



LRL File No. 220487-02
Project: Industrial Development
Location: 363 Entrepreneur Cres
Date: August 29, 2024
Designed: K.Herold

Water Demand
 Ontario Building Code 2012 - Sewage System Design Flows
 City of Ottawa Design Guidelines- Water Distribution, 2010

Industrial Demand (OBC 2012 - Sewage System Design Flows)				
Design Parameter	Value		Quantity	Demand (L/d)
26. Warehouse				
a) Per Water Closet	950	L/day	1.0	950
b) Per Loading Bay	150	L/day	1.0	150
15. Office Building				
a) Per each 9.3m2 of office space	75	L/day	2.3	173
*21.37m2 office space area				1273.0

Industrial Consumption Rates (CoODG 2010 - Water Distribution)				
Unit Type	Value	Units	Value	Units
Average Daily Demand	1,273	L/d	0.015	L/s
Maximum Daily Factor	1.5	<i>(Design guidelines - water distribution Table 4.2)</i>		
Maximum Daily Demand	1,910	L/d	0.022	L/s
Peak Hour Factor	1.8	<i>(Design guidelines - water distribution Table 4.2)</i>		
Maximum Hour Demand	3,437	L/d	0.040	L/s

Total Demand				
Demand	Value	Units	Value	Units
Average Daily Demand	1,273	L/d	0.015	L/s
Maximum Daily Demand	1,910	L/d	0.022	L/s
Maximum Hourly Demand	3,437	L/d	0.040	L/s

Water Service Pipe Sizing				
Q = VA	Q = Flow Rate	V = Velocity	A = Area of pipe	
Assumed maximum velocity =	1.8	m/s		
Q =	0.04	L/s		
Q =	0.00004	m ³ /s		
Minimum pipe diameter (d) = $(4Q/\pi V)^{1/2}$				
=	0.005	m		
=	5	mm		
Proposed pipe diameter (d) =	13	mm		
	1/2	in		
*to be verified w/ Mech Eng.				