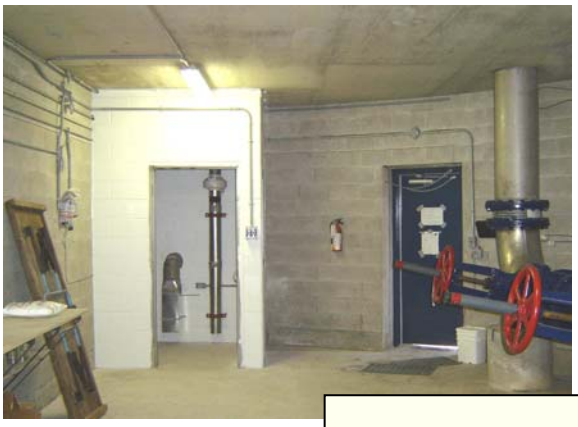
Ainley GROUP
CONSULTING ENGINEERS & PLANNERS

Project Case Study

Mapleview elevated reservoir.

The objective of the project was to boost chlorine residuals at various points within the City's potable water supply.



The photograph at the left shows the new chlorination room inside the valve room of the Mapleview elevated reservoir.

Installation of Rechlorination Systems at Barrie Reservoirs

City of Barrie

The Corporation of the City of Barrie retained the Ainley Group in October 2003 to provide engineering services for the implementation of a paced-to-flow chlorine feed system at three potable water supply reservoirs within the City. The Scope of Work included preliminary design, final design, tender call and evaluation and complete construction administration and supervision.

The objective of the project was to boost chlorine residuals at various points within the City's potable water supply in order to maintain a free chlorine residual of 0.5 mg/L throughout the distribution system. Ontario Regulation 170/03 outlines requirements regarding the sampling, reporting, the minimum level of treatment for surface and groundwater supplies and the maintenance of a chlorine residual within the distribution systems. In compliance with the regulation, the work at the City's reservoirs is being implemented to ensure the chlorine residual levels that are currently meeting the minimum requirements are maintained.

The Anne Street reservoir, Bayfield Street elevated reservoir and Mapleview elevated reservoir were the most suitable points of entry to the system; as there was existing SCADA/ instrumentation capability and sufficient interior space to house the chlorine facilities.

Ideally, chlorinators should be housed in dedicated rooms, sealed to the exterior and equipped with gas alarms. At the Bayfield and Mapleview Tanks, the rooms were constructed within the existing valve rooms. At Anne Street, the room was constructed on the upper level of the booster pump station.

Project Facts

Client: City of Barrie

Scope of Work:

- Preliminary design
- Detailed design
- Tendering
- Construction administration
- Construction supervision.

Key Design Criteria:

- Availability of space
- Compact overall footprint
- Access to existing equipment.

Project Cost: $438,000 (2004)