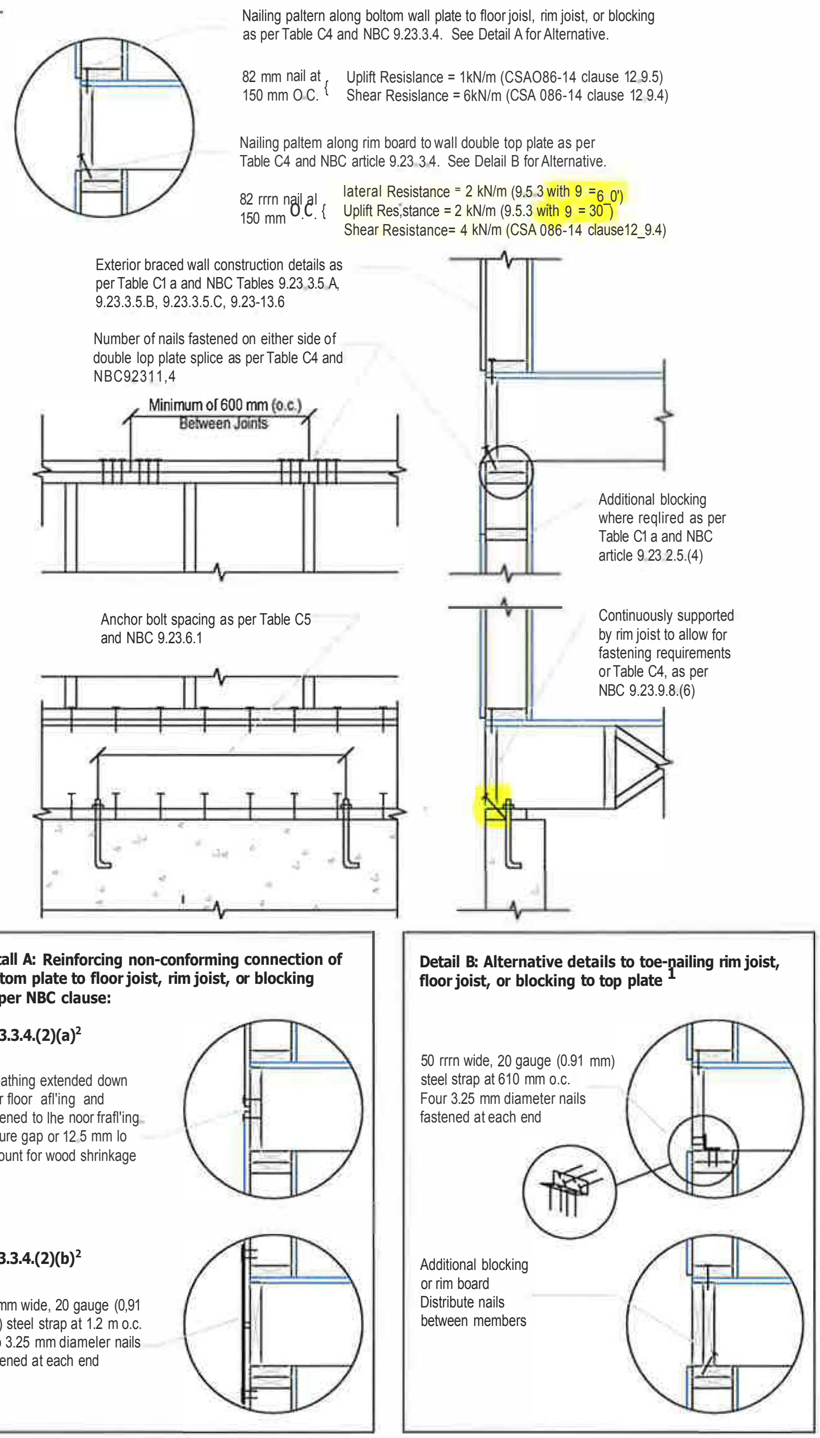
June 2017 Errata

Figure C5a

Exterior Braced Wall Construction Details



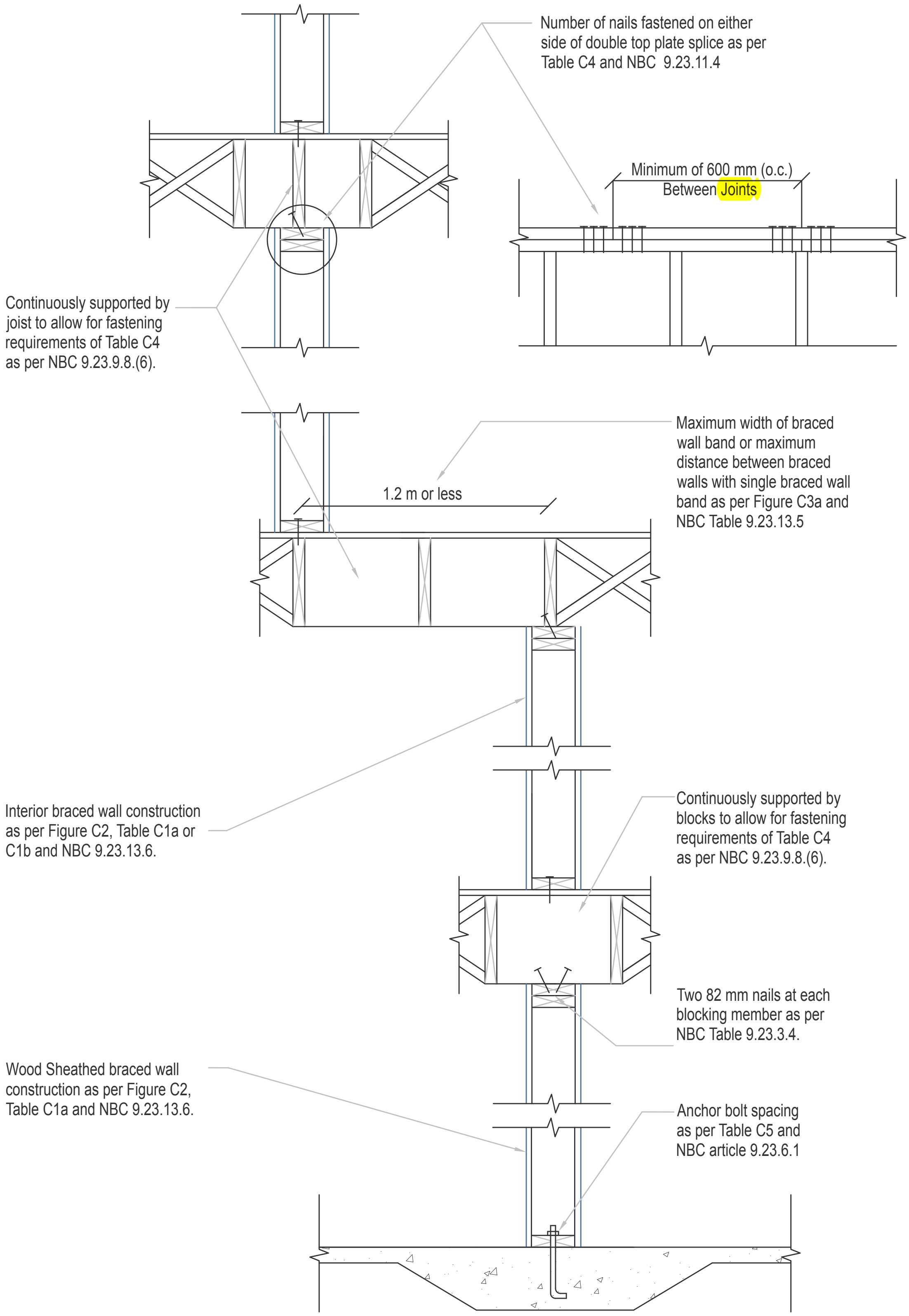
Notes:

1. Other connectors may be used provided the capacity of the connector is capable of transferring equivalent lateral, uplift, and shear forces of 82 mm toe-nails at 150 mm on centre.
2. Reinforcing non-conforming connection of bottom plate to floor joist, rim joist, or blocking connection applies to walls that meet the requirement of bottom plate nailing in the NBC Table 9.23.3.4 (400 mm o.c) but does not conform to the braced wall requirements of 150 mm o.c. Alternative details following NBC 9.23.3.4.(2)(a) and 9.23.3.4.(2)(b) are required to ensure transfer of lateral loads between storeys.

June 2017 Errata

Figure C5b

Interior Braced Wall Construction Details



June 2017 Errata

Calculating S(T) used for Seismic Load Tables 18-29

The following method simplifies the equivalent static force procedure of the NBC to pertain to low rise wood frame construction conforming to Part 9 sized buildings. By definition, this means that only "Normal" importance structures of three storeys or less may be designed. From an earthquake perspective, this eliminates many of the variables from the NBC procedure. This simplified method also assumes the building is located in seismic Site Classes A-E, constructed of wood sheathed (R_d=3) or gypsum sheathed shearwalls (R_d=2). The design of buildings located on site class F or with an R_d < 1.5 may not use this simplified method.

For the purposes of determining seismic loads using Part D of the Engineering Guide, it is necessary to determine the maximum design spectral acceleration (S(T)), based on the S_a(0.2), S_a(0.5) and PGA for the location of the structure. Design data can be obtained from Appendix C of the NBC 2015 or using the NRCan seismic hazard calculator on the Earthquakes Canada website:

Calculate the value of PGA_{ref} to be used with Table 1:

a) 0.8 PGA where the ratio S_a(0.2)/PGA<2.0, and

b) 1.0 PGA otherwise

The values of the site coefficient for the purpose of determining the maximum design spectral acceleration S(T) shall conform to Table 1 using linear interpolation for intermediate values of PGA_{ref}. If site class is unknown use Site Class C or Site Class E to calculate the site coefficient for spectral acceleration, whichever site class yields the highest S(T).

Table 1: Determine Site Coefficient for Spectral Acceleration F(0.2) and F(0.5)

Site Class	Site Cooefficient for Spectral Acceleration	$PGA_{ref} \leq 0.1$	$PGA_{ref} = 0.2$	$PGA_{ref} = 0.3$	$PGA_{ref} = 0.4$	$PGA_{ref} \geq 0.5$
A	F(0.2)	0.69	0.69	0.69	0.69	0.69
	F(0.5)	0.57	0.57	0.57	0.57	0.57
B	F(0.2)	0.77	0.77	0.77	0.77	0.77
	F(0.5)	0.65	0.65	0.65	0.65	0.65
C	F(0.2)	1.00	1.00	1.00	1.00	1.00
	F(0.5)	1.00	1.00	1.00	1.00	1.00
D	F(0.2)	1.24	1.09	1.00	0.94	0.90
	F(0.5)	1.47	1.30	1.20	1.14	1.10
E	F(0.2)	1.64	1.24	1.05	0.93	0.85
	F(0.5)	2.47	1.8	1.48	1.3	1.17

The design spectral acceleration values S(0.2) and S(0.5) used for determining the maximum design spectral acceleration S(T) are determined as follows:

$S(0.2) = MAX\ [F(0.2)S_a(0.2),\ F(0.5)S_a(0.5)]$ for $T \leq 0.2$ seconds
$S(0.5) = F(0.5)S_a(0.5)$ for $T = 0.5$ seconds

Where F(0.2) and F(0.5) have been determined from Table 1 and where $S_a(0.2)$ and $S_a(0.5)$ come from Appendix C of the NBC (or Table 2).

However, the maximum design spectral acceleration need not be greater than the following cap formula:

$$S(T) = MAX\ [2/3\ S(0.2),\ S(0.5)]$$

Example Calculation for S(T):

NBC 2015 Appendix C Design Data Table for Victoria, British Columbia:

$S_a(0.2) = 1.30$, $S_a(0.5) = 1.16$, PGA = 0.58

Calculation based Site Class C:

$$S_a(0.2)/PGA = 1.30/0.58 = 2.24$$

Therefore: $PGA_{ref} = (1.0)(PGA) = (1.0)(0.58) = 0.58$

Since $PGA_{ref} \geq 0.5$, no linear interpolation of Table 1 is required.
F(0.2) = 1.00, F(0.5) = 1.00

$$S(0.2) = MAX[F(0.2)S_a(0.2), F(0.5)S_a(0.5)]$$
$$= MAX[(1.00)(1.30), (1.00)(1.16)] = 1.30$$

$$S(0.5) = F(0.5)S_a(0.5) = (1.00)(1.16) = 1.16$$

$$S(T) = MAX[2/3\ S(0.2), S(0.5)]$$
$$= MAX[(2/3)(1.30), (1.16)] = 1.16$$

Calculation based Site Class E:

$$S_a(0.2)/PGA = 1.30/0.58 = 2.24$$

Therefore: $PGA_{ref} = (1.0)(PGA) = (1.0)(0.58) = 0.58$

Since $PGA_{ref} \geq 0.5$, no linear interpolation of Table 1 is required.
F(0.2) = 0.85, F(0.5) = 1.17

$$S(0.2) = MAX[F(0.2)S_a(0.2), F(0.5)S_a(0.5)]$$
$$= MAX[(0.85)(1.30), (1.17)(1.16)] = 1.36$$

$$S(0.5) = F(0.5)S_a(0.5) = (1.17)(1.16) = 1.36$$

$$S(T) = MAX[2/3\ S(0.2), S(0.5)]$$
$$= MAX[(2/3)(1.36), (1.36)] = 1.36$$

Therefore, based on checking both Site Class C and E, the worst case Maximum Design Spectra acceleration for Victoria British Columbia is S(T)=1.36, governed by Site Class E.

See Table 2 Maximum Design Spectral Acceleration on pages D-38 and D-39 for various locations in Canada.

Table 2: Maximum Design Spectral Acceleration based on Location and Site Class

	Design Data			S(T) based on Site Class				
Location	**$S_a(0.2)$**	**$S_a(0.5)$**	**PGA**	**A**	**B**	**C**	**D**	**E**
Abbotsford, BC	0.701	0.597	0.306	0.34	0.39	0.60	0.71	0.88
Alberni, BC	0.955	0.915	0.434	0.52	0.59	0.92	1.03	1.15
Baie-Saint-Paul, QC	1.620	0.872	0.968	0.75	0.83	1.08	0.97	1.02
Bamfield, BC	1.440	1.350	0.682	0.77	0.88	1.35	1.49	1.58
Bonavista, NL	0.083	0.067	0.047	0.02	0.03	0.07	0.10	0.17
Brandon, MB	0.054	0.031	0.031	0.04	0.04	0.04	0.05	0.08
Calgary, AB	0.192	0.126	0.098	0.09	0.10	0.13	0.19	0.31
Cape Race, NL	0.108	0.085	0.062	0.05	0.06	0.09	0.12	0.21
Charlottetown, PE	0.103	0.077	0.060	0.05	0.05	0.08	0.11	0.19
Chilliwack, BC	0.539	0.448	0.242	0.26	0.29	0.45	0.56	0.75
Comox, BC	0.685	0.662	0.317	0.38	0.43	0.66	0.79	0.96
Courtenay, BC	0.692	0.670	0.321	0.38	0.44	0.67	0.80	0.97
Cowley, AB	0.282	0.198	0.130	0.13	0.14	0.20	0.28	0.45
Crofton, BC	1.130	1.040	0.491	0.59	0.68	1.04	1.15	1.23
Dawson, YT	0.396	0.277	0.185	0.18	0.20	0.28	0.37	0.53
Destruction Bay, YT	1.540	1.150	0.693	0.71	0.79	1.15	1.27	1.35
Dorval, QC	0.600	0.316	0.382	0.28	0.31	0.40	0.40	0.46
Duncan, BC	1.170	1.090	0.513	0.62	0.71	1.09	1.20	1.28
Fredericton, NB	0.210	0.127	0.133	0.10	0.11	0.14	0.19	0.31
Gatineau, QC	0.442	0.238	0.283	0.20	0.23	0.29	0.31	0.41
Gold River, BC	1.010	0.988	0.466	0.56	0.64	0.99	1.10	1.20
Haines Junction, YT	0.973	0.691	0.467	0.45	0.50	0.69	0.77	0.84
Halifax, NS	0.110	0.082	0.064	0.05	0.06	0.08	0.12	0.20
Hamilton, ON	0.260	0.128	0.168	0.12	0.13	0.17	0.21	0.29
Inuvik, NT	0.308	0.223	0.145	0.14	0.16	0.22	0.31	0.48
Iqaluit, NU	0.087	0.065	0.051	0.04	0.04	0.07	0.10	0.16
Jordan River, BC	1.400	1.310	0.639	0.75	0.85	1.31	1.44	1.53
Kelowna, BC	0.143	0.122	0.066	0.07	0.08	0.12	0.18	0.30
Kingston, ON	0.161	0.110	0.098	0.07	0.08	0.11	0.16	0.27
La Malbaie, QC	1.730	0.954	1.040	0.80	0.89	1.15	1.05	1.12
La Pocatiere, QC	1.510	0.817	0.927	0.69	0.78	1.01	0.91	0.96
Ladner, BC	0.924	0.827	0.399	0.47	0.54	0.83	0.94	1.08
Ladysmith, BC	1.100	1.020	0.482	0.58	0.66	1.02	1.13	1.22
Langford, BC	1.320	1.190	0.590	0.68	0.77	1.19	1.31	1.39
Langley, BC	0.772	0.674	0.335	0.38	0.44	0.67	0.79	0.96
Lethbridge, AB	0.164	0.125	0.087	0.08	0.08	0.13	0.18	0.31
London, ON	0.108	0.070	0.064	0.05	0.06	0.07	0.10	0.17
Masset, BC	0.791	0.744	0.364	0.42	0.48	0.74	0.86	1.02
Mattawa, ON	0.446	0.237	0.285	0.21	0.23	0.30	0.32	0.41
Mission City, BC	0.644	0.550	0.283	0.31	0.36	0.55	0.67	0.84
Mississauga, ON	0.219	0.115	0.141	0.10	0.11	0.15	0.18	0.27
Moncton, NB	0.158	0.100	0.098	0.07	0.08	0.11	0.15	0.25
Montreal, QC	0.595	0.311	0.379	0.27	0.31	0.40	0.40	0.46
Moose Jaw, SK	0.096	0.058	0.057	0.04	0.05	0.06	0.09	0.14
Nanaimo, BC	1.020	0.942	0.446	0.54	0.61	0.94	1.06	1.17
New Westminster, BC	0.800	0.704	0.347	0.40	0.46	0.70	0.82	0.98
Niagara Falls, ON	0.321	0.157	0.207	0.15	0.16	0.21	0.24	0.32
North Vancouver, BC	0.794	0.699	0.345	0.40	0.45	0.70	0.82	0.98

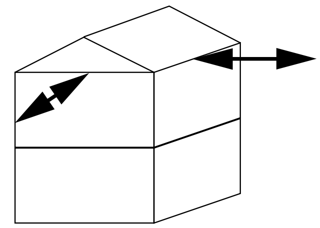
Location	Design Data			S(T) based on Site Class				
	$S_a(0.2)$	$S_a(0.5)$	PGA	A	B	C	D	E
Ottawa, ON	0.439	0.237	0.281	0.20	0.23	0.29	0.31	0.41
Parksville, BC	0.917	0.859	0.405	0.49	0.56	0.86	0.98	1.11
Port Alberni, BC	0.987	0.946	0.450	0.54	0.61	0.95	1.06	1.17
Port Alice, BC	1.600	1.270	0.689	0.74	0.83	1.27	1.40	1.49
Port Renfrew, BC	1.440	1.350	0.668	0.77	0.88	1.35	1.49	1.58
Prince Albert, SK	0.055	0.034	0.032	0.03	0.03	0.04	0.05	0.08
Prince George BC	0.113	0.089	0.049	0.05	0.06	0.09	0.13	0.22
Qualicum Beach, BC	0.888	0.838	0.395	0.48	0.54	0.84	0.96	1.10
Quebec, QC	0.493	0.265	0.618	0.23	0.25	0.33	0.30	0.31
Queen Charlotte, BC	1.620	1.370	0.757	0.78	0.89	1.37	1.51	1.60
Red Deer AB	0.131	0.085	0.078	0.06	0.07	0.09	0.12	0.21
Resolute Island, NU	0.194	0.105	0.124	0.09	0.10	0.13	0.16	0.26
Richmond, BC	0.885	0.787	0.383	0.45	0.51	0.79	0.91	1.05
Riviere-du-loop, QC	1.160	0.616	0.724	0.53	0.60	0.77	0.70	0.72
Roberval, QC	0.688	0.353	0.430	0.32	0.35	0.46	0.45	0.49
Rockland, ON	0.510	0.266	0.328	0.23	0.26	0.34	0.35	0.43
Saguenay, QC	0.791	0.425	0.491	0.36	0.41	0.53	0.50	0.56
Saint Andrews, NB	0.874	0.436	0.544	0.40	0.45	0.58	0.54	0.55
Saint John, NB	0.199	0.121	0.125	0.09	0.10	0.13	0.18	0.30
Sandspit, BC	1.310	1.160	0.603	0.66	0.75	1.16	1.28	1.36
Sechelt, BC	0.828	0.745	0.363	0.42	0.48	0.75	0.87	1.02
Sherbrooke, QC	0.187	0.129	0.115	0.09	0.10	0.13	0.19	0.32
Sidney, BC	1.230	1.100	0.545	0.63	0.72	1.10	1.21	1.29
Simon Fraser, BC	0.768	0.673	0.333	0.38	0.44	0.67	0.79	0.96
Smith River, BC	0.705	0.447	0.354	0.32	0.36	0.47	0.54	0.69
Sooke, BC	1.340	1.240	0.605	0.71	0.81	1.24	1.36	1.45
Squamish, BC	0.600	0.517	0.266	0.29	0.34	0.52	0.64	0.82
St. Anthony, NL	0.073	0.057	0.041	0.03	0.04	0.06	0.08	0.14
St. John's, NL	0.090	0.073	0.052	0.04	0.05	0.07	0.11	0.18
St-Georges-de-Cacouna, QC	0.857	0.478	0.533	0.39	0.44	0.57	0.54	0.60
Summerside, PE	0.133	0.089	0.082	0.06	0.07	0.09	0.13	0.22
Surrey, BC	0.786	0.690	0.341	0.39	0.45	0.69	0.81	0.97
Sydney, NS	0.108	0.083	0.063	0.05	0.06	0.08	0.12	0.21
Tahsis, BC	1.350	1.190	0.605	0.68	0.77	1.19	1.31	1.39
Temiscaming, QC	0.820	0.411	0.516	0.38	0.42	0.55	0.51	0.53
Tofino, BC	1.460	1.360	0.695	0.78	0.88	1.36	1.50	1.59
Toronto, ON	0.249	0.126	0.160	0.11	0.13	0.17	0.20	0.29
Trois-Riviere, QC	0.366	0.200	0.234	0.17	0.19	0.24	0.27	0.38
Ucluelet, BC	1.480	1.380	0.708	0.79	0.90	1.38	1.52	1.61
Vancouver, BC (City Hall)	0.848	0.751	0.369	0.43	0.49	0.75	0.87	1.02
Vancouver, BC (Granville)	0.863	0.765	0.375	0.44	0.50	0.77	0.88	1.03
Vernon, BC	0.133	0.108	0.061	0.06	0.07	0.11	0.16	0.27
Victoria, BC (Gonzales)	1.300	1.150	0.576	0.66	0.75	1.15	1.27	1.35
Victoria, BC (Mt. Tolmie)	1.290	1.140	0.573	0.65	0.74	1.14	1.25	1.33
Victoria, BC	1.300	1.160	0.580	0.66	0.75	1.16	1.28	1.36
West Vancouver, BC	0.818	0.721	0.356	0.41	0.47	0.72	0.84	0.99
Whistler, BC	0.439	0.357	0.203	0.20	0.23	0.36	0.46	0.64
White Rock, BC	0.868	0.765	0.376	0.44	0.50	0.77	0.88	1.03
Whitehorse, NT	0.334	0.258	0.154	0.15	0.17	0.26	0.36	0.54
Yellowknife, NT	0.052	0.032	0.030	0.02	0.03	0.03	0.05	0.08
Youbou, BC	1.200	1.130	0.536	0.64	0.73	1.13	1.24	1.32

Load 20

Seismic Loads at Roof Diaphragm

2 Storey Building

Total Factored Diaphragm Force (kN)



S(T)	Specified roof snow load kPa	8					12					16				
		Building dimension perpendicular to roof ridge (m) / Building dimension parallel to roof ridge (m)														
		8	12	16	20	24	8	12	16	20	24	8	12	16	20	24
0.2	1	5.8	8.2	11	13	15	8.7	12	16	19	23	12	16	21	26	30
	1.5	6.4	9.0	12	14	17	9.5	13	17	21	25	13	18	23	28	34
	2	6.9	10	13	16	19	10	15	19	23	28	14	20	25	31	37
	2.5	7.4	11	14	17	20	11	16	21	25	30	15	21	27	34	40
	3	8.0	11	15	18	22	12	17	22	27	32	16	23	30	36	43
0.4	1	12	16	21	26	31	17	24	31	38	45	23	33	42	51	61
	1.5	13	18	23	29	34	19	27	35	43	50	26	36	46	57	67
	2	14	20	26	32	38	21	29	38	47	55	28	39	51	62	74
	2.5	15	21	28	34	41	22	32	41	51	60	30	42	55	67	80
	3	16	23	30	37	44	24	34	44	54	65	32	46	59	73	86
0.6	1	17	25	32	39	46	26	37	47	58	68	35	49	63	77	91
	1.5	19	27	35	43	51	28	40	52	64	76	39	54	70	85	100
	2	21	30	38	47	56	31	44	57	70	83	42	59	76	93	110
	2.5	22	32	42	51	61	33	47	62	76	90	45	64	82	100	120
	3	24	34	45	55	66	36	51	66	82	97	48	68	89	110	130
0.8	1	23	33	43	52	62	35	49	63	77	91	47	66	84	100	120
	1.5	25	36	47	58	69	38	54	69	85	100	51	72	93	110	130
	2	28	39	51	63	75	41	59	76	93	110	56	79	100	120	150
	2.5	30	43	56	68	81	44	63	82	100	120	60	85	110	130	160
	3	32	46	60	74	88	48	68	88	110	130	64	91	120	150	170

Notes:

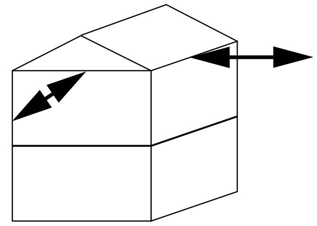
Tabulated values are valid for the following assumptions:

1. Gypsum contributing to shearwall resistance (R_d=2). If contribution of gypsum is ignored in shearwall resistance, values may be reduced by 33% (R_d=3).
2. Roof dead load of 0.5 kPa. For roof dead loads of 1.0 kPa loads must be increased by 45%.
3. Exterior wall dead load of 0.32 kPa. For exterior wall dead loads of 0.70 kPa loads must be increased by 35%. For exterior wall dead loads of 1.2 kPa loads must be increased by 80%.
4. Floor dead load (including partition load) of 1.0 kPa. For floor dead loads (including partition loads) of 1.8 kPa loads must be increased by 10%.
5. Storey height up to 3.5 m.
6. 4 in 12 roof slope. When the roof slope is 12 in 12 tabular values must be increased 25%. Interprolation may be used for roof slopes between 4 in 12 and 12 in 12.
7. S(T) determine following procedure on pages D-36 to D-37.
8. Importance factor of 1.0.

June 2017 Errata

Load 20 (con't)

Seismic Loads at Roof Diaphragm



2 Storey Building

Total Factored Diaphragm Force (kN)

S(T)	Specified roof snow load kPa	20: 8	20: 12	20: 16	20: 20	20: 24	24: 8	24: 12	24: 16	24: 20	24: 24
		Building dimension perpendicular to roof ridge (m) 20					24				
		Building dimension parallel to roof ridge (m) 8	12	16	20	24	8	12	16	20	24
0.2	1	15	21	27	32	38	18	25	32	39	46
	1.5	16	23	29	36	42	20	28	36	44	51
	2	18	25	32	39	46	22	30	39	48	56
	2.5	19	27	35	42	50	23	33	42	51	61
	3	20	29	37	46	54	25	35	45	55	66
0.4	1	30	42	53	65	76	37	51	65	79	93
	1.5	33	46	59	72	85	40	56	71	87	100
	2	35	50	64	78	93	43	61	78	95	110
	2.5	38	54	69	85	100	47	65	84	100	120
	3	41	58	75	91	110	50	70	90	110	130
0.6	1	45	62	80	97	110	55	76	97	120	140
	1.5	49	69	88	110	130	60	84	110	130	150
	2	53	75	96	120	140	65	91	120	140	170
	2.5	57	81	100	130	150	70	98	130	150	180
	3	61	86	110	140	160	74	110	140	170	200
0.8	1	60	83	110	130	150	74	100	130	160	190
	1.5	65	91	120	140	170	80	110	140	170	210
	2	71	99	130	160	190	87	120	160	190	220
	2.5	76	110	140	170	200	93	130	170	210	240
	3	81	120	150	180	220	99	140	180	220	260

Notes:

Tabulated values are valid for the following assumptions:

1. Gypsum contributing to shearwall resistance (R_d=2). If contribution of gypsum is ignored in shearwall resistance, values may be reduced by 33% (R_d=3).
2. Roof dead load of 0.5 kPa. For roof dead loads of 1.0 kPa loads must be increased by 45%.
3. Exterior wall dead load of 0.32 kPa. For exterior wall dead loads of 0.70 kPa loads must be increased by 35%. For exterior wall dead loads of 1.2 kPa loads must be increased by 80%.
4. Floor dead load (including partition load) of 1.0 kPa. For floor dead loads (including partition loads) of 1.8 kPa loads must be increased by 15%.
5. Storey height up to 3.5 m.
6. 4 in 12 roof slope. When the roof slope is 12 in 12 tabular values must be increased 35%. Interprolation may be used for roof slopes between 4 in 12 and 12 in 12.
7. S(T) determine following procedure on pages D-36 to D-37.
8. Importance factor of 1.0.

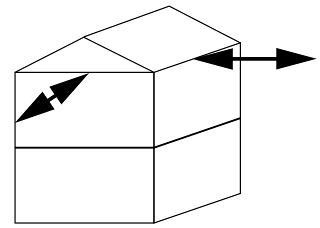
June 2017 Errata

Load 20 (con't)

Seismic Loads at Roof Diaphragm

2 Storey Building

Total Factored Diaphragm Force (kN)



S(T)	Specified roof snow load kPa	Building dimension perpendicular to roof ridge (m): 8					12					16				
		Building dimension parallel to roof ridge (m): 8	12	16	20	24	8	12	16	20	24	8	12	16	20	24
1.0	1	29	41	53	65	77	43	61	78	96	110	59	82	110	130	150
	1.5	32	45	59	72	86	47	67	87	110	130	64	90	120	140	170
	2	34	49	64	79	94	52	73	95	120	140	70	98	130	160	180
	2.5	37	53	69	86	100	55	79	100	130	150	75	110	140	170	200
	3	40	57	75	92	110	59	85	110	140	160	80	110	150	180	220
1.2	1	35	49	64	78	93	52	73	94	120	140	70	98	130	150	180
	1.5	38	54	70	87	100	57	81	100	130	150	77	110	140	170	200
	2	41	59	77	95	110	62	88	110	140	170	83	120	150	190	220
	2.5	45	64	83	100	120	67	95	120	150	180	90	130	160	200	240
	3	48	69	90	110	130	71	100	130	160	190	96	140	180	220	260
1.4	1	41	58	74	91	110	61	85	110	130	160	82	110	150	180	210
	1.5	44	63	82	100	120	66	94	120	150	180	90	130	160	200	240
	2	48	69	90	110	130	72	100	130	160	190	97	140	180	220	260
	2.5	52	75	97	120	140	78	110	140	180	210	100	150	190	240	280
	3	56	80	100	130	150	83	120	150	190	230	110	160	210	250	300
1.6	1	46	66	85	100	120	69	97	130	150	180	94	130	170	210	240
	1.5	51	72	94	120	140	76	110	140	170	200	100	140	190	230	270
	2	55	79	100	130	150	82	120	150	190	220	110	160	200	250	290
	2.5	59	85	110	140	160	89	130	160	200	240	120	170	220	270	320
	3	64	92	120	150	180	95	140	180	220	260	130	180	240	290	340

Notes:

Tabulated values are valid for the following assumptions:

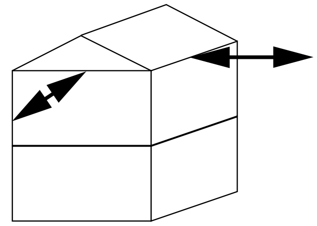
1. Gypsum contributing to shearwall resistance (R_d=2). If contribution of gypsum is ignored in shearwall resistance, values may be reduced by 33% (R_d=3).
2. Roof dead load of 0.5 kPa. For roof dead loads of 1.0 kPa loads must be increased by 45%.
3. Exterior wall dead load of 0.32 kPa. For exterior wall dead loads of 0.70 kPa loads must be increased by 35%. For exterior wall dead loads of 1.2 kPa loads must be increased by 80%.
4. Floor dead load (including partition load) of 1.0 kPa. For floor dead loads (including partition loads) of 1.8 kPa loads must be increased by 10%.
5. Storey height up to 3.5 m.
6. 4 in 12 roof slope. When the roof slope is 12 in 12 tabular values must be increased 25%. Interprolation may be used for roof slopes between 4 in 12 and 12 in 12.
7. S(T) determine following procedure on pages D-36 to D-37.
8. Importance factor of 1.0.

Load 20 (con't)

Seismic Loads at Roof Diaphragm

2 Storey Building

Total Factored Diaphragm Force (kN)



		Building dimension perpendicular to roof ridge (m)									
		20					24				
		Building dimension parallel to roof ridge (m)									
S(T)	Specified roof snow load kPa	8	12	16	20	24	8	12	16	20	24
1.0	1	75	100	130	160	190	92	130	160	200	230
	1.5	82	110	150	180	210	100	140	180	220	260
	2	89	120	160	200	230	110	150	190	240	280
	2.5	95	130	170	210	250	120	160	210	260	300
	3	100	140	190	230	270	120	180	230	280	330
1.2	1	90	120	160	190	230	110	150	190	240	280
	1.5	98	140	180	210	250	120	170	210	260	310
	2	110	150	190	240	280	130	180	230	290	340
	2.5	110	160	210	250	300	140	200	250	310	370
	3	120	170	220	270	330	150	210	270	330	390
1.4	1	110	150	190	230	270	130	180	230	280	320
	1.5	110	160	210	250	300	140	200	250	300	360
	2	120	170	220	270	320	150	210	270	330	390
	2.5	130	190	240	300	350	160	230	290	360	430
	3	140	200	260	320	380	170	250	320	390	460
1.6	1	120	170	210	260	310	150	200	260	320	370
	1.5	130	180	230	290	340	160	220	290	350	410
	2	140	200	260	310	370	170	240	310	380	450
	2.5	150	210	280	340	400	190	260	340	410	490
	3	160	230	300	370	430	200	280	360	440	520

Notes:

Tabulated values are valid for the following assumptions:

1. Gypsum contributing to shearwall resistance (R_d=2). If contribution of gypsum is ignored in shearwall resistance, values may be reduced by 33% (R_d=3).
2. Roof dead load of 0.5 kPa. For roof dead loads of 1.0 kPa loads must be increased by 45%.
3. Exterior wall dead load of 0.32 kPa. For exterior wall dead loads of 0.70 kPa loads must be increased by 35%. For exterior wall dead loads of 1.2 kPa loads must be increased by 80%.
4. Floor dead load (including partition load) of 1.0 kPa. For floor dead loads (including partition loads) of 1.8 kPa loads must be increased by 15%.
5. Storey height up to 3.5 m.
6. 4 in 12 roof slope. When the roof slope is 12 in 12 tabular values must be increased 35%. Interprolation may be used for roof slopes between 4 in 12 and 12 in 12.
7. S(T) determine following procedure on pages D-36 to D-37.
8. Importance factor of 1.0.

June 2017 Errata

Wall 11 (con't)

Factored Uplift Resistance (kN/m)

Where wall sheathing used to resist uplift[1]

Common nail length in.	Spacing of nails in the end or rim joist[3] 150 mm	100 mm
2	3.2	4.7
2.5	4.0	6.0
3	4.7	7.0

Notes:
1. Upper storey sheathing and lower storey sheathing shall each overlap the connecting floor framing member (rim joists or blocking) by not less than 50 mm. Nails driven into the rim joist should be staggered.
2. A gap of 3 mm minimum shall be left between the sheathing panels to accommodate shrinkage of the floor framing
3. The spacing of nailing shall not be less than required for shearwall capacity. See Tables Shearwall 10 and Shearwall 14 Case A for shearwall adjustment factors for shearwalls subject to combined shear and uplift.
4. Resistance values are for 38 mm or thicker rim joists. For proprietary rim joists see manufacturer's literature.
5. Table applies to S-P-F and Hem-Fir lumber. For D. Fir-L multiply the resistance by 1.05. For Northern Species multiply the resistance by 0.95.
6. Lateral resistance calculated as per 12.9.4 of the CSA O86.

Factored Lateral Load f (kN)

Factored wind lateral loads[1.] kN/m	Stud spacing (mm) 300	400	600
0.5	0.15	0.20	0.30
1	0.30	0.40	0.60
1.5	0.45	0.60	0.90
2	0.60	0.80	1.2
2.5	0.75	1.0	1.5
3	0.90	1.2	1.8
3.5	1.1	1.4	2.1
4	1.2	1.6	2.4
4.5	1.4	1.8	2.7

Notes:
1. See Table Load 17 for factored wind lateral loads on the face of the wall. Use half of the wall height as the tributary width in Table Load 17.
2. Factored lateral load is calculated as wind lateral load x framing spacing/1000.

Factored Lateral Resistance (kN)

Common nail length in.	Stud toe-nailed to wall plate: Capacity of 4 toe-nails[1,2]	Stud end-nailed to wall plate: Capacity of 2 nails[1,2]
3.25[3]	2.9	1.2
3.5[4]	3.5	1.4
4[5]	4.9	2.0

Note:
1. Table applies to S-P-F. For D. Fir-L and Hem-Fir mutiply the resistance by 1.1. For Nothern Species mutiply the resistance by 0.90.
2. Lateral resistance calculated as per 12.9.4 of the CSA O86.
3. Minimum Top Plate Width: 140 mm for D. Fir-L and Hem-Fir, 89 mm for S-P-F and Northern Species to conform to minimum nail spacing requirements of CSA O86 Table 12.9.2.1.
4. Minimum Top Plate Width: 140 mm for all Species to conform to minimum nail spacing requirements of CSA O86 Table 12.9.2.1.
5. Minimum Top Plate Width: 184 mm for D. Fir-L and Hem-Fir, 140 mm for S-P-F and Northern Species to conform to minimum nail spacing requirements of CSA O86 Table 12.9.2.1.

June 2018 Errata

Figure 10.4.3 A

Shear Transfer Where Sheathing Extends to Sill Plate

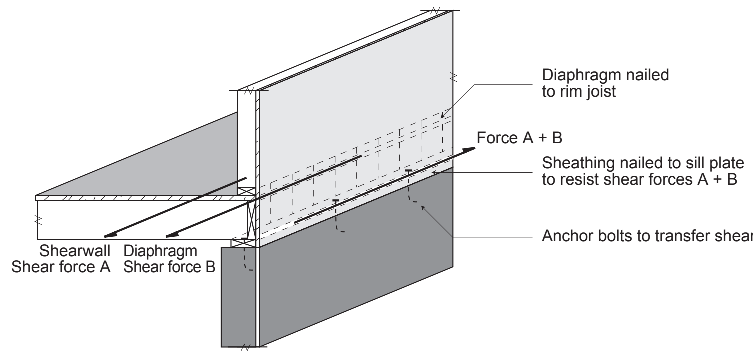
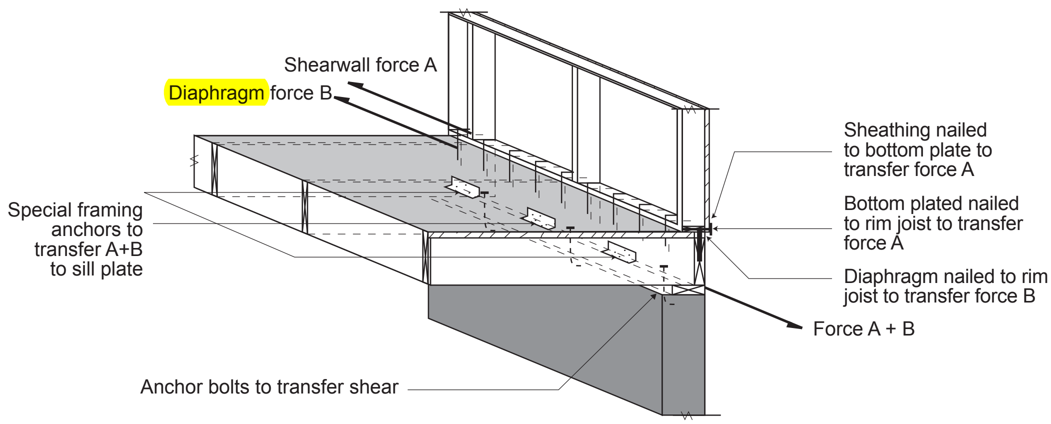


Figure 10.4.3 B

Shear Transfer Where Sheathing is Discontinuous at Floor Framing



10.4.3.4

The concrete or masonry shall be of sufficient strength to resist the applied loads when designed in accordance with their respective design standards.

10.4.3.5

Anchor bolts used with 89 mm wide sill plates shall not be greater than 12.7 mm (1/2 in.) diameter. Anchor bolts used with 140 mm wide sill plates shall not be greater than 19 mm (3/4 in.) diameter.