

WIND LOAD DESIGN TABLE

TABLE NOTES:

1. All allowable loads are based on the limiting strength or stiffness values listed in Table #1 of CCRR-0121.
2. ω_{max} equals maximum allowable wind pressure in pounds per square foot (psf).
3. + ω indicates a positive wind pressure, - ω indicates a negative wind pressure
4. Lateral Loads NOT multiplied by 0.75 for strength dertermination per AISI-NAS 2001
5. Values based upon interior sheathing attached at 12" o/c.
6. Wind pressures below 10psf are for interior applications only.
7. Safety Factor for Flexure = 1.95, Safety Factor for End Reaction = 1.95
8. Safety Factors were calculated based upon AISI/COS/NASPEC 2001 §F1.2.
9. Value denotes pressure limited by stud end reaction capacity.
10. Value denotes pressure limited by flexural strength of studs.

Wall Hgt. (ft)	DEFLECTION CRITERIA									
	L/120		L/240		L/360		L/600		L/720	
	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}
8	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1	45.1
8.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5	42.5
9	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
9.5	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
10	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	34.9	36.1
10.5	34.4	34.4	34.4	34.4	34.4	34.4	34.4	34.4	32.1	32.8
11	32.8	32.8	32.8	32.8	32.8	32.8	32.8	32.8	29.5	29.3
11.5	31.4	31.4	31.4	31.4	31.4	31.4	31.4	31.4	27.3	26.3
12	30.1	30.1	30.1	30.1	30.1	30.1	30.1	28.4	25.3	23.7
12.5	28.9	28.9	28.9	28.9	28.9	28.9	26.9	25.1	22.4	21.0
13	27.8	27.8	27.8	27.8	27.8	27.8	23.9	22.4	19.9	18.6
13.5	26.7	26.7	26.7	26.7	26.7	26.7	21.3	20.0	17.8	16.6
14	25.8	25.8	25.8	25.8	25.8	25.8	19.1	17.9	15.9	14.9
14.5	24.9	24.9	24.9	24.9	24.9	24.9	17.2	16.1	14.3	13.4
15	24.1	24.1	24.1	24.1	24.1	24.1	15.5	14.6	12.9	12.1
15.5	23.3	23.3	23.3	23.3	23.3	22.0	14.1	13.2	11.7	11.0
16	22.6	22.6	22.6	22.6	21.3	20.0	12.8	12.0	10.7	10.0
16.5	21.9	21.9	21.9	21.9	19.5	18.2	11.7	10.9	-	-
17	21.2	21.2	21.2	21.2	17.8	16.7	10.7	10.0	-	-
17.5	20.6	20.6	20.6	20.6	16.3	15.3	-	-	-	-
18	20.1	20.1	20.1	20.1	15.0	14.0	-	-	-	-
18.5	19.5	19.5	19.5	19.4	13.8	12.9	-	-	-	-
19	19.0	19.0	19.0	17.9	12.7	11.9	-	-	-	-
19.5	18.5	18.5	17.7	16.6	11.8	11.0	-	-	-	-
20	17.8	18.1	16.4	15.3	10.9	10.2	-	-	-	-
20.5	17.0	17.6	15.2	14.3	-	-	-	-	-	-
21	16.2	17.2	14.2	13.3	-	-	-	-	-	-
21.5	15.4	16.7	13.2	12.4	-	-	-	-	-	-
22	14.7	15.9	12.3	11.5	-	-	-	-	-	-
22.5	14.1	15.2	11.5	10.8	-	-	-	-	-	-
23	13.5	14.6	10.8	10.1	-	-	-	-	-	-
36.5	5.4	5.0	-	-	-	-	-	-	-	-

WIND LOAD DESIGN TABLE

TABLE NOTES:

1. All allowable loads are based on the limiting strength, stiffness values, or end reaction (web shear) listed in CCRR-0121.
2. ω_{max} equals maximum allowable wind pressure in pounds per square foot (psf).
3. + ω indicates a positive wind pressure, - ω indicates a negative wind pressure
4. Lateral Loads NOT multiplied by 0.75 for strength determination per AISI-NAS 2001
5. Values based upon interior sheathing attached at 12" o/c.
6. Wind pressures below 10psf are for interior applications only.
7. Safety Factor for Flexure = 1.95, Safety Factor for End Reaction = 1.95
8. Safety Factors were calculated based upon AISI/COS/NASPEC 2001 §F1.2.
9. Value denotes pressure limited by stud end reaction capacity.
10. Value denotes pressure limited by stud allowable flexural strength.

Wall Hgt. (ft)	DEFLECTION CRITERIA									
	L/120		L/240		L/360		L/600		L/720	
	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}	(+) ω_{max}	(-) ω_{max}
8	87.5	87.5	87.5	87.5	87.5	87.5	69.9	65.5	58.2	54.6
8.5	82.4	82.4	82.4	82.4	82.4	82.4	61.7	58.6	51.4	48.8
9	77.8	77.8	77.8	77.8	77.8	77.8	54.8	52.6	45.7	43.9
9.5	73.7	73.7	73.7	73.7	73.7	73.7	49.1	47.6	40.9	39.6
10	70.0	70.0	70.0	70.0	70.0	70.0	44.1	43.2	36.8	36.0
10.5	66.7	66.7	66.7	66.7	66.6	65.6	39.9	39.4	33.3	32.8
11	63.6	63.6	63.6	63.6	60.5	60.1	36.3	36.1	30.3	30.1
11.5	60.9	60.9	60.9	60.9	55.3	55.2	33.2	33.1	27.6	27.6
12	58.3	58.3	58.3	58.3	50.7	50.9	30.4	30.6	25.3	25.5
12.5	56.0	56.0	56.0	56.0	46.6	47.1	28.0	28.3	23.3	23.6
13	53.8	53.8	53.8	53.8	43.0	43.7	25.8	26.2	21.5	21.9
13.5	51.9	51.9	51.9	51.9	39.8	40.7	23.9	24.4	19.9	20.3
14	50.0	50.0	50.0	50.0	37.0	37.9	22.2	22.8	18.5	19.0
14.5	47.4	48.3	47.4	48.3	33.3	34.1	20.0	20.5	16.6	17.1
15	44.3	46.5	44.3	46.3	30.1	30.8	18.0	18.5	15.0	15.4
15.5	41.5	43.5	40.9	41.9	27.3	27.9	16.4	16.8	13.6	14.0
16	38.9	40.8	37.2	38.1	24.8	25.4	14.9	15.2	12.4	12.7
16.5	36.6	38.4	33.9	34.8	22.6	23.2	13.6	13.9	11.3	11.6
17	34.5	36.2	31.0	31.8	20.7	21.2	12.4	12.7	10.3	10.6
17.5	32.6	34.1	28.4	29.1	18.9	19.4	11.4	11.7	-	-
18	30.8	32.3	26.1	26.8	17.4	17.8	10.4	10.7	-	-
18.5	29.1	30.6	24.0	24.7	16.0	16.4	-	-	-	-
19	27.6	29.0	22.2	22.8	14.8	15.2	-	-	-	-
19.5	26.2	27.5	20.5	21.1	13.7	14.0	-	-	-	-
20	24.9	26.1	19.0	19.5	12.7	13.0	-	-	-	-
20.5	23.7	24.9	17.7	18.1	11.8	12.1	-	-	-	-
21	22.6	23.7	16.4	16.9	11.0	11.2	-	-	-	-
21.5	21.6	22.6	15.3	15.7	10.2	10.5	-	-	-	-
22	20.6	21.6	14.3	14.7	-	-	-	-	-	-
22.5	19.7	20.7	13.4	13.7	-	-	-	-	-	-
23	18.8	19.8	12.5	12.8	-	-	-	-	-	-
23.5	18.1	18.9	11.7	12.0	-	-	-	-	-	-
24	17.3	18.2	11.0	11.3	-	-	-	-	-	-
24.5	16.6	16.9	10.4	10.6	-	-	-	-	-	-
39.0	5.1	5.3	-	-	-	-	-	-	-	-

COMBINED AXIAL AND FLEXURAL DESIGN TABLE

TABLE NOTES:

1. All allowable loads are based on the limiting strength or stiffness values listed in Table #1 of CCRR-0121.
2. ω_{max} equals design wind pressure in pounds per square foot (psf). Wind loads have not been multiplied by 0.75 for calculating combined stresses.
3. Values are total load (lb.) per wall panel (2 studs / 4-ft panel); $+\omega$ indicates a positive wind pressure, $-\omega$ indicates a negative wind pressure
4. Safety Factors: Flexure = 1.95, Axial Compression = 1.95, End Reaction = 1.95
5. Safety Factors were calculated based upon AISI/COS/NASPEC 2001 §F1.2.
6. Values based upon interior sheathing attached at 12" o/c
7. Combined loading is governed by AISI/COS/NASPEC 2001 Eq. C5.2.1-1 and C5.2.1-2
8. Wind pressures below 10psf are for interior applications only.
9. Meets L/240 deflection criteria
10. Meets L/600 deflection criteria; All other values meet L/360 deflection criteria.

Wall Hgt. (ft)	WIND LOAD PER PANEL (ω)																		
	0 psf	(+) 5 psf	(-) 5 psf	(+) 15 psf	(-) 15 psf	(+) 20 psf	(-) 20 psf	(+) 25 psf	(-) 25 psf	(+) 30 psf	(-) 30 psf	(+) 35 psf	(-) 35 psf	(+) 40 psf	(-) 40 psf	(+) 45 psf	(-) 45 psf	(+) 50 psf	(-) 50 psf
8	8,502	8,120	8,149	7,357	7,444	6,976	7,091	6,594	6,738	6,213	6,386	5,831	6,033	5,449	5,680	5,068	5,328	0	0
8.5	8,502	8,071	8,104	7,210	7,307	6,779	6,909	6,348	6,511	5,917	6,113	5,487	5,715	5,056	5,317	0	0	0	0
9	8,502	8,019	8,056	7,053	7,163	6,570	6,716	6,087	6,270	5,604	5,824	5,121	5,377	4,639	4,931	0	0	0	0
9.5	8,502	7,964	8,005	6,888	7,010	6,350	6,512	5,812	6,015	5,274	5,518	4,735	5,020	0	0	0	0	0	0
10	8,502	7,906	7,951	6,713	6,849	6,117	6,298	5,521	5,746	4,925	5,195	4,329	4,644	0	0	0	0	0	0
10.5	8,502	7,845	7,894	6,530	6,679	5,873	6,072	5,215	5,464	4,558	4,856	0	0	0	0	0	0	0	0
11	8,502	7,781	7,835	6,338	6,501	5,616	5,835	4,895	5,168	4,173	4,501	0	0	0	0	0	0	0	0
11.5	8,502	7,714	7,773	6,137	6,315	5,348	5,587	4,560	4,858	3,771	4,129	0	0	0	0	0	0	0	0
12	8,502	7,643	7,708	5,926	6,121	5,068	5,328	4,209	4,534	3,351	3,740	0	0	0	0	0	0	0	0
13	8,502	7,491	7,555	5,479	5,708	4,472	4,776	3,464	3,845	0	0	0	0	0	0	0	0	0	0
14	8,502	7,302	7,374	4,996	5,261	3,828	4,181	2,659	3,101	0	0	0	0	0	0	0	0	0	0
15	8,502	7,091	7,172	4,478	4,782	3,136	3,542	0	0	0	0	0	0	0	0	0	0	0	0
16	8,502	6,857	6,947	3,923	4,269	2,397	2,858	0	0	0	0	0	0	0	0	0	0	0	0
17	8,502	6,601	6,699	3,333	3,724	1,610	2,131	0	0	0	0	0	0	0	0	0	0	0	0
18	8,502	6,322	6,429	2,707	3,145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	8,502	6,024	6,137	2,045	2,533	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	8,502	5,707	5,827	1,347	1,889	0	0	0	0	0	0	0	0	0	0	0	0	0	0

COMBINED AXIAL AND FLEXURAL DESIGN TABLE

TABLE NOTES:

1. All allowable loads are based on the limiting strength, stiffness values, or end reaction (web shear) listed in CCRR-0121.
2. ω_{max} equals design wind pressure in pounds per square foot (psf). Wind loads have not been multiplied by 0.75 for calculating combined stresses.
3. Values are total load (lb.) per wall panel (2 studs / 4-ft panel); $+\omega$ indicates a positive wind pressure, $-\omega$ indicates a negative wind pressure
4. Safety Factors: Flexure = 1.95, End Reaction = 1.95
5. Axial Compression Safety Factors: at 8'-0" $\Omega = 1.95$; all other heights $\Omega = 2.28$
6. Safety Factors were calculated based upon AISI/COS/NASPEC 2001 §F1.2.
7. Values based upon interior sheathing attached at 12" o/c
8. Combined loading is governed by AISI/COS/NASPEC 2001 Eq. C5.2.1-1 and C5.2.1-2
9. Wind pressures below 10psf are for interior applications only.
10. Meets L/240 deflection criteria
11. Meets L/600 deflection criteria; All other values meet L/360 deflection criteria.

Wall Hgt. (ft)	WIND LOAD PER PANEL (ω)																		
	0 psf	(+) 5 psf	(-) 5 psf	(+) 15 psf	(-) 15 psf	(+) 20 psf	(-) 20 psf	(+) 25 psf	(-) 25 psf	(+) 30 psf	(-) 30 psf	(+) 35 psf	(-) 35 psf	(+) 40 psf	(-) 40 psf	(+) 45 psf	(-) 45 psf	(+) 50 psf	(-) 50 psf
8	9,178	8,883	8,897	8,294	8,335	8,000	8,055	7,705	7,774	7,411	7,493	7,116	7,212	6,821	6,931	6,527	6,650	6,232	6,369
8.5	7,528	7,255	7,268	6,710	6,748	6,437	6,488	6,164	6,228	5,891	5,968	5,619	5,707	5,346	5,447	5,073	5,187	4,800	4,927
9	7,528	7,222	7,236	6,611	6,653	6,305	6,362	5,999	6,070	5,693	5,779	5,387	5,487	5,082	5,195	4,776	4,904	4,470	4,612
9.5	7,528	7,187	7,203	6,506	6,553	6,165	6,229	5,824	5,904	5,484	5,579	5,143	5,254	4,802	4,929	4,461	4,604	4,121	4,279
10	7,528	7,150	7,168	6,395	6,448	6,018	6,088	5,640	5,728	5,263	5,368	4,885	5,008	4,508	4,648	4,130	4,288	3,753	3,928
10.5	7,528	7,112	7,131	6,279	6,337	5,863	5,941	5,447	5,544	5,031	5,147	4,614	4,750	4,198	4,353	3,782	3,956	3,366	3,559
11	7,528	7,071	7,092	6,158	6,221	5,701	5,786	5,244	5,350	4,787	4,915	4,330	4,479	3,873	4,044	3,417	3,608	2,960	3,172
11.5	7,528	7,029	7,052	6,030	6,100	5,531	5,624	5,032	5,148	4,532	4,672	4,033	4,196	3,534	3,720	3,034	3,244	2,535	2,768
12	7,528	6,984	7,010	5,897	5,973	5,353	5,455	4,810	4,936	4,266	4,418	3,722	3,900	3,179	3,381	2,635	2,863	2,092	2,345
13	7,528	6,890	6,920	5,614	5,703	4,976	5,095	4,338	4,486	3,700	3,878	3,062	3,270	2,424	2,661	2,395	2,617	1,148	1,445
14	7,528	6,778	6,816	5,308	5,411	4,568	4,706	3,828	4,000	3,088	3,295	2,348	2,589	1,608	1,884	868	1,178	0	0
15	7,528	6,639	6,690	4,980	5,098	4,130	4,288	3,281	3,478	2,431	2,669	1,582	1,859	732	1,049	0	0	0	0
16	7,528	6,503	6,551	4,629	4,763	3,662	3,842	2,696	2,920	1,729	1,999	763	1,077	0	0	0	0	0	0
17	7,528	6,336	6,396	4,255	4,405	3,164	3,367	2,073	2,327	982	1,286	0	0	0	0	0	0	0	0
18	7,528	6,156	6,226	3,852	4,013	2,635	2,863	1,412	1,697	0	0	0	0	0	0	0	0	0	0
19	7,528	5,960	6,039	3,437	3,610	2,076	2,330	0	0	0	0	0	0	0	0	0	0	0	0
20	7,528	5,747	5,837	2,998	3,201	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ALLOWABLE SHEAR LOADS

TABLE NOTES:

1. All allowable loads are based on the limiting strength or stiffness values listed in Table #1 of CCRR-0121.
2. Allowable loads for sheathed walls are pounds per lineal foot of shear wall length.
3. Allowable loads for X-Brace wall panels are pounds per braced wall segment.
4. Maximum aspect ratio (H/L) is the ratio of wall height to wall length.
5. Steel strapping must be minimum 0.068" (16 Ga) (68 mils) Fy=50 ksi.
6. Minimum framing fasteners are #10 x 3/4" HWH#2 or modified truss head self-drilling screws.
7. Minimum OSB fasteners are #8 x 1" self piercing or self-drilling screws.
8. Minimum Gypsum Board fasteners are #6 x 1-1/4" self piercing or self-drilling screws.
9. Maximum fastener spacing of interior and exterior sheathing is 12" o/c other than at panel edges.
10. Safety Factor for Wind Loading, $\Omega_W = 2.0$ per AISI /COFS/LATERAL-2004
11. Safety Factor for Seismic Loading, $\Omega_S = 2.5$ per AISI /COFS/LATERAL-2004

Wall Construction	Aspect Ratio Max. Dim.	Fastener Spacing		Allowable Shear (Wind) $\Omega_W = 2.0$	Allowable Shear (Seismic) $\Omega_S = 2.5$
		at OSB Edges	at Gyp. Edges		
7/16" Rated OSB on Exterior Face + 1/2" Gypsum Board on Interior Face	2.67 16'-0" x 6'-0"	6" o/c	7" o/c	375 lb/ft	300 lb/ft
4" x 0.068" (16 Ga.) Fy = 50 ksi Steel Strapping	2.00 16'-0" x 8'-0"	N/A	N/A	2,155 lb	1,724 lb

ALLOWABLE SHEAR LOADS

TABLE NOTES:

1. All allowable loads are based on the limiting strength or stiffness values listed in CCRR-0121.
2. Allowable loads for X-Brace wall panels are pounds per braced wall segment.
3. Maximum aspect ratio (H/L) is the ratio of wall height to wall length.
4. Steel strapping must be minimum 0.097" (12 Ga) (97 mils) Fy=50 ksi.
5. Minimum framing fasteners are #10 x 3/4" HWH#3 or modified truss head self-drilling screws.
6. Safety Factor for Wind Loading, $\Omega_w = 2.0$ per AISI /COFS/LATERAL-2004
7. Safety Factor for Seismic Loading, $\Omega_s = 2.5$ per AISI /COFS/LATERAL-2004

Wall Construction	Aspect Ratio Max. Dim.	Allowable Shear (Wind) $\Omega_w = 2.0$	Allowable Shear (Seismic) $\Omega_s = 2.5$
6" x 0.097" (12 Ga.) Fy = 50 ksi Steel Strapping	2.00 16'-0" x 8'-0"	2,301 lb	1,841 lb