of this approach.”

That approach also dictates where the company works. Much of the work thus far is in Western Canada and focuses on the oil and gas industry, though CCI has ventured east, as well as south into the United States. Goerz and Dupuis acknowledge that continued growth into the United States is in the company's 10-year plan as is the addition of more municipal work.

“The busiest part of our company has been oil and gas related, although as we grow the municipal infrastructure component is something we will further pursue as long as we can provide the same standard of product on that side of

things,” Dupuis says. “We won't compromise quality as we grow.”

Continued growth into the United States is due in part to clients like TransCanada, Enbridge and Kinder Morgan, which appreciate consistency when working on projects on both sides of the border.

“I believe the main thing we do that a lot of other companies have not thought of yet, is taking the project from start-to-finish, looking at the project and dissecting all of its different parts,” Goerz says. “This would start with route selection, geotechnical and environment assessment, detailed engineering including trenchless and pipeline, and environmental and construction monitoring/management. This company direction follows the decisions and risks from start to finish ensuring the best outcome for the client.”

This dedication to looking at the whole project exists no matter if CCI has the entire contract or is charged with



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looking at only one aspect of the crossing. For example, if CCI handles the engineering on a crossing, CCI staff evaluates the geotechnical, environmental and construction services end, as well. If they learn drilling fluid will pose a challenge, they will let the client know. The result is a “high tide raises all ships” mentality of, if the project is a technical and financial success for the client, all involved benefit.

Given CCI’s range of offerings in construction, engineering, environmental and geotechnical, Dupuis says the company has its hands on almost every major pipeline project in western Canada.

Sometimes it is all four segments, others it might be one or two.

Accomplishments Abound

To date, CCI has completed more than 3,000 trenchless projects, including numerous crossings on TransCanada’s Base Keystone project, constructability reviews of the Base Keystone trenchless crossings in the United States and municipal work for the Regional Municipality of Wood Buffalo in Alberta. Milestone projects include the first pipeline installation in Canada using the Direct Pipe method for Inter Pipeline Ltd. (IPL) and more recently a 42-in., 2.19 km, HDD crossing for TransCanada’s Northern Courier Pipeline Project. Coincidentally, both projects also involved Michels Canada.

The IPL project, completed in 2013, was a 42-in., 342-m oil pipeline under the Beaver River about 20 km northeast of Bonnyville, Alberta. The crossing was part of IPL’s Cold Lake and Polaris expansion program and took about two years of planning. Initially the crossing was an HDD project, but geotechnical data was not conducive to HDD.

As the engineer on the project, CCI introduced the idea of Direct Pipe to IPL and worked with Michels Canada – which at that time already had experience with Direct Pipe in the United States – to make the project a success.

“We had an advantage on that project, in that another pipeline operator was crossing the same geotechnical formation and having significant problems, so we presented another option to IPL in-

stead of doing the same thing over and over again,” Goerz says. “IPL was also quite a progressive client and wanted to solve problems ahead of time. They did not see Direct Pipe as significantly new technology, as it was used often in Europe by that time, and was becoming popular in the U.S. IPL knew they had a significant geological challenges and we worked with them to overcome those – and they were happy with the result.”

Most people are familiar with the 7 Ps – Proper Planning and Preparation Prevents Piss Poor Performance – and nowhere does that military adage hold more true than in the trenchless industry, where digging into the “unknown” is commonplace. Planning, Goerz and Dupuis agree is the No. 1 key to a quality trenchless project. This is where CCI’s whole-project ‘360-degree’ approach once again shines.

“It starts with a good plan, choosing a successful route, completing environmental and geotechnical investigations and then moving it forward with all the different disciplines required to complete a trenchless project,” Goerz says. “We look at every project in that engineering is just a very small portion of the work. We look at it as all of the construction challenges should be our challenges. We provide clarity for the contractor to plan and prepare for these—allowing us to feel successful if the contractor understands the risks and plans for them—enabling all of the different disciplines to work together to complete the project.”



The ability to offer a consistent, quality product is something that was at the company’s core when it formed as Complete Crossings Inc. in July 2004.

CCI never enters a project predisposed to one trenchless method, instead its employees look for the approach which will provide for the best overall success at the lowest cost. This involves looking at what was successful in that area in the past or what worked well on a prior CCI project. Each project offers the company new information that it applies to future projects.

Education Grows Industry

That kind of knowledge comes from not only a wealth of hands-on experience but also a proper education about the trenchless industry. Though several decades old and continuing to grow, one of the hurdles to further advancement Dupuis says is a lack of education — not just in academia but also education by companies to potential clients.

“At times, within this industry, there are some black eyes that everybody remembers and they are afraid of it just because there was a lack of knowledge,” Dupuis says. “As you go down the path and are able to educate companies and clients and project managers as to how [trenchless] works, as more people get educated in that industry, they find that it is a very viable construction method.”

On the academic end, Dupuis sees a need for more universities, and industry as a whole, to offer in-depth exposure of trenchless design to its engineering students. While the North American Society for Trenchless Technology (NASTT) does well to educate those within the industry, Dupuis and Goerz see a need to take that knowledge, go out, and educate those companies that NASTT does not reach.

CCI works to educate its clients in two ways. One is via post-project wrap-up where CCI discusses the good things that happened during the project as well as the bad, and what was learned. The client can apply this information to future projects whether with CCI or another firm. The second thing Goerz noted was the creation of a CCI inspector training program (HIT), for all employees. This puts everyone, from Goerz and Dupuis on down to its subcontractors, on the same page in terms of the latest construction practices, industry standards, regulations and so on.

Another hurdle facing those in the industry is risk assessment as contractors and clients try to minimize the risks on their respective ends.

“In many cases there is a significant difference in expectation of the parties of who takes cost and schedule risks on problems that occur during the HDD,” Goerz says. “These issues require consideration especially when a lump sum is provided with a number of qualifications that are intended to share some of the risk.”

As a consultant, CCI helps both sides find the best risk profile that all parties can accept and yields the greatest financial and technical reward.

As the industry and the company continue to grow, Dupuis recalls a piece of advice he and Goerz received from a colleague. “There is always something that somebody else does not want to do. If you are able to do that, and do that really well, there will be work for you.”

For CCI, that niche resulted in Dupuis and Goerz desire to follow a project from beginning to end, offering clients a 360-degree approach with a focus on engineering, environmental, geo-technical and construction of trenchless crossings. Through this approach and a desire to build strong client relationships, the company is poised to grow across Canada along with the trenchless industry.

Mike Kezdi is associate editor of *Trenchless Technology Canada*.

the piece of the puzzle that completes the picture



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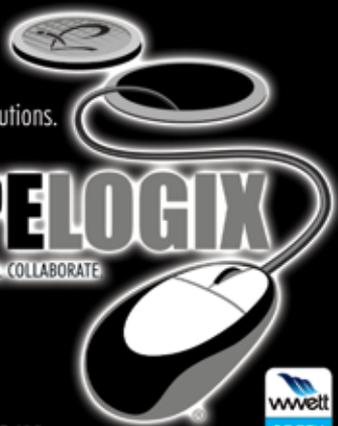
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