



FUS Fire Flow Calculation Sheet

Stantec Project #: 160401608
 Project Name: Kanata West Block 29
 Date: 2021-03-24
 Fire Flow Calculation #: 1
 Description: 12-unit terrace flats (Block 1).

Notes: 3-storey building with 412 m2 footprint and 12 2-bedroom units (4 adjoining units each stacked 3 high).

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)					
1	Determine Type of Construction	Wood Frame	1.5	-					
2	Determine Ground Floor Area of One Unit	-	104	-					
	Determine Number of Adjoining Units	Includes adjacent wood frame structures separated by 3m or less	4	-					
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space	3	-					
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min	-	12000					
5	Determine Occupancy Charge	Limited Combustible	-15%	10200					
6	Determine Sprinkler Reduction	None	0%	0					
		Non-Standard Water Supply or N/A	0%						
		Not Fully Supervised or N/A	0%						
		% Coverage of Sprinkler System	0%						
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	> 45	32.4	3	91-120	Wood Frame or Non-Combustible	0%	2856
		East	3.1 to 10	12.8	3	31-60	Wood Frame or Non-Combustible	18%	
		South	20.1 to 30	32.4	3	91-120	Wood Frame or Non-Combustible	10%	
		West	> 45	12.8	3	31-60	Wood Frame or Non-Combustible	0%	
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min			13000				
		Total Required Fire Flow in L/s			216.7				
		Required Duration of Fire Flow (hrs)			2.50				
		Required Volume of Fire Flow (m ³)			1950				



FUS Fire Flow Calculation Sheet

Stantec Project #: 160401608
 Project Name: Kanata West Block 29
 Date: 2021-03-24
 Fire Flow Calculation #: 2
 Description: 12-unit terrace flats (Block 2).

Notes: 3-storey building with 412 m2 footprint and 12 2-bedroom units (4 adjoining units each stacked 3 high).

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)					
1	Determine Type of Construction	Wood Frame	1.5	-					
2	Determine Ground Floor Area of One Unit	-	104	-					
	Determine Number of Adjoining Units	Includes adjacent wood frame structures separated by 3m or less	4	-					
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space	3	-					
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min	-	12000					
5	Determine Occupancy Charge	Limited Combustible	-15%	10200					
6	Determine Sprinkler Reduction	None	0%	0					
		Non-Standard Water Supply or N/A	0%						
		Not Fully Supervised or N/A	0%						
		% Coverage of Sprinkler System	0%						
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	> 45	32.4	3	91-120	Wood Frame or Non-Combustible	0%	4182
		East	10.1 to 20	12.8	3	31-60	Wood Frame or Non-Combustible	13%	
		South	20.1 to 30	32.4	3	91-120	Wood Frame or Non-Combustible	10%	
		West	3.1 to 10	12.8	3	31-60	Wood Frame or Non-Combustible	18%	
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min			14000				
		Total Required Fire Flow in L/s			233.3				
		Required Duration of Fire Flow (hrs)			3.00				
		Required Volume of Fire Flow (m ³)			2520				



FUS Fire Flow Calculation Sheet

Stantec Project #: 160401608
 Project Name: Kanata West Block 29
 Date: 2021-03-24
 Fire Flow Calculation #: 3
 Description: 12-unit terrace flats (Block 3).

Notes: 3-storey building with 412 m2 footprint and 12 2-bedroom units (4 adjoining units each stacked 3 high).

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)					
1	Determine Type of Construction	Wood Frame	1.5	-					
2	Determine Ground Floor Area of One Unit	-	104	-					
	Determine Number of Adjoining Units	Includes adjacent wood frame structures separated by 3m or less	4	-					
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space	3	-					
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min	-	12000					
5	Determine Occupancy Charge	Limited Combustible	-15%	10200					
6	Determine Sprinkler Reduction	None	0%	0					
		Non-Standard Water Supply or N/A	0%						
		Not Fully Supervised or N/A	0%						
		% Coverage of Sprinkler System	0%						
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	3.1 to 10	12.8	3	31-60	Wood Frame or Non-Combustible	18%	4692
		East	30.1 to 45	32.4	3	91-120	Wood Frame or Non-Combustible	5%	
		South	20.1 to 30	12.8	3	31-60	Wood Frame or Non-Combustible	8%	
		West	10.1 to 20	32.4	3	91-120	Wood Frame or Non-Combustible	15%	
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min			15000				
		Total Required Fire Flow in L/s			250.0				
		Required Duration of Fire Flow (hrs)			3.00				
		Required Volume of Fire Flow (m ³)			2700				



FUS Fire Flow Calculation Sheet

Stantec Project #: 160401608
 Project Name: Kanata West Block 29
 Date: 2021-03-24
 Fire Flow Calculation #: 4
 Description: 12-unit terrace flats (Block 4).

Notes: 3-storey building with 412 m2 footprint and 12 2-bedroom units (4 adjoining units each stacked 3 high).

Step	Task	Notes	Value Used	Req'd Fire Flow (L/min)					
1	Determine Type of Construction	Wood Frame	1.5	-					
2	Determine Ground Floor Area of One Unit	-	104	-					
	Determine Number of Adjoining Units	Includes adjacent wood frame structures separated by 3m or less	4	-					
3	Determine Height in Storeys	Does not include floors >50% below grade or open attic space	3	-					
4	Determine Required Fire Flow	($F = 220 \times C \times A^{1/2}$). Round to nearest 1000 L/min	-	12000					
5	Determine Occupancy Charge	Limited Combustible	-15%	10200					
6	Determine Sprinkler Reduction	None	0%	0					
		Non-Standard Water Supply or N/A	0%						
		Not Fully Supervised or N/A	0%						
		% Coverage of Sprinkler System	0%						
7	Determine Increase for Exposures (Max. 75%)	Direction	Exposure Distance (m)	Exposed Length (m)	Exposed Height (Stories)	Length-Height Factor (m x stories)	Construction of Adjacent Wall	-	-
		North	> 45	12.8	3	31-60	Wood Frame or Non-Combustible	0%	2346
		East	30.1 to 45	32.4	3	91-120	Wood Frame or Non-Combustible	5%	
		South	3.1 to 10	11.5	3	31-60	Wood Frame or Non-Combustible	18%	
		West	> 45	32.4	3	91-120	Wood Frame or Non-Combustible	0%	
8	Determine Final Required Fire Flow	Total Required Fire Flow in L/min, Rounded to Nearest 1000L/min			13000				
		Total Required Fire Flow in L/s			216.7				
		Required Duration of Fire Flow (hrs)			2.50				
		Required Volume of Fire Flow (m ³)			1950				