

Client

City of Ottawa
100 Constellation Cres.
Ottawa, Ontario K2G 6J8
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Location

Ottawa, Ontario, Canada

Services

- Preliminary Design
- Detail Design
- Contract Administration

Date

2004

Key Personnel

Alain Grégoire, P.Eng.
Project Manager
Michael Drew, CET
Designer

Contract Value

\$220,000.00

Leitrim Wastewater Pumping Station

Scope of Services

The City of Ottawa required an assessment of alternative pumping/discharge arrangements for a sanitary sewage pumping station and the provision of the optimum pumping station to meet development timing issues.

Project Description

A study was undertaken to assess combinations of pumps, together with combinations of forcemain / gravity sewer outlets. The study examined phasing of pumping arrangements for initial low flow, 20 years medium flow and ultimate high flow periods, in consideration of a long forcemain and low gradient gravity sewer outlet. The XP-SWMM computer model was used to determine flows and velocities in the discharge piping, to assess solids deposition and help understand odour issues. A two-phased pumping approach was selected to meet the timing needs, together with a water flushing system for solids deposition and odour control in the early years of operation. At 15 metres depth and 3.7 metres in diameter, this station is one of the deepest of its kind in North America.

**Results**

The recommendations of the study will enable a phased, economical pumping solution for discharge of sanitary sewage from a newly developing area in Ottawa. The selected FRP pumping station installed will provide a discharge solution designed to result in a minimum of maintenance requirements over its service life.