

Big Infrastructure Project in Halton Region Includes Big RCP

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The big infrastructure story in Halton Region, Ontario (west of Toronto) is “The Big Pipe” – a massive infrastructure improvement project to service the expansion of the Town of Milton by providing an improved sewage system for residents and a more dependable source of drinking water. For decades, growth in Milton was limited because it depended entirely on water supplied by wells. The wells and sewage treatment system were functioning at capacity.

Not only did the town require a more dependable source of potable water from Lake Ontario, it also needed a new sanitary sewer system and local treatment plant improvements. “The Big Pipe” would carry effluent from new developments to the expanded Mid-Halton Wastewater Treatment Plant in Oakville for treatment and discharge into Lake Ontario.

Construction of the project began in January 2000 to service Phase I of the “Halton Urban Structure Program (HUSP). The initial expansion would allow the construction of 6,200 new resi-

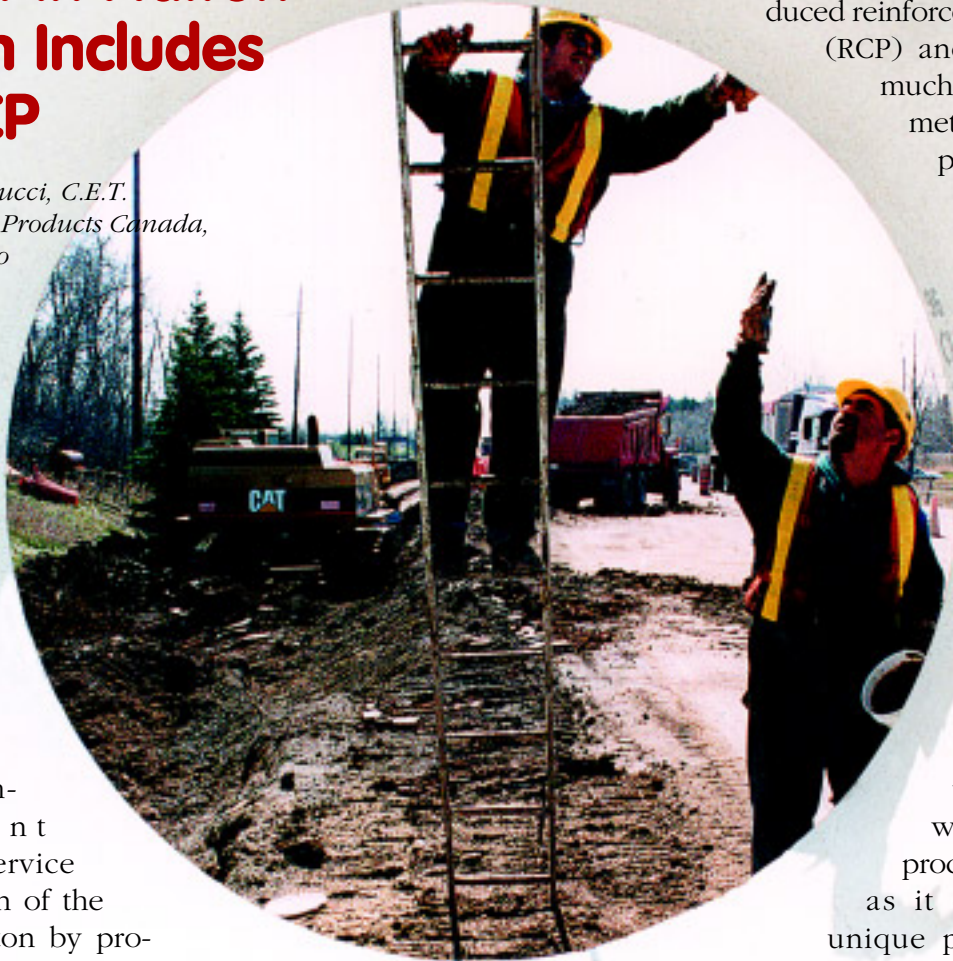
dential units and permit the use of 500 to 700 acres of business property in Halton Region.

Hanson Pipe & Products Canada produced reinforced concrete pipe (RCP) and manholes for much of the 15.5 kilometers (9 miles) of pipeline. Sizes ranged from 825-mm (33-inch) to 2400-mm (96-inch) diameter pipe.

Construction of the \$CAD 30 million trunk sanitary sewer and concrete pressure pipe water main would not have proceeded as rapidly as it did without a unique partnership between industry and government.

Halton Region had planned for the orderly development of Milton, and growth elsewhere in the Region, through the HUSP initiated in the late 1980s. The HUSP, detailed the infrastructure required for growth, and estimated costs. To bring the services to Milton, Halton Region partnered with six local developers, the Town of Milton, and a joint venture team (D’Orazio-Walter Joint Venture) to construct the pipeline. The project was entirely funded upfront by the developers.

A design/build approach to constructing the pipeline along the Highway 25 right-of-way was preferred, as it was expected that it would meet the tight schedule, and that the work would be done for a fixed price. The fast-paced construction schedule, and sequencing of work sites, was paramount since the pipeline had to be installed



in a section of the route where a portion of the western extension of the new 407 ETR (electronic toll road) was also scheduled for construction that year. The joint venture and region teams applied a value engineering assessment and found cost savings for many components of the project. The assessment also confirmed the choice of reinforced concrete pipe (RCP) for the trunk sanitary sewer.

The construction schedule included a new pumping station, the largest built to date in the Halton Region. The pumping station was required because there is a high point of land between Oakville and Milton that would have otherwise required a deep tunnel installation.

Close coordination between the contractor and pipe producer was also required. The contractor arranged for just-in-time delivery of the pipe for speedy installation and reduced impact on traffic flow. Shipping of pipe from the Hanson plant began on January 24 and ended on September 29, 2000, well within the project schedule. All of the RCP supplied to the trunk sewer and Boyne Sewage Pumping Station were standard gasketed products, and used standard design and bedding specifications.

Jim D’Orazio of D’Orazio Infrastructure Group said, “The ease of installation of our concrete wastewater main pipes helped us maintain the safest site possible. Excellent product support from Hanson was a key factor in the maintenance of our tight construction schedule.” ☺



A fast-paced schedule and safety considerations required the use of trench boxes for much of the 15.5 kilometers of RCP installed along the Highway 25 right-of-way.

Project:	The Big Pipe Design/Build Section
Owner:	Regional Municipality of Halton Oakville, Ontario Patrick Murphy, Commissioner of Planning and Public Works
Designer:	Greater Toronto Consulting Group (Dillon Consulting Ltd., Acres and Associated Ltd., R.V. Anderson Associates Ltd.)
Contractors:	D’Orazio Infrastructure Group (15.5 km (10 miles) of 825-mm (33- inch) to 2400-mm (96-inch) diameter sanitary trunk sewer and force main.) Oakville, Ontario Jim D’Orazio, Chief Operating Officer Walter Construction Canada Ltd. (Construction of 1100 L/s sewage pumping station.) Toronto, Ontario Frank Ross, Vice President
Quantities:	2,623 meters (8,606 feet) – 825-mm (33-inch) diameter RCP 222 meters (728 feet) – 1050-mm (42-inch) diameter RCP 940 meters (3,084 feet) – 1200-mm (48-inch) diameter RCP 2,777 meters (9,111 feet) – 1350-mm (54-inch) diameter RCP 854 meters (2,802 feet) – 2400-mm (96-inch) diameter RCP Manholes ranged in size from 1200-mm (48-inch) diameter to 3000-mm (120-inch) diameter sections
Producer:	Hanson Pipe & Products Canada Whitby, Ontario

In January 1999, Gifford-Hill became Hanson Pipe & Products, Inc. The name change was intended to strengthen the company’s identity both in the U.S and abroad, and to unify the pipe and precast operations with the rest of the Hanson organization. Hanson added LOC PIPE to its family in 1999. LOC PIPE was established in Whitby, Ontario, near Toronto, in 1974. The plant produces concrete pipe, and precast concrete products for sewers and storm drainage. The plant is ISO 9002 certified, and operates as Hanson Pipe & Products Canada, Inc., For more information visit www.hansonpipeandproducts.com.