

Project Name: McGee Side Road Warehouse Building Project Location: 2167 McGee Side Road, Ottawa Project No: 24012 Date: 02-Apr-24 Building Type: Warehouse Building Building Being Considered: Proposed Building	<h1 style="margin: 0;">Robinson</h1> <h2 style="margin: 0;">Land Development</h2>
---	---

Calculations for Total Required Fire Flow

Step	Parameter	Value		
A	Type of Construction	Options	C	
		Wood Frame (Type V)	1.5	
		Ordinary Construction (Type III)	1.0	
		Non-Combustible Construction (Type II)	0.8	
		Fire Resistive Construction (Type I)	0.6	
	Non-Combustible Construction (Type II)	0.8		
B	Ground Floor Area	163.5	m ²	
	Total Effective Floor Area	**Effective Area Reduced by Firewalls**	163.5	
C	Fire Flow	2,000	L/min	
D	Occupancy Class	Options	Charge	
		Non-combustible	-0.25	
		Limited Combustible	-0.15	
		Combustible	0.00	
		Free burning	0.15	
		Rapid Burning	0.25	
	Occupancy Adjustment	0	L/min	
Fire Flow	2,000	L/min		
E	Sprinkler Protection	Options	Charge	
		Automatic Sprinkler Protection	-0.30	
		None	0.00	
		Water Supply is Standard for System and Hose Lines	-0.10	
		Full Supervision of the Sprinkler System	-0.10	
Sprinkler Reduction	0	L/min		
F	Exposures			
	West Side			
	Subject Building and Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
	Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
	Exposed Wall Length		0	
	Exposed Wall No. of Storeys		0	
	Length-Height Factor of Exposed Wall		0	
	Construction Type of Exposed Wall	Options	Noncombustible or Fire Resistive with Unprotected Openings	
		Wood Frame		
		Ordinary with Unprotected Openings		
		Ordinary without Unprotected Openings		
		Noncombustible or Fire Resistive with Unprotected Openings		
		Noncombustible or Fire Resistive without Unprotected Openings		
	Separation Distance		**>30m; No Exposure**	31
	West Side Exposure Charge			0.00
	North Side			
	Subject Building and Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
	Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
	Exposed Wall Length		0	
	Exposed Wall No. of Storeys		0	
	Length-Height Factor of Exposed Wall		0	
	Construction Type of Exposed Wall	Options	Noncombustible or Fire Resistive with Unprotected Openings	
		Wood Frame		
		Ordinary with Unprotected Openings		
		Ordinary without Unprotected Openings		
		Noncombustible or Fire Resistive with Unprotected Openings		
		Noncombustible or Fire Resistive without Unprotected Openings		
	Separation Distance		**>30m; No Exposure**	31
	North Side Exposure Charge			0.00
	East Side			
Subject Building and Exposed Building Fully Protected with Automatic Sprinkler Systems		No		
Exposed Building Fully Protected with Automatic Sprinkler Systems		No		
Exposed Wall Length		13		
Exposed Wall No. of Storeys		1		
Length-Height Factor of Exposed Wall		13		
Construction Type of Exposed Wall	Options	Noncombustible or Fire Resistive with Unprotected Openings		
	Wood Frame			
	Ordinary with Unprotected Openings			
	Ordinary without Unprotected Openings			
	Noncombustible or Fire Resistive with Unprotected Openings			
	Noncombustible or Fire Resistive without Unprotected Openings			
Separation Distance		**>30m; No Exposure**	31.0	

East Side Exposure Charge		0.00	
South Side			
Subject Building and Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
Exposed Building Fully Protected with Automatic Sprinkler Systems		No	
Exposed Wall Length		55	m
Exposed Wall No. of Storeys		1	
Length-Height Factor of Exposed Wall		55	m.storeys
Construction Type of Exposed Wall	Options		Noncombustible or Fire Resistive with Unprotected Openings
	Wood Frame		
	Ordinary with Unprotected Openings		
	Ordinary without Unprotected Openings		
	Noncombustible or Fire Resistive with Unprotected Openings		
Noncombustible or Fire Resistive without Unprotected Openings			
Separation Distance		**>30m; No Exposure**	31 m
South Side Exposure Charge		0.00	
Total Exposure Charge		0	< 0.75
Increase for Exposures		0	L/min
G	Total Required Fire Flow	2,000	L/min
H	Required Fire Flow Duration	1.00	hrs
I	Required Fire Flow Volume	120,000	L

Notes:

1. Fire flow calculations have been prepared in accordance with Fire Underwriters Survey (v. 2020)
2. Where buildings are at a diagonal to each other, the shortest separation distance is increased by 3 metres and used as the exposure distance (Ref. FUS v.2020 pg.30).
3. Required fire flow duration as per Table 1 (Ref. FUS v.2020 pg 5).