Span Tables

Table 9.20.17.4.-A
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (1-10M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m²			
		1.50	3.33	1.50	3.33
140	200	1.41	1.18	1.03	0.93
	300	1.78	1.50	1.30	1.18
	400	2.08	1.75	1.53	1.38
	500	2.33	1.97	1.72	1.56
	600	2.55	2.16	1.89	1.71
150	200	1.41	1.18	1.02	0.92
	300	1.78	1.50	1.29	1.17
	400	2.08	1.75	1.51	1.37
	500	2.33	1.97	1.70	1.54
	600	2.54	2.15	1.87	1.70
160	200	1.41	1.18	1.01	0.91
	300	1.78	1.50	1.28	1.16
	400	2.07	1.75	1.50	1.36
	500	2.32	1.96	1.68	1.53
	600	2.53	2.15	1.85	1.68
190	200	1.41	1.19	0.98	0.89
	300	1.78	1.50	1.24	1.13
	400	2.06	1.74	1.45	1.32
	500	2.30	1.95	1.63	1.49
	600	2.51	2.13	1.78	1.63
200	200	1.41	1.19	0.97	0.89
	300	1.77	1.49	1.23	1.12
	400	2.06	1.74	1.43	1.31
	500	2.30	1.95	1.61	1.48
	600	2.50	2.13	1.77	1.62

Table 9.20.17.4.-A *(continued)*
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (1-10M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m²			
		1.50	3.33	1.50	3.33
240	200	1.41	1.19	0.94	0.86
	300	1.76	1.49	1.18	1.09
	400	2.04	1.73	1.38	1.27
	500	2.27	1.93	1.55	1.43
	600	2.47	2.11	1.70	1.56

Notes to Table 9.20.17.4.-A:

(1) Deflection criterion is L/240, where "L" is the clear span of the lintel.

(2) Linear interpolation is permitted between ground snow loads and between lintel depths.

(3) 10M stirrups are required at a maximum d/2 spacing for spans greater than 1 200 mm, where "d" is the distance from the top of the lintel to the level of the bottom reinforcing bar in the lintel.

Table 9.20.17.4.-B
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (1-15M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m²			
		1.50	3.33	1.50	3.33
140	200	1.63	1.46	1.31	1.23
	300	2.43	2.08	1.81	1.64
	400	2.90	2.44	2.13	1.93
	500	3.26	2.75	2.41	2.18
	600	3.58	3.03	2.65	2.4
150	200	1.67	1.49	1.33	1.25
	300	2.48	2.08	1.79	1.62
	400	2.90	2.44	2.11	1.91
	500	3.26	2.75	2.38	2.16
	600	3.57	3.02	2.62	2.38
160	200	1.70	1.53	1.35	1.26
	300	2.48	2.08	1.78	1.61
	400	2.90	2.44	2.09	1.90
	500	3.25	2.75	2.36	2.14
	600	3.56	3.02	2.59	2.36

Table 9.20.17.4.-B *(continued)*
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (1-15M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m^2			
		1.50	3.33	1.50	3.33
190	200	1.80	1.61	1.36	1.24
	300	2.48	2.09	1.73	1.58
	400	2.89	2.44	2.03	1.85
	500	3.23	2.74	2.29	2.09
	600	3.53	3.00	2.51	2.30
200	200	1.83	1.64	1.35	1.23
	300	2.48	2.09	1.71	1.57
	400	2.88	2.44	2.01	1.84
	500	3.22	2.74	2.26	2.07
	600	3.52	2.99	2.48	2.28
240	200	1.93	1.65	1.30	1.20
	300	2.47	2.08	1.66	1.52
	400	2.86	2.43	1.94	1.78
	500	3.19	2.72	2.18	2.01
	600	3.47	2.97	2.39	2.20

Notes to Table 9.20.17.4.-B:

(1) Deflection criterion is L/240, where "L" is the clear span of the lintel.

(2) Linear interpolation is permitted between ground snow loads and between lintel depths.

(3) 10M stirrups are required at a maximum d/2 spacing for spans greater than 1 200 mm, where "d" is the distance from the top of the lintel to the level of the bottom reinforcing bar in the lintel.

Table 9.20.17.4.-C
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (2-15M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m^2			
		1.50	3.33	1.50	3.33
140	200	1.63	1.46	1.31	1.23
	300	2.43	2.18	1.96	1.84
	400	3.22	2.90	2.60	2.42
	500	4.00	3.60	3.25	2.70
	600	4.71	4.20	3.61	2.97

Table 9.20.17.4.-C *(continued)*
Maximum Allowable Clear Spans for Lintels in Flat Loadbearing Insulating Concrete Form (ICF) Walls[1][2][3] (2-15M Bottom Bar)
Forming Part of Sentences 9.3.2.8.(1) and 9.20.17.4.(3)

Minimum Lintel Thickness, mm	Minimum Lintel Depth, mm	Maximum Clear Span, m			
		Supporting Light-Frame Roof Only		Supporting ICF Second *Storey* and Light-Frame Roof	
		Maximum Ground Snow Load, kN/m²			
		1.50	3.33	1.50	3.33
150	200	1.67	1.49	1.33	1.25
	300	2.48	2.23	1.99	1.87
	400	3.29	2.96	2.64	2.45
	500	4.80	3.68	3.29	2.74
	600	4.87	4.20	3.64	3.02
160	200	1.70	1.53	1.35	1.27
	300	2.53	2.28	2.02	1.90
	400	3.36	3.02	2.68	2.48
	500	4.16	3.76	3.27	2.78
	600	4.95	4.20	3.61	3.08
190	200	1.80	1.61	1.39	1.32
	300	2.67	2.40	2.09	1.97
	400	3.53	3.19	2.77	2.56
	500	4.38	3.81	3.18	2.90
	600	4.92	4.19	3.50	3.21
200	200	1.83	1.64	1.41	1.33
	300	2.87	2.44	2.11	2.00
	400	3.78	3.24	2.79	2.55
	500	4.46	3.81	3.15	2.89
	600	4.86	4.18	3.47	3.18
240	200	2.07	1.74	1.46	1.38
	300	3.07	2.59	2.18	2.07
	400	3.95	3.38	2.70	2.48
	500	4.40	3.80	3.04	2.80
	600	4.78	4.16	3.34	3.08

Notes to Table 9.20.17.4.-C:

(1) Deflection criterion is L/240, where “L” is the clear span of the lintel.

(2) Linear interpolation is permitted between ground snow loads and between lintel depths.

(3) 10M stirrups are required at a maximum d/2 spacing for spans greater than 1 200 mm, where “d” is the distance from the top of the lintel to the level of the bottom reinforcing bar in the lintel.

Table 9.23.4.2.-A
Maximum Spans for Floor Joists – General Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(1) and 9.23.9.4.(1) to (3)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			With Strapping[2]			With Bridging			With Strapping[2] and Bridging		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	2.13	1.97	1.73	2.19	1.99	1.73	2.19	1.99	1.73
		38 x 140	3.23	3.07	2.73	3.44	3.12	2.73	3.44	3.12	2.73
		38 x 184	3.88	3.69	3.51	4.18	3.92	3.59	4.37	4.07	3.59
		38 x 235	4.57	4.34	4.13	4.86	4.57	4.29	5.05	4.70	4.39
		38 x 286	5.21	4.95	4.71	5.49	5.16	4.85	5.66	5.28	4.92
	No. 1 and No. 2	38 x 89	2.00	1.85	1.66	2.09	1.90	1.66	2.09	1.90	1.66
		38 x 140	3.09	2.91	2.62	3.29	2.99	2.62	3.29	2.99	2.62
		38 x 184	3.71	3.53	3.36	4.00	3.76	3.44	4.19	3.90	3.44
		38 x 235	4.38	4.16	3.96	4.66	4.38	4.11	4.84	4.51	4.20
		38 x 286	4.99	4.75	4.52	5.26	4.94	4.65	5.43	5.06	4.72
	No. 3	38 x 89	1.90	1.69	1.38	1.95	1.69	1.38	1.95	1.69	1.38
		38 x 140	2.78	2.41	1.97	2.78	2.41	1.97	2.78	2.41	1.97
		38 x 184	3.38	2.93	2.39	3.38	2.93	2.39	3.38	2.93	2.39
		38 x 235	4.14	3.58	2.93	4.14	3.58	2.93	4.14	3.58	2.93
		38 x 286	4.80	4.16	3.39	4.80	4.16	3.39	4.80	4.16	3.39
	Construction	38 x 89	1.90	1.77	1.61	2.03	1.84	1.61	2.03	1.84	1.61
	Standard	38 x 89	1.81	1.63	1.33	1.88	1.63	1.33	1.88	1.63	1.33
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	2.08	1.93	1.71	2.16	1.96	1.71	2.16	1.96	1.71
		38 x 140	3.18	3.03	2.69	3.39	3.08	2.69	3.39	3.08	2.69
		38 x 184	3.82	3.64	3.46	4.12	3.87	3.54	4.31	4.02	3.54
		38 x 235	4.50	4.28	4.08	4.80	4.51	4.23	4.98	4.64	4.33
		38 x 286	5.14	4.89	4.65	5.42	5.09	4.78	5.59	5.21	4.86
	No. 1 and No. 2	38 x 89	2.00	1.85	1.66	2.09	1.90	1.66	2.09	1.90	1.66
		38 x 140	3.09	2.91	2.62	3.29	2.99	2.62	3.29	2.99	2.62
		38 x 184	3.71	3.53	3.36	4.00	3.76	3.44	4.19	3.90	3.44
		38 x 235	4.38	4.16	3.96	4.66	4.38	4.11	4.84	4.51	4.20
		38 x 286	4.99	4.75	4.52	5.26	4.94	4.65	5.43	5.06	4.72
	No. 3	38 x 89	1.90	1.77	1.61	2.03	1.84	1.61	2.03	1.84	1.61
		38 x 140	2.99	2.78	2.43	3.19	2.90	2.43	3.19	2.90	2.43
		38 x 184	3.60	3.42	2.95	3.88	3.61	2.95	4.06	3.61	2.95
		38 x 235	4.24	4.03	3.61	4.51	4.24	3.61	4.68	4.37	3.61
		38 x 286	4.84	4.60	4.19	5.10	4.79	4.19	5.26	4.90	4.19
	Construction	38 x 89	1.90	1.77	1.61	2.03	1.84	1.61	2.03	1.84	1.61
	Standard	38 x 89	1.81	1.68	1.39	1.96	1.71	1.39	1.96	1.71	1.39

Table 9.23.4.2.-A *(continued)*
Maximum Spans for Floor Joists – General Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(1) and 9.23.9.4.(1) to (3)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			With Strapping[2]			With Bridging			With Strapping[2] and Bridging		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	1.95	1.81	1.64	2.06	1.87	1.64	2.06	1.87	1.64
		38 x 140	3.05	2.85	2.57	3.24	2.95	2.57	3.24	2.95	2.57
		38 x 184	3.66	3.48	3.31	3.94	3.70	3.38	4.12	3.84	3.38
		38 x 235	4.31	4.10	3.90	4.59	4.31	4.05	4.76	4.44	4.14
		38 x 286	4.91	4.67	4.45	5.18	4.87	4.57	5.34	4.98	4.64
	No. 1 and No. 2	38 x 89	1.86	1.72	1.58	1.99	1.81	1.58	1.99	1.81	1.58
		38 x 140	2.92	2.71	2.49	3.14	2.85	2.49	3.14	2.85	2.49
		38 x 184	3.54	3.36	3.20	3.81	3.58	3.27	3.99	3.72	3.27
		38 x 235	4.17	3.96	3.77	4.44	4.17	3.92	4.60	4.29	4.00
		38 x 286	4.75	4.52	4.30	5.01	4.71	4.42	5.17	4.82	4.49
	No. 3	38 x 89	1.81	1.68	1.55	1.96	1.78	1.55	1.96	1.78	1.55
		38 x 140	2.84	2.64	2.43	3.08	2.80	2.43	3.08	2.80	2.43
		38 x 184	3.47	3.30	2.95	3.74	3.52	2.95	3.92	3.61	2.95
		38 x 235	4.09	3.89	3.61	4.36	4.09	3.61	4.52	4.22	3.61
		38 x 286	4.67	4.44	4.19	4.92	4.62	4.19	5.08	4.73	4.19
	Construction	38 x 89	1.81	1.68	1.55	1.96	1.78	1.55	1.96	1.78	1.55
	Standard	38 x 89	1.70	1.58	1.44	1.88	1.71	1.44	1.88	1.71	1.44

Table 9.23.4.2.-A *(continued)*
Maximum Spans for Floor Joists – General Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(1) and 9.23.9.4.(1) to (3)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			With Strapping[2]			With Bridging			With Strapping[2] and Bridging		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	1.65	1.53	1.42	1.84	1.68	1.46	1.84	1.68	1.46
		38 x 140	2.59	2.41	2.24	2.90	2.63	2.30	2.90	2.63	2.30
		38 x 184	3.27	3.11	2.94	3.52	3.31	3.03	3.69	3.44	3.03
		38 x 235	3.85	3.66	3.48	4.10	3.85	3.62	4.26	3.97	3.70
		38 x 286	4.39	4.18	3.97	4.63	4.35	4.09	4.78	4.45	4.15
	No. 1 and No. 2	38 x 89	1.59	1.48	1.37	1.80	1.64	1.43	1.80	1.64	1.43
		38 x 140	2.51	2.33	2.16	2.83	2.57	2.25	2.83	2.57	2.25
		38 x 184	3.19	3.04	2.84	3.44	3.23	2.96	3.60	3.36	2.96
		38 x 235	3.76	3.58	3.41	4.01	3.77	3.54	4.16	3.88	3.62
		38 x 286	4.29	4.08	3.88	4.53	4.25	4.00	4.67	4.35	4.06
	No. 3	38 x 89	1.54	1.43	1.32	1.74	1.57	1.36	1.76	1.60	1.36
		38 x 140	2.42	2.24	1.94	2.74	2.38	1.94	2.75	2.38	1.94
		38 x 184	3.12	2.90	2.37	3.35	2.90	2.37	3.35	2.90	2.37
		38 x 235	3.67	3.49	2.89	3.91	3.54	2.89	4.06	3.54	2.89
		38 x 286	4.19	3.98	3.36	4.42	4.11	3.36	4.55	4.11	3.36
	Construction	38 x 89	1.54	1.43	1.32	1.74	1.57	1.40	1.76	1.60	1.40
	Standard	38 x 89	1.48	1.37	1.15	1.63	1.41	1.15	1.63	1.41	1.15

Notes to Table 9.23.4.2.-A:

(1) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) See Sentence 9.23.9.4.(5) for alternatives to strapping.

Table 9.23.4.2.-B
Maximum Spans for Floor Joists – Special Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(2) and 9.23.9.4.(4) and (6)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Joists with Ceilings Attached to Wood Furring						Joists with Concrete Topping		
			Without Bridging			With Bridging			With or Without Bridging[2]		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	2.19	1.99	1.73	2.19	1.99	1.73	2.19	1.99	1.73
		38 x 140	3.44	3.12	2.73	3.44	3.12	2.73	3.44	3.12	2.73
		38 x 184	4.24	3.99	3.59	4.52	4.11	3.59	4.52	4.11	3.59
		38 x 235	4.98	4.69	4.29	5.47	5.20	4.58	5.77	5.24	4.58
		38 x 286	5.67	5.34	4.88	6.19	5.89	5.54	6.83	6.37	5.58
	No. 1 and No. 2	38 x 89	2.09	1.90	1.66	2.09	1.90	1.66	2.09	1.90	1.66
		38 x 140	3.29	2.99	2.62	3.29	2.99	2.62	3.29	2.99	2.55
		38 x 184	4.06	3.83	3.44	4.33	3.93	3.44	4.33	3.81	3.11
		38 x 235	4.78	4.50	4.11	5.24	4.98	4.31	5.37	4.65	3.80
		38 x 286	5.44	5.12	4.68	5.93	5.64	5.00	6.24	5.40	4.41
	No. 3	38 x 89	1.95	1.69	1.38	1.95	1.69	1.38	1.72	1.49	1.21
		38 x 140	2.78	2.41	1.97	2.78	2.41	1.97	2.45	2.12	1.73
		38 x 184	3.38	2.93	2.39	3.38	2.93	2.39	2.98	2.58	2.11
		38 x 235	4.14	3.58	2.93	4.14	3.58	2.93	3.65	3.16	2.58
		38 x 286	4.80	4.16	3.39	4.80	4.16	3.39	4.23	3.66	2.99
	Construction	38 x 89	2.03	1.84	1.61	2.03	1.84	1.61	2.03	1.84	1.61
	Standard	38 x 89	1.88	1.63	1.33	1.88	1.63	1.33	1.66	1.44	1.17

Table 9.23.4.2.-B *(continued)*
Maximum Spans for Floor Joists – Special Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(2) and 9.23.9.4.(4) and (6)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Joists with Ceilings Attached to Wood Furring						Joists with Concrete Topping		
			Without Bridging			With Bridging			With or Without Bridging[2]		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	2.16	1.96	1.71	2.16	1.96	1.71	2.16	1.96	1.71
		38 x 140	3.39	3.08	2.69	3.39	3.08	2.69	3.39	3.08	2.69
		38 x 184	4.18	3.94	3.54	4.46	4.05	3.54	4.46	4.05	3.54
		38 x 235	4.92	4.63	4.23	5.39	5.13	4.52	5.69	5.17	4.52
		38 x 286	5.60	5.27	4.82	6.10	5.81	5.47	6.74	6.28	5.50
	No. 1 and No. 2	38 x 89	2.09	1.90	1.66	2.09	1.90	1.66	2.09	1.90	1.66
		38 x 140	3.29	2.99	2.62	3.29	2.99	2.62	3.29	2.99	2.62
		38 x 184	4.06	3.83	3.44	4.33	3.93	3.44	4.33	3.93	3.26
		38 x 235	4.78	4.50	4.11	5.24	4.98	4.39	5.53	4.88	3.99
		38 x 286	5.44	5.12	4.68	5.93	5.64	5.25	6.54	5.66	4.63
	No. 3	38 x 89	2.03	1.84	1.61	2.03	1.84	1.61	2.03	1.83	1.50
		38 x 140	3.19	2.90	2.43	3.19	2.90	2.43	3.02	2.62	2.14
		38 x 184	3.94	3.61	2.95	4.17	3.61	2.95	3.68	3.18	2.60
		38 x 235	4.63	4.36	3.61	5.08	4.42	3.61	4.50	3.89	3.18
		38 x 286	5.27	4.96	4.19	5.74	5.13	4.19	5.22	4.52	3.69
	Construction	38 x 89	2.03	1.84	1.61	2.03	1.84	1.61	2.03	1.84	1.61
	Standard	38 x 89	1.96	1.71	1.39	1.96	1.71	1.39	1.74	1.50	1.23

Table 9.23.4.2.-B *(continued)*
Maximum Spans for Floor Joists – Special Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(2) and 9.23.9.4.(4) and (6)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Joists with Ceilings Attached to Wood Furring						Joists with Concrete Topping		
			Without Bridging			With Bridging			With or Without Bridging[2]		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	2.06	1.87	1.64	2.06	1.87	1.64	2.06	1.87	1.64
		38 x 140	3.24	2.95	2.57	3.24	2.95	2.57	3.24	2.95	2.57
		38 x 184	4.00	3.77	3.38	4.26	3.87	3.38	4.26	3.87	3.38
		38 x 235	4.70	4.43	4.05	5.16	4.91	4.32	5.45	4.95	4.32
		38 x 286	5.35	5.04	4.61	5.84	5.55	5.23	6.45	6.01	5.26
	No. 1 and No. 2	38 x 89	1.99	1.81	1.58	1.99	1.81	1.58	1.99	1.81	1.58
		38 x 140	3.14	2.85	2.49	3.14	2.85	2.49	3.14	2.85	2.49
		38 x 184	3.87	3.64	3.27	4.12	3.75	3.27	4.12	3.75	3.27
		38 x 235	4.55	4.28	3.91	4.99	4.75	4.18	5.27	4.79	4.13
		38 x 286	5.18	4.88	4.46	5.65	5.37	5.06	6.23	5.81	4.79
	No. 3	38 x 89	1.96	1.78	1.55	1.96	1.78	1.55	1.96	1.78	1.50
		38 x 140	3.08	2.80	2.43	3.08	2.80	2.43	3.02	2.62	2.14
		38 x 184	3.80	3.58	2.95	4.05	3.61	2.95	3.68	3.18	2.60
		38 x 235	4.47	4.21	3.61	4.90	4.42	3.61	4.50	3.89	3.18
		38 x 286	5.09	4.79	4.19	5.55	5.13	4.19	5.22	4.52	3.69
	Construction	38 x 89	1.96	1.78	1.55	1.96	1.78	1.55	1.96	1.78	1.55
	Standard	38 x 89	1.88	1.71	1.44	1.88	1.71	1.44	1.80	1.56	1.27

Table 9.23.4.2.-B *(continued)*
Maximum Spans for Floor Joists – Special Cases[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and (2), 9.23.4.4.(2) and 9.23.9.4.(4) and (6)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Joists with Ceilings Attached to Wood Furring						Joists with Concrete Topping		
			Without Bridging			With Bridging			With or Without Bridging[2]		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	1.84	1.68	1.46	1.84	1.68	1.46	1.84	1.68	1.46
		38 x 140	2.90	2.63	2.30	2.90	2.63	2.30	2.90	2.63	2.30
		38 x 184	3.58	3.37	3.03	3.81	3.46	3.03	3.81	3.46	3.03
		38 x 235	4.20	3.96	3.62	4.61	4.39	3.86	4.87	4.42	3.86
		38 x 286	4.79	4.51	4.12	5.22	4.96	4.68	5.76	5.37	4.54
	No. 1 and No. 2	38 x 89	1.80	1.64	1.43	1.80	1.64	1.43	1.80	1.64	1.43
		38 x 140	2.83	2.57	2.25	2.83	2.57	2.25	2.83	2.57	2.23
		38 x 184	3.50	3.29	2.96	3.72	3.38	2.96	3.72	3.32	2.71
		38 x 235	4.11	3.87	3.54	4.51	4.29	3.76	4.69	4.06	3.31
		38 x 286	4.68	4.40	4.03	5.10	4.85	4.36	5.44	4.71	3.84
	No. 3	38 x 89	1.76	1.60	1.36	1.76	1.60	1.36	1.70	1.47	1.20
		38 x 140	2.75	2.38	1.94	2.75	2.38	1.94	2.42	2.10	1.71
		38 x 184	3.35	2.90	2.37	3.35	2.90	2.37	2.95	2.55	2.08
		38 x 235	4.01	3.54	2.89	4.09	3.54	2.89	3.61	3.12	2.55
		38 x 286	4.56	4.11	3.36	4.75	4.11	3.36	4.18	3.62	2.96
	Construction	38 x 89	1.76	1.60	1.40	1.76	1.60	1.40	1.76	1.60	1.37
	Standard	38 x 89	1.63	1.41	1.15	1.63	1.41	1.15	1.44	1.25	1.02

Notes to Table 9.23.4.2.-B:

(1) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) No bridging is assumed for spans for floor joists with concrete topping.

Table 9.23.4.2.-C
Maximum Spans for Ceiling Joists – Attic not Accessible by a Stairway
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m		
			Joist Spacing, mm		
			300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	3.41	3.10	2.71
		38 x 140	5.37	4.88	4.26
		38 x 184	7.05	6.41	5.60
		38 x 235	9.01	8.18	7.15
		38 x 286	10.96	9.96	8.70
	No. 1 and No. 2	38 x 89	3.27	2.97	2.59
		38 x 140	5.14	4.67	4.08
		38 x 184	6.76	6.14	5.36
		38 x 235	8.63	7.84	6.85
		38 x 286	10.50	9.54	8.34
	No. 3	38 x 89	3.17	2.88	2.42
		38 x 140	4.89	4.23	3.46
		38 x 184	5.95	5.15	4.20
		38 x 235	7.27	6.30	5.14
		38 x 286	8.44	7.31	5.97
	Construction	38 x 89	3.17	2.88	2.51
	Standard	38 x 89	3.06	2.78	2.34
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	3.36	3.06	2.67
		38 x 140	5.29	4.81	4.20
		38 x 184	6.96	6.32	5.52
		38 x 235	8.88	8.07	7.05
		38 x 286	10.81	9.82	8.58
	No. 1 and No. 2	38 x 89	3.27	2.97	2.59
		38 x 140	5.14	4.67	4.08
		38 x 184	6.76	6.14	5.36
		38 x 235	8.63	7.84	6.85
		38 x 286	10.50	9.54	8.34
	No. 3	38 x 89	3.17	2.88	2.51
		38 x 140	4.98	4.53	3.95
		38 x 184	6.55	5.95	5.19
		38 x 235	8.36	7.60	6.34
		38 x 286	10.18	9.01	7.36
	Construction	38 x 89	3.17	2.88	2.50
	Standard	38 x 89	3.06	2.78	2.43

Table 9.23.4.2.-C *(continued)*
Maximum Spans for Ceiling Joists – Attic not Accessible by a Stairway
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m		
			Joist Spacing, mm		
			300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	3.22	2.92	2.55
		38 x 140	5.06	4.60	4.02
		38 x 184	6.65	6.05	5.28
		38 x 235	8.50	7.72	6.74
		38 x 286	10.34	9.40	8.21
	No. 1 and No. 2	38 x 89	3.11	2.83	2.47
		38 x 140	4.90	4.45	3.89
		38 x 184	6.44	5.85	5.11
		38 x 235	8.22	7.47	6.52
		38 x 286	10.00	9.09	7.94
	No. 3	38 x 89	3.06	2.78	2.43
		38 x 140	4.81	4.37	3.82
		38 x 184	6.32	5.74	5.02
		38 x 235	8.07	7.33	6.34
		38 x 286	9.82	8.93	7.36
	Construction	38 x 89	3.06	2.78	2.43
	Standard	38 x 89	2.94	2.67	2.33
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	2.88	2.61	2.28
		38 x 140	4.53	4.11	3.59
		38 x 184	5.95	5.40	4.72
		38 x 235	7.60	6.90	6.03
		38 x 286	9.25	8.40	7.34
	No. 1 and No. 2	38 x 89	2.81	2.55	2.23
		38 x 140	4.42	4.02	3.51
		38 x 184	5.81	5.28	4.61
		38 x 235	7.42	6.74	5.89
		38 x 286	9.03	8.21	7.17
	No. 3	38 x 89	2.74	2.49	2.18
		38 x 140	4.31	3.92	3.42
		38 x 184	5.67	5.09	4.16
		38 x 235	7.19	6.23	5.08
		38 x 286	8.34	7.23	5.90
	Construction	38 x 89	2.74	2.49	2.18
	Standard	38 x 89	2.67	2.43	2.03

Table 9.23.4.2.-D
Maximum Spans for Roof Joists – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	2.71	2.46	2.15	2.37	2.15	1.88	2.15	1.95	1.71
		38 x 140	4.26	3.87	3.38	3.72	3.38	2.95	3.38	3.07	2.68
		38 x 184	5.60	5.09	4.44	4.89	4.44	3.88	4.44	4.04	3.53
		38 x 235	7.15	6.49	5.67	6.24	5.67	4.96	5.67	5.15	4.50
		38 x 286	8.70	7.90	6.91	7.60	6.91	6.03	6.91	6.27	5.48
	No. 1 and No. 2	38 x 89	2.59	2.36	2.06	2.27	2.06	1.80	2.06	1.87	1.63
		38 x 140	4.08	3.71	3.24	3.57	3.24	2.83	3.24	2.94	2.57
		38 x 184	5.36	4.87	4.26	4.69	4.26	3.72	4.26	3.87	3.38
		38 x 235	6.85	6.22	5.44	5.98	5.44	4.74	5.44	4.94	4.22
		38 x 286	8.34	7.57	6.40	7.28	6.62	5.50	6.62	6.00	4.90
	No. 3	38 x 89	2.49	2.16	1.76	2.14	1.85	1.51	1.91	1.65	1.35
		38 x 140	3.56	3.08	2.51	3.06	2.65	2.16	2.72	2.36	1.92
		38 x 184	4.33	3.75	3.06	3.72	3.22	2.63	3.31	2.87	2.34
		38 x 235	5.29	4.58	3.74	4.55	3.94	3.22	4.05	3.51	2.86
		38 x 286	6.14	5.32	4.34	5.28	4.57	3.73	4.70	4.07	3.32
	Construction	38 x 89	2.51	2.28	1.99	2.20	1.99	1.74	1.99	1.81	1.58
	Standard	38 x 89	2.41	2.08	1.70	2.07	1.79	1.46	1.84	1.60	1.30

Table 9.23.4.2.-D *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	2.67	2.43	2.12	2.33	2.12	1.85	2.12	1.93	1.68
		38 x 140	4.20	3.82	3.33	3.67	3.33	2.91	3.33	3.03	2.65
		38 x 184	5.52	5.02	4.38	4.82	4.38	3.83	4.38	3.98	3.48
		38 x 235	7.05	6.41	5.60	6.16	5.60	4.89	5.60	5.09	4.44
		38 x 286	8.58	7.80	6.81	7.50	6.81	5.95	6.81	6.19	5.41
	No. 1 and No. 2	38 x 89	2.59	2.36	2.06	2.27	2.06	1.80	2.06	1.87	1.63
		38 x 140	4.08	3.71	3.24	3.57	3.24	2.83	3.24	2.94	2.57
		38 x 184	5.36	4.87	4.26	4.69	4.26	3.72	4.26	3.87	3.38
		38 x 235	6.85	6.22	5.44	5.98	5.44	4.75	5.44	4.94	4.32
		38 x 286	8.34	7.57	6.62	7.28	6.62	5.77	6.62	6.01	5.25
	No. 3	38 x 89	2.51	2.28	1.99	2.20	1.99	1.74	1.99	1.81	1.58
		38 x 140	3.95	3.59	3.10	3.45	3.14	2.67	3.14	2.85	2.37
		38 x 184	5.20	4.62	3.77	4.54	3.97	3.24	4.09	3.54	2.89
		38 x 235	6.53	5.65	4.61	5.61	4.86	3.97	5.00	4.33	3.53
		38 x 286	7.57	6.56	5.35	6.51	5.64	4.60	5.80	5.02	4.10
	Construction	38 x 89	2.51	2.28	1.99	2.20	1.99	1.74	1.99	1.81	1.58
	Standard	38 x 89	2.43	2.18	1.78	2.12	1.88	1.53	1.93	1.67	1.36

Table 9.23.4.2.-D *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	2.55	2.32	2.03	2.23	2.03	1.77	2.03	1.84	1.61
		38 x 140	4.02	3.65	3.19	3.51	3.19	2.79	3.19	2.90	2.53
		38 x 184	5.28	4.80	4.19	4.61	4.19	3.66	4.19	3.81	3.33
		38 x 235	6.74	6.13	5.35	5.89	5.35	4.68	5.35	4.86	4.25
		38 x 286	8.21	7.46	6.52	7.17	6.52	5.69	6.52	5.92	5.17
	No. 1 and No. 2	38 x 89	2.47	2.24	1.96	2.16	1.96	1.71	1.96	1.78	1.56
		38 x 140	3.89	3.53	3.08	3.40	3.08	2.69	3.08	2.80	2.45
		38 x 184	5.11	4.64	4.05	4.46	4.05	3.54	4.05	3.68	3.22
		38 x 235	6.52	5.93	5.18	5.70	5.18	4.52	5.18	4.70	4.11
		38 x 286	7.94	7.21	6.30	6.94	6.30	5.50	6.30	5.73	5.00
	No. 3	38 x 89	2.43	2.20	1.93	2.12	1.93	1.68	1.93	1.75	1.53
		38 x 140	3.82	3.47	3.03	3.33	3.03	2.65	3.03	2.75	2.37
		38 x 184	5.02	4.56	3.77	4.38	3.97	3.24	3.98	3.54	2.89
		38 x 235	6.41	5.65	4.61	5.60	4.86	3.97	5.00	4.33	3.53
		38 x 286	7.57	6.56	5.35	6.51	5.64	4.60	5.80	5.02	4.10
	Construction	38 x 89	2.43	2.20	1.93	2.12	1.93	1.68	1.93	1.75	1.53
	Standard	38 x 89	2.33	2.12	1.85	2.04	1.85	1.59	1.85	1.68	1.41

Table 9.23.4.2.-D *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Joist Spacing, mm			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	2.28	2.07	1.81	1.99	1.81	1.58	1.81	1.65	1.44
		38 x 140	3.59	3.26	2.85	3.14	2.85	2.49	2.85	2.59	2.26
		38 x 184	4.72	4.29	3.75	4.12	3.75	3.27	3.75	3.40	2.97
		38 x 235	6.03	5.48	4.79	5.27	4.79	4.18	4.79	4.35	3.80
		38 x 286	7.34	6.67	5.82	6.41	5.82	5.09	5.82	5.29	4.62
	No. 1 and No. 2	38 x 89	2.23	2.03	1.77	1.95	1.77	1.55	1.77	1.61	1.41
		38 x 140	3.51	3.19	2.79	3.07	2.79	2.43	2.79	2.53	2.21
		38 x 184	4.61	4.19	3.66	4.03	3.66	3.20	3.66	3.33	2.91
		38 x 235	5.89	5.35	4.68	5.15	4.68	4.09	4.68	4.25	3.68
		38 x 286	7.17	6.52	5.58	6.26	5.69	4.80	5.69	5.17	4.27
	No. 3	38 x 89	2.18	1.98	1.73	1.90	1.73	1.50	1.73	1.57	1.33
		38 x 140	3.42	3.05	2.49	2.99	2.62	2.14	2.69	2.33	1.90
		38 x 184	4.28	3.71	3.03	3.68	3.19	2.60	3.28	2.84	2.32
		38 x 235	5.23	4.53	3.70	4.50	3.90	3.18	4.01	3.47	2.83
		38 x 286	6.07	5.26	4.29	5.22	4.52	3.69	4.65	4.03	3.29
	Construction	38 x 89	2.18	1.98	1.73	1.90	1.73	1.51	1.73	1.57	1.37
	Standard	38 x 89	2.09	1.81	1.48	1.80	1.56	1.27	1.60	1.38	1.13

Table 9.23.4.2.-E
Maximum Spans for Roof Joists – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	1.99	1.81	1.58	1.88	1.71	1.49
		38 x 140	3.14	2.85	2.49	2.95	2.68	2.34
		38 x 184	4.12	3.75	3.27	3.88	3.53	3.08
		38 x 235	5.27	4.79	4.18	4.96	4.50	3.93
		38 x 286	6.41	5.82	5.09	6.03	5.48	4.79
	No. 1 and No. 2	38 x 89	1.91	1.74	1.52	1.80	1.63	1.43
		38 x 140	3.01	2.73	2.39	2.83	2.57	2.25
		38 x 184	3.95	3.59	3.14	3.72	3.38	2.90
		38 x 235	5.05	4.59	3.84	4.75	4.32	3.55
		38 x 286	6.14	5.46	4.46	5.78	5.05	4.12
	No. 3	38 x 89	1.74	1.50	1.23	1.60	1.39	1.13
		38 x 140	2.48	2.15	1.75	2.29	1.98	1.62
		38 x 184	3.01	2.61	2.13	2.79	2.41	1.97
		38 x 235	3.69	3.19	2.61	3.41	2.95	2.41
		38 x 286	4.28	3.70	3.03	3.95	3.42	2.79
	Construction	38 x 89	1.85	1.68	1.47	1.74	1.58	1.38
	Standard	38 x 89	1.68	1.45	1.19	1.55	1.34	1.10

Table 9.23.4.2.-E *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	1.97	1.79	1.56	1.85	1.68	1.47
		38 x 140	3.10	2.81	2.46	2.91	2.65	2.31
		38 x 184	4.07	3.70	3.23	3.83	3.48	3.04
		38 x 235	5.20	4.72	4.12	4.89	4.44	3.88
		38 x 286	6.32	5.75	5.02	5.95	5.41	4.72
	No. 1 and No. 2	38 x 89	1.91	1.74	1.52	1.80	1.63	1.43
		38 x 140	3.01	2.73	2.39	2.83	2.57	2.25
		38 x 184	3.95	3.59	3.14	3.72	3.38	2.95
		38 x 235	5.05	4.59	4.01	4.75	4.32	3.72
		38 x 286	6.14	5.58	4.68	5.78	5.25	4.32
	No. 3	38 x 89	1.85	1.68	1.47	1.74	1.58	1.38
		38 x 140	2.91	2.65	2.16	2.74	2.45	2.00
		38 x 184	3.72	3.22	2.63	3.44	2.98	2.43
		38 x 235	4.55	3.94	3.22	4.20	3.64	2.97
		38 x 286	5.28	4.57	3.73	4.88	4.22	3.45
	Construction	38 x 89	1.85	1.68	1.47	1.74	1.58	1.38
	Standard	38 x 89	1.76	1.52	1.24	1.62	1.40	1.15

Table 9.23.4.2.-E *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	1.88	1.71	1.49	1.77	1.61	1.41
		38 x 140	2.96	2.69	2.35	2.79	2.53	2.21
		38 x 184	3.89	3.54	3.09	3.66	3.33	2.91
		38 x 235	4.97	4.52	3.94	4.68	4.25	3.71
		38 x 286	6.05	5.50	4.80	5.69	5.17	4.52
	No. 1 and No. 2	38 x 89	1.82	1.65	1.44	1.71	1.56	1.36
		38 x 140	2.86	2.60	2.27	2.69	2.45	2.14
		38 x 184	3.76	3.42	2.99	3.54	3.22	2.81
		38 x 235	4.81	4.37	3.82	4.52	4.11	3.59
		38 x 286	5.85	5.31	4.64	5.50	5.00	4.37
	No. 3	38 x 89	1.79	1.62	1.42	1.68	1.53	1.34
		38 x 140	2.81	2.56	2.16	2.65	2.40	2.00
		38 x 184	3.70	3.22	2.63	3.44	2.98	2.43
		38 x 235	4.55	3.94	3.22	4.20	3.64	2.97
		38 x 286	5.28	4.57	3.73	4.88	4.22	3.45
	Construction	38 x 89	1.79	1.62	1.42	1.68	1.53	1.34
	Standard	38 x 89	1.72	1.56	1.29	1.62	1.46	1.19

Table 9.23.4.2.-E *(continued)*
Maximum Spans for Roof Joists – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Joist Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Joist Spacing, mm			Joist Spacing, mm		
			300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	1.68	1.53	1.34	1.58	1.44	1.26
		38 x 140	2.65	2.40	2.10	2.49	2.26	1.98
		38 x 184	3.48	3.16	2.76	3.27	2.97	2.60
		38 x 235	4.44	4.04	3.53	4.18	3.80	3.32
		38 x 286	5.41	4.91	4.29	5.09	4.62	4.04
	No. 1 and No. 2	38 x 89	1.64	1.49	1.31	1.55	1.41	1.23
		38 x 140	2.59	2.35	2.05	2.43	2.21	1.93
		38 x 184	3.40	3.09	2.70	3.20	2.91	2.53
		38 x 235	4.34	3.94	3.35	4.09	3.71	3.10
		38 x 286	5.28	4.76	3.89	4.97	4.40	3.59
	No. 3	38 x 89	1.60	1.46	1.21	1.51	1.37	1.12
		38 x 140	2.45	2.12	1.73	2.26	1.96	1.60
		38 x 184	2.98	2.58	2.11	2.76	2.39	1.95
		38 x 235	3.65	3.16	2.58	3.37	2.92	2.38
		38 x 286	4.23	3.66	2.99	3.91	3.39	2.76
	Construction	38 x 89	1.60	1.46	1.27	1.51	1.37	1.20
	Standard	38 x 89	1.46	1.26	1.03	1.34	1.16	0.95

Table 9.23.4.2.-F
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Rafter Spacing, mm			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	3.41	3.10	2.71	2.98	2.71	2.37	2.71	2.46	2.15
		38 x 140	5.37	4.88	4.26	4.69	4.26	3.72	4.26	3.87	3.38
		38 x 184	7.05	6.41	5.60	6.16	5.60	4.89	5.60	5.09	4.44
		38 x 235	9.01	8.18	7.15	7.87	7.15	6.24	7.15	6.49	5.62
		38 x 286	10.96	9.96	8.70	9.58	8.70	7.40	8.70	7.90	6.52
	No. 1 and No. 2	38 x 89	3.27	2.97	2.59	2.86	2.59	2.27	2.59	2.36	2.06
		38 x 140	5.14	4.67	3.95	4.49	4.08	3.34	4.08	3.60	2.94
		38 x 184	6.76	5.88	4.80	5.74	4.97	4.06	5.06	4.38	3.58
		38 x 235	8.30	7.19	5.87	7.02	6.08	4.96	6.19	5.36	4.38
		38 x 286	9.63	8.34	6.81	8.14	7.05	5.76	7.18	6.22	5.08
	No. 3	38 x 89	2.65	2.30	1.87	2.24	1.94	1.58	1.98	1.71	1.40
		38 x 140	3.78	3.28	2.68	3.20	2.77	2.26	2.82	2.44	1.99
		38 x 184	4.61	3.99	3.26	3.89	3.37	2.75	3.43	2.97	2.43
		38 x 235	5.63	4.88	3.98	4.76	4.12	3.37	4.20	3.64	2.97
		38 x 286	6.53	5.66	4.62	5.52	4.78	3.91	4.87	4.22	3.44
	Construction	38 x 89	3.17	2.88	2.42	2.77	2.50	2.04	2.51	2.21	1.80
	Standard	38 x 89	2.56	2.22	1.81	2.17	1.88	1.53	1.91	1.65	1.35

Table 9.23.4.2.-F *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Rafter Spacing, mm			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600	300	400	600
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	3.36	3.06	2.67	2.94	2.67	2.33	2.67	2.43	2.12
		38 x 140	5.29	4.81	4.20	4.62	4.20	3.67	4.20	3.82	3.33
		38 x 184	6.96	6.32	5.52	6.08	5.52	4.82	5.52	5.02	4.38
		38 x 235	8.88	8.07	7.05	7.76	7.05	6.16	7.05	6.41	5.54
		38 x 286	10.81	9.82	8.58	9.45	8.58	7.28	8.58	7.80	6.42
	No. 1 and No. 2	38 x 89	3.27	2.97	2.59	2.86	2.59	2.27	2.59	2.36	2.06
		38 x 140	5.14	4.67	4.08	4.49	4.08	3.50	4.08	3.71	3.08
		38 x 184	6.76	6.14	5.04	5.90	5.21	4.26	5.31	4.60	3.75
		38 x 235	8.63	7.54	6.16	7.36	6.37	5.20	6.49	5.62	4.59
		38 x 286	10.11	8.75	7.15	8.54	7.40	6.04	7.53	6.52	5.33
	No. 3	38 x 89	3.17	2.83	2.31	2.76	2.39	1.95	2.44	2.11	1.72
		38 x 140	4.67	4.04	3.30	3.95	3.42	2.79	3.48	3.01	2.46
		38 x 184	5.68	4.92	4.02	4.80	4.16	3.40	4.23	3.67	2.99
		38 x 235	6.95	6.02	4.91	5.87	5.08	4.15	5.18	4.48	3.66
		38 x 286	8.06	6.98	5.70	6.81	5.90	4.82	6.01	5.20	4.25
	Construction	38 x 89	3.17	2.88	2.51	2.77	2.51	2.14	2.51	2.28	1.89
	Standard	38 x 89	2.68	2.32	1.90	2.27	1.96	1.60	2.00	1.73	1.41

Table 9.23.4.2.-F *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Rafter Spacing, mm			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	3.22	2.92	2.55	2.81	2.55	2.23	2.55	2.32	2.03
		38 x 140	5.06	4.60	4.02	4.42	4.02	3.51	4.02	3.65	3.19
		38 x 184	6.65	6.05	5.28	5.81	5.28	4.61	5.28	4.80	4.19
		38 x 235	8.50	7.72	6.74	7.42	6.74	5.89	6.74	6.13	5.35
		38 x 286	10.34	9.40	8.21	9.03	8.21	7.17	8.21	7.46	6.52
	No. 1 and No. 2	38 x 89	3.11	2.83	2.47	2.72	2.47	2.16	2.47	2.24	1.96
		38 x 140	4.90	4.45	3.89	4.28	3.89	3.40	3.89	3.53	3.08
		38 x 184	6.44	5.85	5.11	5.62	5.11	4.41	5.11	4.64	3.89
		38 x 235	8.22	7.47	6.38	7.18	6.52	5.39	6.52	5.82	4.75
		38 x 286	10.00	9.06	7.40	8.74	7.66	6.25	7.80	6.76	5.52
	No. 3	38 x 89	3.06	2.78	2.31	2.67	2.39	1.95	2.43	2.11	1.72
		38 x 140	4.67	4.04	3.30	3.95	3.42	2.79	3.48	3.01	2.46
		38 x 184	5.68	4.92	4.02	4.80	4.16	3.40	4.23	3.67	2.99
		38 x 235	6.95	6.02	4.91	5.87	5.08	4.15	5.18	4.48	3.66
		38 x 286	8.06	6.98	5.70	6.81	5.90	4.82	6.01	5.20	4.25
	Construction	38 x 89	3.06	2.78	2.43	2.67	2.43	2.12	2.43	2.20	1.93
	Standard	38 x 89	2.78	2.41	1.97	2.35	2.04	1.66	2.07	1.79	1.47

Table 9.23.4.2.-F *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 1.0 to 2.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1), 9.23.4.5.(1) and 9.23.14.10.(2)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m								
			Specified Snow Load, kPa								
			1.0			1.5			2.0		
			Rafter Spacing, mm			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	2.88	2.61	2.28	2.51	2.28	1.99	2.28	2.07	1.81
		38 x 140	4.53	4.11	3.59	3.95	3.59	3.14	3.59	3.26	2.85
		38 x 184	5.95	5.40	4.72	5.20	4.72	4.12	4.72	4.29	3.68
		38 x 235	7.60	6.90	6.03	6.64	6.03	5.11	6.03	5.48	4.51
		38 x 286	9.25	8.40	7.01	8.08	7.26	5.93	7.34	6.40	5.23
	No. 1 and No. 2	38 x 89	2.81	2.55	2.23	2.46	2.23	1.95	2.23	2.03	1.77
		38 x 140	4.42	4.02	3.44	3.86	3.51	2.91	3.51	3.14	2.56
		38 x 184	5.81	5.13	4.19	5.00	4.33	3.54	4.41	3.82	3.12
		38 x 235	7.24	6.27	5.12	6.12	5.30	4.33	5.40	4.67	3.82
		38 x 286	8.40	7.27	5.94	7.10	6.15	5.02	6.26	5.42	4.43
	No. 3	38 x 89	2.62	2.27	1.85	2.22	1.92	1.57	1.95	1.69	1.38
		38 x 140	3.74	3.24	2.65	3.16	2.74	2.24	2.79	2.42	1.97
		38 x 184	4.56	3.94	3.22	3.85	3.33	2.72	3.40	2.94	2.40
		38 x 235	5.57	4.82	3.94	4.71	4.08	3.33	4.15	3.60	2.94
		38 x 286	6.46	5.60	4.57	5.46	4.73	3.86	4.82	4.17	3.41
	Construction	38 x 89	2.74	2.49	2.11	2.40	2.18	1.90	2.18	1.93	1.57
	Standard	38 x 89	2.22	1.93	1.57	1.88	1.63	1.33	1.66	1.44	1.17

Table 9.23.4.2.-G
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.4.5.(1)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	38 x 89	2.51	2.28	1.99	2.37	2.15	1.88
		38 x 140	3.95	3.59	3.14	3.72	3.38	2.95
		38 x 184	5.20	4.72	4.12	4.89	4.44	3.83
		38 x 235	6.64	6.03	5.08	6.24	5.67	4.68
		38 x 286	8.08	7.23	5.90	7.60	6.65	5.43
	No. 1 and No. 2	38 x 89	2.41	2.19	1.86	2.27	2.06	1.71
		38 x 140	3.76	3.26	2.66	3.46	3.00	2.45
		38 x 184	4.58	3.96	3.24	4.21	3.65	2.98
		38 x 235	5.60	4.85	3.96	5.15	4.46	3.64
		38 x 286	6.50	5.63	4.59	5.98	5.17	4.23
	No. 3	38 x 89	1.79	1.55	1.26	1.64	1.42	1.16
		38 x 140	2.55	2.21	1.80	2.35	2.03	1.66
		38 x 184	3.10	2.69	2.20	2.86	2.47	2.02
		38 x 235	3.80	3.29	2.68	3.49	3.02	2.47
		38 x 286	4.41	3.82	3.12	4.05	3.51	2.87
	Construction	38 x 89	2.30	2.00	1.63	2.12	1.84	1.50
	Standard	38 x 89	1.73	1.50	1.22	1.59	1.38	1.12

Table 9.23.4.2.-G *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.4.5.(1)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	38 x 89	2.48	2.25	1.97	2.33	2.12	1.85
		38 x 140	3.90	3.54	3.10	3.67	3.33	2.91
		38 x 184	5.13	4.66	4.07	4.82	4.38	3.77
		38 x 235	6.55	5.95	5.01	6.16	5.60	4.61
		38 x 286	7.97	7.12	5.81	7.50	6.55	5.34
	No. 1 and No. 2	38 x 89	2.41	2.19	1.91	2.27	2.06	1.80
		38 x 140	3.79	3.42	2.79	3.57	3.14	2.57
		38 x 184	4.80	4.16	3.40	4.42	3.83	3.12
		38 x 235	5.87	5.08	4.15	5.40	4.68	3.82
		38 x 286	6.81	5.90	4.82	6.27	5.43	4.43
	No. 3	38 x 89	2.21	1.91	1.56	2.03	1.76	1.43
		38 x 140	3.15	2.73	2.23	2.90	2.51	2.05
		38 x 184	3.83	3.32	2.71	3.52	3.05	2.49
		38 x 235	4.68	4.06	3.31	4.31	3.73	3.05
		38 x 286	5.43	4.71	3.84	5.00	4.33	3.54
	Construction	38 x 89	2.33	2.09	1.71	2.20	1.93	1.57
	Standard	38 x 89	1.81	1.57	1.28	1.66	1.44	1.18

Table 9.23.4.2.-G *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.4.5.(1)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	38 x 89	2.37	2.15	1.88	2.23	2.03	1.77
		38 x 140	3.73	3.39	2.96	3.51	3.19	2.79
		38 x 184	4.90	4.45	3.89	4.61	4.19	3.66
		38 x 235	6.26	5.69	4.97	5.89	5.35	4.68
		38 x 286	7.62	6.92	5.90	7.17	6.52	5.43
	No. 1 and No. 2	38 x 89	2.29	2.08	1.82	2.16	1.96	1.71
		38 x 140	3.61	3.28	2.86	3.40	3.08	2.66
		38 x 184	4.74	4.31	3.52	4.46	3.96	3.23
		38 x 235	6.06	5.27	4.30	5.59	4.84	3.96
		38 x 286	7.06	6.11	4.99	6.49	5.62	4.59
	No. 3	38 x 89	2.21	1.91	1.56	2.03	1.76	1.43
		38 x 140	3.15	2.73	2.23	2.90	2.51	2.05
		38 x 184	3.83	3.32	2.71	3.52	3.05	2.49
		38 x 235	4.68	4.06	3.31	4.31	3.73	3.05
		38 x 286	5.43	4.71	3.84	5.00	4.33	3.54
	Construction	38 x 89	2.25	2.05	1.77	2.12	1.93	1.63
	Standard	38 x 89	1.87	1.62	1.33	1.72	1.49	1.22

Table 9.23.4.2.-G *(continued)*
Maximum Spans for Roof Rafters – Specified Roof Snow Loads 2.5 and 3.0 kPa
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(1) and 9.23.4.5.(1)

Commercial Designation	Grade	Rafter Size, mm	Maximum Span, m					
			Specified Snow Load, kPa					
			2.5			3.0		
			Rafter Spacing, mm			Rafter Spacing, mm		
			300	400	600	300	400	600
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	38 x 89	2.12	1.93	1.68	1.99	1.81	1.58
		38 x 140	3.33	3.03	2.65	3.14	2.85	2.49
		38 x 184	4.38	3.98	3.33	4.12	3.75	3.07
		38 x 235	5.60	4.99	4.08	5.27	4.59	3.75
		38 x 286	6.69	5.79	4.73	6.15	5.33	4.35
	No. 1 and No. 2	38 x 89	2.07	1.88	1.62	1.95	1.77	1.49
		38 x 140	3.26	2.84	2.32	3.02	2.61	2.13
		38 x 184	3.99	3.46	2.82	3.67	3.18	2.60
		38 x 235	4.88	4.23	3.45	4.49	3.89	3.17
		38 x 286	5.66	4.90	4.00	5.21	4.51	3.68
	No. 3	38 x 89	1.77	1.53	1.25	1.63	1.41	1.15
		38 x 140	2.52	2.19	1.78	2.32	2.01	1.64
		38 x 184	3.07	2.66	2.17	2.82	2.45	2.00
		38 x 235	3.76	3.25	2.66	3.45	2.99	2.44
		38 x 286	4.36	3.77	3.08	4.01	3.47	2.83
	Construction	38 x 89	2.01	1.74	1.42	1.85	1.60	1.31
	Standard	38 x 89	1.50	1.30	1.06	1.38	1.19	0.98

Table 9.23.4.2.-H
Maximum Spans for Built-up Floor Beams Supporting not more than One Floor[1][2]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m[3][4]	Maximum Span, m[5][6]								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	2.4	3.36	3.70	3.99	4.30	4.73	5.09	5.23	5.66	5.99
		3.0	3.12	3.44	3.70	3.99	4.39	4.73	4.84	5.34	5.66
		3.6	2.94	3.23	3.48	3.75	4.13	4.45	4.41	5.03	5.41
		4.2	2.79	3.07	3.31	3.52	3.92	4.23	4.09	4.72	5.14
		4.8	2.67	2.94	3.17	3.29	3.75	4.04	3.82	4.41	4.92
		5.4	2.54	2.83	3.04	3.11	3.59	3.89	3.60	4.16	4.65
		6.0	2.41	2.73	2.94	2.95	3.40	3.75	3.42	3.95	4.41
	No. 1 and No. 2	2.4	2.97	3.42	3.82	3.63	4.19	4.68	4.21	4.86	5.43
		3.0	2.65	3.06	3.42	3.24	3.75	4.19	3.76	4.35	4.86
		3.6	2.42	2.80	3.13	2.96	3.42	3.82	3.44	3.97	4.44
		4.2	2.24	2.59	2.89	2.74	3.17	3.54	3.18	3.67	4.11
		4.8	2.10	2.42	2.71	2.56	2.96	3.31	2.98	3.44	3.84
		5.4	1.98	2.28	2.55	2.42	2.79	3.12	2.81	3.24	3.62
		6.0	1.88	2.17	2.42	2.29	2.65	2.96	2.66	3.07	3.44
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	2.4	3.32	3.65	3.93	4.24	4.66	5.03	5.16	5.61	5.93
		3.0	3.08	3.39	3.65	3.93	4.33	4.66	4.76	5.27	5.61
		3.6	2.90	3.19	3.44	3.70	4.08	4.39	4.35	4.96	5.34
		4.2	2.75	3.03	3.27	3.47	3.87	4.17	4.02	4.65	5.07
		4.8	2.63	2.90	3.12	3.24	3.70	3.99	3.66	4.35	4.85
		5.4	2.49	2.79	3.00	2.95	3.53	3.83	3.32	4.10	4.58
		6.0	2.28	2.69	2.90	2.70	3.35	3.70	3.04	3.87	4.35
	No. 1 and No. 2	2.4	3.11	3.55	3.82	3.80	4.39	4.88	4.41	5.10	5.70
		3.0	2.78	3.21	3.55	3.40	3.93	4.39	3.95	4.56	5.10
		3.6	2.54	2.93	3.28	3.11	3.59	4.01	3.60	4.16	4.65
		4.2	2.35	2.72	3.04	2.88	3.32	3.71	3.34	3.85	4.31
		4.8	2.20	2.54	2.84	2.69	3.11	3.47	3.12	3.60	4.03
		5.4	2.07	2.39	2.68	2.54	2.93	3.27	2.94	3.40	3.80
		6.0	1.97	2.27	2.54	2.41	2.78	3.11	2.79	3.22	3.60

Table 9.23.4.2.-H *(continued)*
Maximum Spans for Built-up Floor Beams Supporting not more than One Floor(1)(2)
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m(3)(4)	Maximum Span, m(5)(6)								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	2.4	3.17	3.49	3.76	4.05	4.46	4.81	4.93	5.42	5.73
		3.0	2.95	3.24	3.49	3.76	4.14	4.46	4.58	5.04	5.42
		3.6	2.77	3.05	3.29	3.54	3.90	4.20	4.31	4.74	5.11
		4.2	2.63	2.90	3.12	3.36	3.70	3.99	4.09	4.51	4.85
		4.8	2.52	2.77	2.99	3.22	3.54	3.81	3.82	4.31	4.64
		5.4	2.42	2.67	2.87	3.09	3.41	3.67	3.60	4.14	4.46
		6.0	2.34	2.57	2.77	2.95	3.29	3.54	3.32	3.95	4.31
	No. 1 and No. 2	2.4	3.07	3.38	3.64	3.92	4.32	4.65	4.57	5.25	5.59
		3.0	2.85	3.14	3.38	3.52	4.01	4.32	4.09	4.72	5.25
		3.6	2.63	2.95	3.18	3.22	3.71	4.06	3.73	4.31	4.82
		4.2	2.44	2.80	3.02	2.98	3.44	3.84	3.46	3.99	4.46
		4.8	2.28	2.63	2.89	2.79	3.22	3.60	3.23	3.73	4.17
		5.4	2.15	2.48	2.77	2.63	3.03	3.39	3.05	3.52	3.93
		6.0	2.04	2.35	2.63	2.49	2.88	3.22	2.89	3.34	3.73
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	2.4	2.84	3.12	3.36	3.62	3.99	4.30	4.33	4.85	5.23
		3.0	2.63	2.90	3.12	3.34	3.70	3.99	3.88	4.47	4.85
		3.6	2.48	2.73	2.94	3.05	3.48	3.75	3.54	4.08	4.57
		4.2	2.31	2.59	2.79	2.82	3.26	3.57	3.28	3.78	4.23
		4.8	2.16	2.48	2.67	2.64	3.05	3.41	3.06	3.54	3.96
		5.4	2.04	2.35	2.57	2.49	2.87	3.21	2.89	3.34	3.73
		6.0	1.93	2.23	2.48	2.36	2.73	3.05	2.74	3.16	3.54
	No. 1 and No. 2	2.4	2.59	2.99	3.29	3.16	3.65	4.08	3.67	4.24	4.74
		3.0	2.31	2.67	2.99	2.83	3.27	3.65	3.28	3.79	4.24
		3.6	2.11	2.44	2.73	2.58	2.98	3.33	3.00	3.46	3.87
		4.2	1.95	2.26	2.52	2.39	2.76	3.09	2.77	3.20	3.58
		4.8	1.83	2.11	2.36	2.24	2.58	2.89	2.59	3.00	3.35
		5.4	1.72	1.99	2.23	2.11	2.43	2.72	2.45	2.82	3.16
		6.0	1.64	1.89	2.11	2.00	2.31	2.58	2.32	2.68	3.00

Notes to Table 9.23.4.2.-H:

(1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) When the floors have a concrete topping of not more than 51 mm, the spans must be multiplied by 0.8.

(3) Supported length means half the sum of the joist spans on both sides of the beam.

(4) Straight interpolation may be used for other supported lengths.

(5) Spans are clear spans between supports. For total span, add two bearing lengths.

(6) 3-ply beams with supported lengths greater than 4.2 m require 114 mm bearing. All other beams require 76 mm bearing.

Table 9.23.4.2.-I
Maximum Spans for Built-up Floor Beams Supporting not more than Two Floors[1][2]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m[3][4]	Maximum Span, m[5][6]								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	2.4	2.80	3.08	3.32	3.49	3.93	4.24	4.05	4.67	5.16
		3.0	2.55	2.86	3.08	3.12	3.60	3.93	3.62	4.18	4.67
		3.6	2.33	2.69	2.90	2.85	3.29	3.68	3.30	3.82	4.27
		4.2	2.16	2.49	2.75	2.64	3.04	3.40	2.99	3.53	3.95
		4.8	2.00	2.33	2.60	2.38	2.85	3.18	2.69	3.30	3.69
		5.4	1.82	2.20	2.45	2.17	2.68	3.00	2.45	3.08	3.48
		6.0	1.67	2.08	2.33	2.00	2.51	2.85	2.26	2.83	3.30
	No. 1 and No. 2	2.4	2.22	2.56	2.87	2.72	3.14	3.51	3.15	3.64	4.07
		3.0	1.99	2.29	2.56	2.43	2.80	3.14	2.82	3.25	3.64
		3.6	1.81	2.09	2.34	2.22	2.56	2.86	2.57	2.97	3.32
		4.2	1.68	1.94	2.17	2.05	2.37	2.65	2.38	2.75	3.07
		4.8	1.57	1.81	2.03	1.92	2.22	2.48	2.23	2.57	2.88
		5.4	1.48	1.71	1.91	1.81	2.09	2.34	2.10	2.43	2.71
		6.0	1.40	1.62	1.81	1.72	1.98	2.22	1.99	2.30	2.57
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	2.4	2.76	3.04	3.27	3.43	3.88	4.18	3.99	4.60	5.09
		3.0	2.51	2.82	3.04	2.97	3.55	3.88	3.34	4.12	4.60
		3.6	2.15	2.65	2.86	2.56	3.24	3.62	2.88	3.65	4.20
		4.2	1.90	2.40	2.72	2.26	2.85	3.35	2.55	3.21	3.87
		4.8	1.70	2.15	2.56	2.03	2.56	3.08	2.30	2.88	3.46
		5.4	1.56	1.95	2.35	1.86	2.32	2.79	2.11	2.62	3.14
		6.0	1.44	1.79	2.15	1.72	2.14	2.56	1.96	2.42	2.88
	No. 1 and No. 2	2.4	2.33	2.69	3.01	2.85	3.29	3.68	3.30	3.82	4.27
		3.0	2.08	2.41	2.69	2.55	2.94	3.29	2.96	3.41	3.82
		3.6	1.90	2.20	2.45	2.33	2.68	3.00	2.70	3.12	3.48
		4.2	1.76	2.03	2.27	2.15	2.49	2.78	2.50	2.88	3.22
		4.8	1.65	1.90	2.13	2.01	2.33	2.60	2.30	2.70	3.02
		5.4	1.55	1.79	2.00	1.86	2.19	2.45	2.11	2.54	2.84
		6.0	1.44	1.70	1.90	1.72	2.08	2.33	1.96	2.41	2.70

Table 9.23.4.2.-I *(continued)*
Maximum Spans for Built-up Floor Beams Supporting not more than Two Floors[1][2]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m[3][4]	Maximum Span, m[5][6]								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	2.4	2.64	2.91	3.13	3.37	3.71	4.00	4.05	4.52	4.87
		3.0	2.45	2.70	2.91	3.12	3.45	3.71	3.62	4.18	4.52
		3.6	2.31	2.54	2.73	2.79	3.24	3.49	3.14	3.82	4.25
		4.2	2.07	2.41	2.60	2.46	3.04	3.32	2.77	3.50	3.95
		4.8	1.85	2.31	2.48	2.21	2.79	3.17	2.50	3.14	3.69
		5.4	1.69	2.13	2.39	2.02	2.53	3.00	2.28	2.85	3.42
		6.0	1.56	1.95	2.31	1.86	2.32	2.79	2.11	2.62	3.14
	No. 1 and No. 2	2.4	2.41	2.79	3.03	2.95	3.41	3.81	3.42	3.95	4.42
		3.0	2.16	2.49	2.79	2.64	3.05	3.41	3.06	3.53	3.95
		3.6	1.97	2.27	2.54	2.41	2.78	3.11	2.79	3.23	3.61
		4.2	1.82	2.11	2.35	2.23	2.57	2.88	2.59	2.99	3.34
		4.8	1.71	1.97	2.20	2.09	2.41	2.69	2.42	2.79	3.12
		5.4	1.61	1.86	2.08	1.97	2.27	2.54	2.28	2.63	2.95
		6.0	1.53	1.76	1.97	1.86	2.15	2.41	2.11	2.50	2.79
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	2.4	2.29	2.60	2.80	2.80	3.23	3.57	3.24	3.75	4.19
		3.0	2.04	2.36	2.60	2.50	2.89	3.23	2.90	3.35	3.75
		3.6	1.87	2.16	2.41	2.28	2.64	2.95	2.65	3.06	3.42
		4.2	1.73	2.00	2.23	2.11	2.44	2.73	2.45	2.83	3.17
		4.8	1.62	1.87	2.09	1.98	2.28	2.55	2.29	2.65	2.96
		5.4	1.52	1.76	1.97	1.86	2.15	2.41	2.11	2.50	2.79
		6.0	1.44	1.67	1.87	1.72	2.04	2.28	1.96	2.37	2.65
	No. 1 and No. 2	2.4	1.94	2.24	2.50	2.37	2.73	3.06	2.75	3.17	3.55
		3.0	1.73	2.00	2.24	2.12	2.44	2.73	2.46	2.84	3.17
		3.6	1.58	1.83	2.04	1.93	2.23	2.50	2.24	2.59	2.90
		4.2	1.46	1.69	1.89	1.79	2.07	2.31	2.08	2.40	2.68
		4.8	1.37	1.58	1.77	1.67	1.93	2.16	1.94	2.24	2.51
		5.4	1.29	1.49	1.67	1.58	1.82	2.04	1.83	2.11	2.36
		6.0	1.22	1.41	1.58	1.50	1.73	1.93	1.74	2.01	2.24

Notes to Table 9.23.4.2.-I:

(1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) When the floors have a concrete topping of not more than 51 mm, the spans must be multiplied by 0.8.

(3) Supported length means half the sum of the joist spans on both sides of the beam.

(4) Straight interpolation may be used for other supported lengths.

(5) Spans are clear spans between supports. For total span, add two bearing lengths.

(6) 3-ply beams require 114 mm bearing. 4-ply and 5-ply beams with supported lengths greater than 3 m require 114 mm bearing. All other beams require 76 mm bearing.

Table 9.23.4.2.-J
Maximum Spans for Built-up Floor Beams Supporting not more than Three Floors[1][2]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m[3][4]	Maximum Span, m[5][6]								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	Select Structural	2.4	2.38	2.74	2.95	2.91	3.36	3.75	3.37	3.89	4.35
		3.0	2.13	2.46	2.74	2.60	3.00	3.36	2.92	3.48	3.89
		3.6	1.88	2.24	2.51	2.24	2.74	3.06	2.53	3.18	3.56
		4.2	1.66	2.08	2.32	1.99	2.49	2.84	2.25	2.81	3.29
		4.8	1.50	1.88	2.17	1.80	2.24	2.65	2.04	2.53	3.02
		5.4	1.38	1.71	2.05	1.65	2.04	2.44	1.88	2.31	2.75
		6.0	1.28	1.58	1.88	1.53	1.89	2.24	1.75	2.14	2.53
	No. 1 and No. 2	2.4	1.85	2.14	2.39	2.26	2.61	2.92	2.63	3.03	3.39
		3.0	1.66	1.91	2.14	2.02	2.34	2.61	2.35	2.71	3.03
		3.6	1.51	1.74	1.95	1.85	2.13	2.39	2.14	2.48	2.77
		4.2	1.40	1.62	1.81	1.71	1.98	2.21	1.99	2.29	2.56
		4.8	1.31	1.51	1.69	1.60	1.85	2.07	1.86	2.14	2.40
		5.4	1.23	1.42	1.59	1.51	1.74	1.95	1.75	2.02	2.26
		6.0	1.17	1.35	1.51	1.43	1.65	1.85	1.66	1.92	2.14
Hem – Fir (includes Western Hemlock and Amabilis Fir)	Select Structural	2.4	2.22	2.70	2.91	2.64	3.31	3.70	2.98	3.78	4.29
		3.0	1.85	2.35	2.70	2.21	2.79	3.31	2.50	3.14	3.78
		3.6	1.61	2.02	2.43	1.92	2.40	2.89	2.18	2.71	3.24
		4.2	1.43	1.78	2.14	1.71	2.13	2.54	1.95	2.40	2.86
		4.8	1.30	1.61	1.92	1.56	1.92	2.28	1.77	2.18	2.58
		5.4	1.19	1.47	1.74	1.44	1.76	2.08	1.64	2.00	2.35
		6.0	1.11	1.36	1.61	1.34	1.63	1.92	1.53	1.85	2.18
	No. 1 and No. 2	2.4	1.94	2.24	2.51	2.37	2.74	3.06	2.75	3.18	3.56
		3.0	1.74	2.00	2.24	2.12	2.45	2.74	2.46	2.84	3.18
		3.6	1.58	1.83	2.05	1.92	2.24	2.50	2.18	2.60	2.90
		4.2	1.43	1.69	1.89	1.71	2.07	2.32	1.95	2.40	2.69
		4.8	1.30	1.58	1.77	1.56	1.92	2.17	1.77	2.18	2.51
		5.4	1.19	1.47	1.67	1.44	1.76	2.04	1.64	2.00	2.35
		6.0	1.11	1.36	1.58	1.34	1.63	1.92	1.53	1.85	2.18

Table 9.23.4.2.-J *(continued)*
Maximum Spans for Built-up Floor Beams Supporting not more than Three Floors[1][2]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Commercial Designation	Grade	Supported Length, m[3][4]	Maximum Span, m[5][6]								
			Size of Built-up Beam, mm								
			3- 38x184	4- 38x184	5- 38x184	3- 38x235	4- 38x235	5- 38x235	3- 38x286	4- 38x286	5- 38x286
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce), Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	Select Structural	2.4	2.35	2.58	2.78	2.89	3.30	3.55	3.24	3.89	4.33
		3.0	2.02	2.40	2.58	2.40	3.00	3.30	2.71	3.42	3.89
		3.6	1.74	2.20	2.43	2.08	2.62	3.06	2.35	2.95	3.54
		4.2	1.55	1.94	2.31	1.85	2.31	2.77	2.10	2.61	3.12
		4.8	1.40	1.74	2.09	1.68	2.08	2.48	1.91	2.35	2.80
		5.4	1.28	1.59	1.90	1.54	1.90	2.26	1.76	2.16	2.55
		6.0	1.19	1.47	1.74	1.44	1.76	2.08	1.64	2.00	2.35
	No. 1 and No. 2	2.4	2.01	2.32	2.60	2.46	2.84	3.17	2.85	3.29	3.68
		3.0	1.80	2.08	2.32	2.20	2.54	2.84	2.55	2.95	3.29
		3.6	1.64	1.90	2.12	2.01	2.32	2.59	2.33	2.69	3.01
		4.2	1.52	1.75	1.96	1.85	2.15	2.40	2.10	2.49	2.78
		4.8	1.40	1.64	1.84	1.68	2.01	2.24	1.91	2.33	2.60
		5.4	1.28	1.55	1.73	1.54	1.89	2.12	1.76	2.16	2.46
		6.0	1.19	1.47	1.64	1.44	1.76	2.01	1.64	2.00	2.33
Northern Species (includes any Canadian species covered by the NLGA Standard Grading Rules)	Select Structural	2.4	1.91	2.20	2.46	2.33	2.69	3.01	2.70	3.12	3.49
		3.0	1.70	1.97	2.20	2.08	2.41	2.69	2.42	2.79	3.12
		3.6	1.56	1.80	2.01	1.90	2.20	2.46	2.18	2.55	2.85
		4.2	1.43	1.66	1.86	1.71	2.03	2.27	1.95	2.36	2.64
		4.8	1.30	1.56	1.74	1.56	1.90	2.13	1.77	2.18	2.47
		5.4	1.19	1.47	1.64	1.44	1.76	2.01	1.64	2.00	2.33
		6.0	1.11	1.36	1.56	1.34	1.63	1.90	1.53	1.85	2.18
	No. 1 and No. 2	2.4	1.61	1.86	2.08	1.97	2.28	2.55	2.29	2.64	2.96
		3.0	1.44	1.67	1.86	1.76	2.04	2.28	2.05	2.36	2.64
		3.6	1.32	1.52	1.70	1.61	1.86	2.08	1.87	2.16	2.41
		4.2	1.22	1.41	1.57	1.49	1.72	1.93	1.73	2.00	2.23
		4.8	1.14	1.32	1.47	1.40	1.61	1.80	1.62	1.87	2.09
		5.4	1.08	1.24	1.39	1.32	1.52	1.70	1.53	1.76	1.97
		6.0	1.02	1.18	1.32	1.25	1.44	1.61	1.45	1.67	1.87

Notes to Table 9.23.4.2.-J:

(1) Beam spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) When the floors have a concrete topping of not more than 51 mm, the spans must be multiplied by 0.8.

(3) Supported length means half the sum of the joist spans on both sides of the beam.

(4) Straight interpolation may be used for other supported lengths.

(5) Spans are clear spans between supports. For total span, add two bearing lengths.

(6) 3-ply beams with supported lengths greater than 4.2 m require 152 mm bearing. All other beams require 114 mm bearing.

Table 9.23.4.2.-K
Maximum Spans for Glued-Laminated Floor Beams – 20f-E Grade(1)
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Number of *Storeys* Supported	Beam Width, mm	Supported Length, m[2][3]	Maximum Span, m[4][5][6][7]						
			Beam Depth, mm						
			228	266	304	342	380	418	456
1	80	2.4	4.32	5.04	5.76	6.48	7.20	7.92	8.64
		3.0	3.87	4.51	5.15	5.80	6.44	7.09	7.73
		3.6	3.53	4.12	4.70	5.29	5.88	6.47	7.06
		4.2	3.27	3.81	4.36	4.90	5.44	5.99	6.53
		4.8	3.06	3.57	4.07	4.58	5.09	5.60	6.11
		5.4	2.88	3.36	3.84	4.32	4.80	5.28	5.76
		6.0	2.73	3.19	3.64	4.10	4.56	5.01	5.47
	130	2.4	5.51	6.43	7.35	8.26	9.18	10.10	11.02
		3.0	4.93	5.75	6.57	7.39	8.21	9.03	9.86
		3.6	4.50	5.25	6.00	6.75	7.50	8.25	9.00
		4.2	4.16	4.86	5.55	6.25	6.94	7.64	8.33
		4.8	3.90	4.54	5.19	5.84	6.49	7.14	7.79
		5.4	3.67	4.28	4.90	5.51	6.12	6.73	7.35
		6.0	3.48	4.07	4.65	5.23	5.81	6.39	6.97
2	80	2.4	3.28	3.83	4.37	4.92	5.47	6.01	6.56
		3.0	2.93	3.42	3.91	4.40	4.89	5.38	5.87
		3.6	2.68	3.12	3.57	4.02	4.46	4.91	5.36
		4.2	2.48	2.89	3.31	3.72	4.13	4.54	4.96
		4.8	2.32	2.71	3.09	3.48	3.86	4.25	4.64
		5.4	2.19	2.55	2.91	3.28	3.64	4.01	4.37
		6.0	2.07	2.42	2.77	3.11	3.46	3.80	4.15
	130	2.4	4.18	4.88	5.57	6.27	6.97	7.66	8.36
		3.0	3.74	4.36	4.99	5.61	6.23	6.85	7.48
		3.6	3.41	3.98	4.55	5.12	5.69	6.26	6.83
		4.2	3.16	3.69	4.21	4.74	5.27	5.79	6.32
		4.8	2.96	3.45	3.94	4.43	4.93	5.42	5.91
		5.4	2.79	3.25	3.72	4.18	4.64	5.11	5.57
		6.0	2.64	3.08	3.53	3.97	4.41	4.85	5.29

Table 9.23.4.2.-K *(continued)*
Maximum Spans for Glued-Laminated Floor Beams – 20f-E Grade(1)
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(3), 9.23.4.4.(3) and 9.23.8.1.(1)

Number of *Storeys* Supported	Beam Width, mm	Supported Length, m[2][3]	Maximum Span, m[4][5][6][7]						
			Beam Depth, mm						
			228	266	304	342	380	418	456
3	80	2.4	2.75	3.21	3.66	4.12	4.58	5.04	5.50
		3.0	2.46	2.87	3.28	3.69	4.10	4.51	4.92
		3.6	2.24	2.62	2.99	3.37	3.74	4.11	4.49
		4.2	2.08	2.42	2.77	3.12	3.46	3.81	4.15
		4.8	1.94	2.27	2.59	2.91	3.24	3.56	3.89
		5.4	1.83	2.14	2.44	2.75	3.05	3.36	3.66
		6.0	1.74	2.03	2.32	2.61	2.90	3.19	3.48
	130	2.4	3.50	4.09	4.67	5.25	5.84	6.42	7.01
		3.0	3.13	3.66	4.18	4.70	5.22	5.74	6.27
		3.6	2.86	3.34	3.81	4.29	4.77	5.24	5.72
		4.2	2.65	3.09	3.53	3.97	4.41	4.85	5.30
		4.8	2.48	2.89	3.30	3.72	4.13	4.54	4.95
		5.4	2.34	2.72	3.11	3.50	3.89	4.28	4.67
		6.0	2.22	2.58	2.95	3.32	3.69	4.06	4.43

Notes to Table 9.23.4.2.-K:

(1) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* on the floors does not exceed that specified for residential areas as described in Table 4.1.5.3.

(2) Supported length means half the sum of the joist spans on both sides of the beam.

(3) Straight interpolation may be used for other supported lengths.

(4) Spans are valid for glued-laminated timber conforming to CAN/CSA-O122 and CSA O177.

(5) Spans are clear spans between supports. For total span, add two bearing lengths.

(6) Provide a minimum bearing length of 89 mm. (Alternatively, the bearing length may be designed in accordance with Part 4.)

(7) Top edge of beam assumed to be fully laterally supported by joists.

Table 9.23.4.2.-L
Maximum Spans for Built-up Ridge Beams and Lintels Supporting the Roof and Ceiling Only, No. 1 or No. 2 Grade
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.2.(4), 9.23.4.5.(1), 9.23.12.3.(1) and (3), and 9.23.14.10.(2)

Commercial Designation	Beam or Lintel Size, mm	Maximum Span, m[1][2][3]				
		Specified Snow Load, kPa				
		1.0	1.5	2.0	2.5	3.0
Douglas Fir – Larch (includes Douglas Fir and Western Larch)	3-38x184	2.65	2.28	2.03	1.85	1.71
	4-38x184	3.06	2.64	2.35	2.14	1.97
	5-38x184	3.43	2.95	2.62	2.39	2.21
	3-38x235	3.25	2.79	2.49	2.26	2.09
	4-38x235	3.75	3.22	2.87	2.61	2.41
	5-38x235	4.19	3.60	3.21	2.92	2.70
	3-38x286	3.77	3.24	2.88	2.62	2.43
	4-38x286	4.35	3.74	3.33	3.03	2.80
	5-38x286	4.86	4.18	3.72	3.39	3.13
Hem – Fir (includes Western Hemlock and Amabilis Fir)	3-38x184	2.78	2.39	2.13	1.94	1.79
	4-38x184	3.21	2.76	2.46	2.24	2.07
	5-38x184	3.59	3.09	2.75	2.50	2.31
	3-38x235	3.40	2.93	2.61	2.37	2.19
	4-38x235	3.93	3.38	3.01	2.74	2.53
	5-38x235	4.39	3.78	3.36	3.06	2.83
	3-38x286	3.95	3.40	3.02	2.75	2.54
	4-38x286	4.56	3.92	3.49	3.18	2.94
	5-38x286	5.10	4.38	3.90	3.55	3.28
Spruce – Pine – Fir (includes Spruce (all species except Coast Sitka Spruce) Jack Pine, Lodgepole Pine, Balsam Fir and Alpine Fir)	3-38x184	2.88	2.48	2.21	2.01	1.86
	4-38x184	3.30	2.86	2.55	2.32	2.14
	5-38x184	3.55	3.10	2.82	2.59	2.40
	3-38x235	3.53	3.03	2.70	2.46	2.27
	4-38x235	4.07	3.50	3.12	2.84	2.62
	5-38x235	4.54	3.91	3.49	3.17	2.93
	3-38x286	4.09	3.52	3.13	2.85	2.63
	4-38x286	4.72	4.06	3.62	3.29	3.04
	5-38x286	5.28	4.54	4.04	3.68	3.40

Notes to Table 9.23.4.2.-L:

(1) Beam and lintel spans are calculated based on a maximum supported length of 4.9 m. Spans may be increased by 5% for supported lengths of not more than 4.3 m, by 10% for supported lengths of not more than 3.7 m, and by 25% for supported lengths of not more than 2.4 m.

(2) For ridge beams, supported length means half the sum of the rafter, joist or truss spans on both sides of the beam. For lintels, supported length means half the sum of truss, roof joist or rafter spans supported by the lintel plus the length of the overhang beyond the lintel.

(3) Provide minimum 76 mm bearing.

Table 9.23.12.3.-A
Maximum Spans for Douglas Fir – Larch Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,[2] mm	Maximum Span, m[3][4]					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Limited attic storage and ceiling	2-38x89	This Area Intentionally Left Blank					1.25
	2-38x140						1.78
	2-38x184						2.17
	2-38x235						2.65
	2-38x286						3.08
Roof and ceiling only (tributary width of 0.6 m maximum)[5]	2-38x89	2.68	2.34	2.13	1.97	1.86	1.97
	2-38x140	4.21	3.68	3.34	3.10	2.92	3.10
	2-38x184	5.50	4.84	4.39	4.08	3.84	4.08
	2-38x235	6.61	5.97	5.56	5.21	4.88	5.21
	2-38x286	7.66	6.92	6.44	6.09	5.66	6.09
Roof and ceiling only (tributary width of 4.9 m maximum)[6]	2-38x89	1.25	1.07	0.96	0.87	0.80	0.87
	2-38x140	1.78	1.53	1.36	1.24	1.15	1.24
	2-38x184	2.17	1.86	1.66	1.51	1.40	1.51
	2-38x235	2.65	2.28	2.03	1.85	1.71	1.85
	2-38x286	3.08	2.64	2.35	2.14	1.98	2.14
Roof, ceiling and 1 *storey* [3][6][7]	2-38x89	0.96	0.88	0.82	0.77	0.73	0.68
	2-38x140	1.37	1.26	1.17	1.10	1.04	0.97
	2-38x184	1.67	1.53	1.42	1.34	1.26	1.18
	2-38x235	2.04	1.88	1.74	1.63	1.54	1.44
	2-38x286	2.37	2.18	2.02	1.90	1.79	1.67
Roof, ceiling and 2 *storeys* [3][6][7]	2-38x89	0.86	0.81	0.77	0.73	0.70	0.61
	2-38x140	1.23	1.16	1.09	1.04	0.99	0.87
	2-38x184	1.50	1.41	1.33	1.27	1.21	1.06
	2-38x235	1.84	1.72	1.63	1.55	1.48	1.30
	2-38x286	2.13	2.00	1.89	1.80	1.72	1.51

Table 9.23.12.3.-A *(continued)*
Maximum Spans for Douglas Fir – Larch Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing(1)
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,(2) mm	Maximum Span, m(3)(4)					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Roof, ceiling and 3 *storeys* (3)(6)(7)	2-38x89	0.81	0.77	0.73	0.71	0.68	0.57
	2-38x140	1.15	1.10	1.05	1.01	0.97	0.82
	2-38x184	1.40	1.33	1.28	1.22	1.18	1.00
	2-38x235	1.71	1.63	1.56	1.50	1.44	1.22
	2-38x286	1.99	1.89	1.81	1.74	1.67	1.41

Notes to Table 9.23.12.3.-A:

(1) Where structural sheathing is used, lintel spans may be increased by 15%. Structural sheathing consists of a minimum 9.5 mm thick structural panel conforming to CSA O121, CSA O151, CSA O325 or CSA O437.0 fastened with at least two rows of fasteners to the exterior face of the lintel, and a single row to the top plates and studs. Fasteners shall conform to Table 9.23.3.5.-A.

(2) A single piece of 89 mm thick lumber may be used in lieu of 2 pieces of 38 mm thick lumber on edge.

(3) If floor joists span the full width of the *building* without support, lintel spans shall be reduced by 15% for "roof, ceiling and 1 *storey*," by 20% for "roof, ceiling and 2 *storeys*," and by 25% for "roof, ceiling and 3 *storeys*."

(4) For ends of lintels fully supported by walls, provide minimum 38 mm bearing for lintel spans up to 3 m, or minimum 76 mm bearing for lintel spans greater than 3 m.

(5) Spans for 0.6 m tributary width are calculated for lintels in end walls that support only a 0.6 m width of roof and ceiling, but do not support roof joists, roof rafters or roof trusses.

(6) Lintel spans are calculated based on a maximum floor joist, roof joist or rafter span of 4.9 m and a maximum roof truss span of 9.8 m. Lintel spans may be increased by 5% if rafter and joist spans are no greater than 4.3 m and roof truss spans are no greater than 8.6 m. Spans may be increased by 10% if rafter and joist spans are no greater than 3.7 m and roof truss spans are no greater than 7.4 m.

(7) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* does not exceed that specified for residential areas as described in Table 4.1.5.3.

Table 9.23.12.3.-B
Maximum Spans for Hem – Fir Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing(1)
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,(2) mm	Maximum Span, m(3)(4)					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Limited attic storage and ceiling	2-38x89	This Area Intentionally Left Blank					1.31
	2-38x140						1.87
	2-38x184						2.27
	2-38x235						2.78
	2-38x286						3.23
Roof and ceiling only (tributary width of 0.6 m maximum)(5)	2-38x89	2.68	2.34	2.13	1.97	1.86	1.97
	2-38x140	4.21	3.68	3.34	3.10	2.92	3.10
	2-38x184	5.50	4.84	4.39	4.08	3.84	4.08
	2-38x235	6.61	5.97	5.56	5.21	4.90	5.21
	2-38x286	7.66	6.92	6.44	6.09	5.82	6.09

Table 9.23.12.3.-B *(continued)*
Maximum Spans for Hem – Fir Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,[2] mm	Maximum Span, m[3][4]					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Roof and ceiling only (tributary width of 4.9 m maximum)[6]	2-38x89	1.31	1.13	1.00	0.91	0.84	0.91
	2-38x140	1.87	1.61	1.43	1.30	1.20	1.30
	2-38x184	2.27	1.95	1.74	1.58	1.42	1.58
	2-38x235	2.78	2.39	2.13	1.92	1.71	1.92
	2-38x286	3.23	2.77	2.47	2.17	1.94	2.17
Roof, ceiling and 1 *storey* [3][6][7]	2-38x89	1.01	0.93	0.86	0.81	0.76	0.69
	2-38x140	1.44	1.32	1.23	1.14	1.05	0.95
	2-38x184	1.75	1.61	1.47	1.34	1.23	1.12
	2-38x235	2.14	1.96	1.76	1.60	1.48	1.35
	2-38x286	2.49	2.22	2.00	1.82	1.69	1.55
Roof, ceiling and 2 *storeys* [3][6][7]	2-38x89	0.91	0.85	0.80	0.76	0.72	0.60
	2-38x140	1.29	1.21	1.13	1.05	0.98	0.82
	2-38x184	1.57	1.44	1.33	1.24	1.16	0.98
	2-38x235	1.90	1.73	1.60	1.49	1.40	1.19
	2-38x286	2.15	1.97	1.82	1.70	1.60	1.37
Roof, ceiling and 3 *storeys* [3][6][7]	2-38x89	0.85	0.81	0.77	0.74	0.69	0.55
	2-38x140	1.21	1.14	1.06	1.00	0.95	0.76
	2-38x184	1.43	1.33	1.25	1.18	1.12	0.91
	2-38x235	1.72	1.60	1.50	1.42	1.35	1.10
	2-38x286	1.95	1.82	1.72	1.63	1.55	1.27

Notes to Table 9.23.12.3.-B:

(1) Where structural sheathing is used, lintel spans may be increased by 15%. Structural sheathing consists of a minimum 9.5 mm thick structural panel conforming to CSA O121, CSA O151, CSA O325 or CSA O437.0 fastened with at least two rows of fasteners to the exterior face of the lintel, and a single row to the top plates and studs. Fasteners shall conform to Table 9.23.3.5.-A.

(2) A single piece of 89 mm thick lumber may be used in lieu of 2 pieces of 38 mm thick lumber on edge.

(3) If floor joists span the full width of the *building* without support, lintel spans shall be reduced by 15% for "roof, ceiling and 1 *storey*," by 20% for "roof, ceiling and 2 *storeys*," and by 25% for "roof, ceiling and 3 *storeys*."

(4) For ends of lintels fully supported by walls, provide minimum 38 mm bearing for lintel spans up to 3 m, or minimum 76 mm bearing for lintel spans greater than 3 m.

(5) Spans for 0.6 m tributary width are calculated for lintels in end walls that support only a 0.6 m width of roof and ceiling, but do not support roof joists, roof rafters or roof trusses.

(6) Lintel spans are calculated based on a maximum floor joist, roof joist or rafter span of 4.9 m and a maximum roof truss span of 9.8 m. Lintel spans may be increased by 5% if rafter and joist spans are no greater than 4.3 m and roof truss spans are no greater than 8.6 m. Spans may be increased by 10% if rafter and joist spans are no greater than 3.7 m and roof truss spans are no greater than 7.4 m.

(7) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* does not exceed that specified for residential areas as described in Table 4.1.5.3.

Table 9.23.12.3.-C
Maximum Spans for Spruce – Pine – Fir Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,[2] mm	Maximum Span, m[3][4]					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Limited attic storage and ceiling	2-38x89	This Area Intentionally Left Blank					1.27
	2-38x140						1.93
	2-38x184						2.35
	2-38x235						2.88
	2-38x286						3.34
Roof and ceiling only (tributary width of 0.6 m maximum)[5]	2-38x89	2.55	2.23	2.02	1.88	1.77	1.88
	2-38x140	4.01	3.50	3.18	2.96	2.78	2.96
	2-38x184	5.27	4.61	4.18	3.88	3.66	3.88
	2-38x235	6.37	5.76	5.34	4.96	4.67	4.96
	2-38x286	7.38	6.67	6.21	5.87	5.61	5.87
Roof and ceiling only (tributary width of 4.9 m maximum)[6]	2-38x89	1.27	1.11	1.01	0.93	0.87	0.93
	2-38x140	1.93	1.66	1.48	1.35	1.25	1.35
	2-38x184	2.35	2.02	1.80	1.64	1.52	1.64
	2-38x235	2.88	2.47	2.20	2.01	1.84	2.01
	2-38x286	3.34	2.87	2.56	2.33	2.09	2.33
Roof, ceiling and 1 *storey*[3][6][7]	2-38x89	1.05	0.96	0.89	0.84	0.79	0.74
	2-38x140	1.49	1.37	1.27	1.19	1.13	1.02
	2-38x184	1.82	1.67	1.55	1.44	1.33	1.20
	2-38x235	2.22	2.04	1.89	1.73	1.59	1.45
	2-38x286	2.58	2.36	2.15	1.96	1.81	1.66
Roof, ceiling and 2 *storeys* [3][6][7]	2-38x89	0.94	0.88	0.83	0.79	0.76	0.64
	2-38x140	1.34	1.26	1.19	1.13	1.06	0.88
	2-38x184	1.63	1.53	1.44	1.33	1.25	1.05
	2-38x235	1.99	1.87	1.72	1.60	1.50	1.27
	2-38x286	2.31	2.12	1.96	1.82	1.71	1.45

Table 9.23.12.3.-C *(continued)*
Maximum Spans for Spruce – Pine – Fir Lintels – No. 1 or No. 2 Grade – Non-structural Sheathing[1]
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Supporting	Lintel Size,[2] mm	Maximum Span, m[3][4]					
		Exterior Walls					Interior Walls
		Specified Snow Load, kPa					
		1.0	1.5	2.0	2.5	3.0	
Roof, ceiling and 3 *storeys* [3][6][7]	2-38x89	0.88	0.83	0.80	0.77	0.74	0.59
	2-38x140	1.25	1.19	1.14	1.08	1.02	0.81
	2-38x184	1.52	1.44	1.35	1.27	1.21	0.97
	2-38x235	1.86	1.73	1.62	1.53	1.45	1.17
	2-38x286	2.11	1.96	1.84	1.74	1.66	1.35

Notes to Table 9.23.12.3.-C:

(1) Where structural sheathing is used, lintel spans may be increased by 15%. Structural sheathing consists of a minimum 9.5 mm thick structural panel conforming to CSA O121, CSA O151, CSA O325 or CSA O437.0 fastened with at least two rows of fasteners to the exterior face of the lintel, and a single row to the top plates and studs. Fasteners shall conform to Table 9.23.3.5.-A.

(2) A single piece of 89 mm thick lumber may be used in lieu of 2 pieces of 38 mm thick lumber on edge.

(3) If floor joists span the full width of the *building* without support, lintel spans shall be reduced by 15% for "roof, ceiling and 1 *storey*," by 20% for "roof, ceiling and 2 *storeys*," and by 25% for "roof, ceiling and 3 *storeys*."

(4) For ends of lintels fully supported by walls, provide minimum 38 mm bearing for lintel spans up to 3 m, or minimum 76 mm bearing for lintel spans greater than 3 m.

(5) Spans for 0.6 m tributary width are calculated for lintels in end walls that support only a 0.6 m width of roof and ceiling, but do not support roof joists, roof rafters or roof trusses.

(6) Lintel spans are calculated based on a maximum floor joist, roof joist or rafter span of 4.9 m and a maximum roof truss span of 9.8 m. Lintel spans may be increased by 5% if rafter and joist spans are no greater than 4.3 m and roof truss spans are no greater than 8.6 m. Spans may be increased by 10% if rafter and joist spans are no greater than 3.7 m and roof truss spans are no greater than 7.4 m.

(7) Spans apply only where the floors serve residential areas as described in Table 4.1.5.3., or the uniformly distributed *live load* does not exceed that specified for residential areas as described in Table 4.1.5.3.

Table 9.23.12.3.-D
Maximum Spans for Glued-Laminated Timber Lintels – 20f-E Stress Grade – Exterior Walls – Roof and Ceiling Load Only
Forming Part of Sentences 9.3.2.8.(1), 9.23.4.5.(1) and 9.23.12.3.(1) and (3)

Lintel Size, mm	Maximum Span, m[1][2][3]														
	Specified Snow Load, kPa														
	1.0			1.5			2.0			2.5			3.0		
	Supported length, m[4][5]			Supported length, m[4] [5]			Supported length, m[4] [5]			Supported length, m[4] [5]			Supported length, m[4] [5]		
	2.4	3.6	4.8	2.4	3.6	4.8	2.4	3.6	4.8	2.4	3.6	4.8	2.4	3.6	4.8
130 x 304	6.23	5.63	5.24	5.63	5.09	4.73	5.24	4.73	4.40	4.95	4.48	4.17	4.73	4.28	3.87
80 x 380	6.52	5.89	5.48	5.89	5.32	4.96	5.48	4.96	4.52	5.19	4.69	4.11	4.96	4.39	3.80
130 x 342	6.80	6.15	5.72	6.15	5.56	5.17	5.72	5.17	4.81	5.41	4.89	4.55	5.17	4.67	4.35
80 x 418	7.00	6.33	5.89	6.33	5.72	5.32	5.89	5.32	4.96	5.57	5.03	4.52	5.32	4.81	4.18
130 x 380	7.36	6.65	6.19	6.65	6.01	5.59	6.19	5.59	5.21	5.86	5.29	4.92	5.59	5.06	4.70
80 x 456	7.48	6.76	6.29	6.76	6.10	5.68	6.29	5.68	5.29	5.95	5.37	4.93	5.68	5.13	4.56
130 x 418	7.91	7.15	6.65	7.15	6.46	6.01	6.65	6.01	5.59	6.29	5.68	5.29	6.01	5.43	5.05
80 x 494	7.94	7.17	6.68	7.17	6.48	6.03	6.68	6.03	5.61	6.31	5.71	5.31	6.03	5.45	4.94
80 x 532	8.39	7.58	7.06	7.58	6.85	6.38	7.06	6.38	5.93	6.67	6.03	5.61	6.38	5.76	5.32
130 x 456	8.44	7.63	7.10	7.63	6.89	6.41	7.10	6.41	5.97	6.71	6.07	5.65	6.41	5.80	5.39

Notes to Table 9.23.12.3.-D:

(1) Spans are valid for glued-laminated timber conforming to CAN/CSA-O122 and CSA O177.

(2) Provide minimum 89 mm bearing. (Alternatively, the bearing length may be calculated in accordance with Part 4.)

(3) Top edge of lintel assumed to be fully laterally supported.

(4) Supported length means half the length of trusses or rafters, plus the length of the overhang beyond the wall.

(5) For intermediate supported lengths, straight interpolation may be used.