

Boundary Conditions 4385 Bank Street

Provided Information

Scenario	Demand	
	L/min	L/s
Average Daily Demand	276	4.6
Maximum Daily Demand	414.6	6.91
Peak Hour	746.4	12.44
Fire Flow Demand	4002	66.7

Location



Results – Existing Conditions

Connection 1 – Bank Street

Demand Scenario	Head (m)	Pressure ¹ (psi)
Maximum HGL	155.8	81.1
Peak Hour	150.5	73.5
Max Day plus Fire (12,000 l/min)	150.2	73.1

¹ Ground Elevation = 98.8 m

Results – SUC Zone Reconfiguration

Connection 1 – Bank Street

Demand Scenario	Head (m)	Pressure¹ (psi)
Maximum HGL	147.0	68.6
Peak Hour	142.9	62.7
Max Day plus Fire (12,000 l/min)	142.7	62.5

¹ Ground Elevation = 98.8 m

Notes:

1. Internal looping of the watermain is required to decrease vulnerability of the water system in case of breaks.
2. As per the Ontario Building Code in areas that may be occupied, the static pressure at any fixture shall not exceed 552 kPa (80 psi.) Pressure control measures to be considered are as follows, in order of preference:
 - a. If possible, systems to be designed to residual pressures of 345 to 552 kPa (50 to 80 psi) in all occupied areas outside of the public right-of-way without special pressure control equipment.
 - b. Pressure reducing valves to be installed immediately downstream of the isolation valve in the home/ building, located downstream of the meter so it is owner maintained.

Disclaimer

The boundary condition information is based on current operation of the city water distribution system. The computer model simulation is based on the best information available at the time. The operation of the water distribution system can change on a regular basis, resulting in a variation in boundary conditions. The physical properties of watermains deteriorate over time, as such must be assumed in the absence of actual field test data. The variation in physical watermain properties can therefore alter the results of the computer model simulation. Fire Flow analysis is a reflection of available flow in the watermain; there may be additional restrictions that occur between the watermain and the hydrant that the model cannot take into account.