

Stormwater Management - Grading & Drainage - Storm & Sanitary Sewers - Watermains

700 Long Point Circle Ottawa, Ontario K1T 4E9 613-425-8044 d.gray@dbgrayengineering.com

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2167 McGee Side Road Office / Warehouse Building Ottawa, Ontario

FIRE FLOW CALCULATIONS OBC Method

As per "Required Minimum Water Supply Flow Rate" as calculated using the Ontario Building Code - Appendix A - Article A-3.2.5.7 "Water Supply For Fire Fighting".

K = Water supply coefficient as per OBC A-3.2.5.7. Table 1

= 12 Group F, Division 3 Occupancy, Building is of noncombustible construction with fire separations without fire resistance ratings.

V = Building volume in cubic meters

	Average	
Floor Area	Height	Volume
(sq.m)	(m)	(cu.m)
1,635	4.35	7,120

$$S_{\text{Total}}$$
 = Total of spatial coefficients from exposure distances

$$= 1.0 + S_{Side 1} + S_{Side 2} + S_{Side 3} + S_{Side 4}$$

Exposure Spatial Distance Coefficient (m) 0.0 33.3 (to NW property line) S_{Side 1} S_{Side 2} (to centerline John Cavanaugh Dr) 0.0 32.3 S_{Side 3} 29.7 (to centerline McGee Side Rd) 0.0 19.6 (to SW adjacent building) S_{Side 4} 0.0 1.0 S_{Total}

$$\begin{array}{lll} \text{Q} = & \text{KVS}_{\text{Tot}} & \text{(required water supply in litres)} \\ \text{Q} = & 85,435 & \text{L} \\ = & 2,700 & \text{L/min as per OBC A-3.2.5.7. Table 2} \\ = & 45 & \text{L/s} \end{array}$$

Required duration of fire flow in minutes

= 30 min

Required water supply in litres

= 81,000 L